Bazaar Lives: Calcutta, New Urban Form and Spatial Experience: 1890–1940

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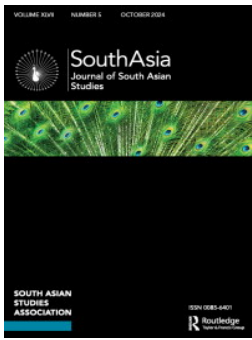Chris McConville and Robert Pascoe

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ABSTRACT

South Asian cities share a contested late colonial history. Calcutta (Kolkata) occupies a distinctive place in their emergence as modernising urban centres. Instead of viewing changes in Calcutta's markets merely as the products of colonial and racial hierarchies—or as the product of modernisation—mental maps of people moving through these spaces inform a deeper understanding. Attempts by the Calcutta municipality to 'modernise' markets using European assumptions about how urban markets work, failed to recognise the autonomous nature of indigenous 'mental maps'. The paper analyses these tensions through a street-level observational typology. An experiential legibility of urban spaces thus exposes an otherwise obscured haptic and psychological tension, as cities modernised, between a Westernised urban sensibility and an expanding autonomous space.

Introduction

One night in 1920, just as Calcutta's electric street lights failed, a visitor wandered into Burrabazar, the city's Great Market. In the lightless laneways, he quickly sensed that 'behind the good humour and jollity of Burra Bazar there is always an undercurrent of unease'.[1] From where did this undercurrent spring, and why does it matter? To answer these questions, we have sought to replicate a wanderer's street-level view of the city. Official responses are different. Colonial bureaucrats thought undercurrents of unease could be readily explained through the 'natural tendency of large cities', implying that predictability would be restored by such modern characteristics as suburban expansion, widened roads, sanitised alleyways, and of course a reliable electricity supply.[2] Modernising urban technologies did change late colonial Calcutta (now Kolkata). At the same time, this extraordinary metropolis sustained locales in which modernity could make only limited inroads without itself being transformed. Burrabazar was one of these places. Burrabazar lay roughly at the midpoint of Calcutta's sprawl along the east bank of the Hooghly (Hugli) river. With major north–south thoroughfares running

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1. 'Calcutta in Darkness; Panic in Burra Bazar', *The Times of India*, October 16, 1920: 13. Here we have tried to stick to the most vernacular English spelling: 'Burrabazar'; when quoting, we reproduce the spelling used by the original author, as here: Burra Bazaar.
2. L.S.S. O'Malley, *Calcutta, Vol. VI, Census of India, 1911* (Calcutta: Bengal Secretariat Book Depot, 1913): 6.

at its edges and with access to the waterfront, the alleyways here supported sales of local consumer items as well as export goods. A bureaucratic zone of commercial and colonial administration had expanded to the south, although in the decade before our wanderer found himself in a darkened market alley, British imperial authorities had begun to relocate activities from Calcutta to Delhi. Despite this move, Calcutta, a garrison town of little more than a quarter of a million people in the 1830s, was a mercantile centre of more than 600,000 in 1881 and a metropolis of two million by 1931. Late colonial Calcutta incorporated advanced elements of technocratic modernity: motor traffic on the Civic Improvement Trust's arterial roads, multi-storeyed function-alist buildings even in Burrabazar, slum clearances, suburbanism, and seemingly eternal and disorienting public works. Amongst the most ambitious, King George Docks, 'a great modern port at the very centre of the Ganges mud', had few rivals amongst global shipping hubs.[3] Disadvantaged when compared to Bombay (now Mumbai) because of its upriver siting from the Bay of Bengal, Calcutta still operated as a port essential to global trade. A new Calcutta Port Commission (1870) drew dock workers to the city. Vast and diverse immigrant networks brought their own rural traditions to new urban neighbourhoods. Other newcomers were employed along riverbanks north and south of the city, in jute mills, engineering works and (around the market lanes) leatherworks. In this city of immigrants, mercantile energy meant flourishing stock and financial exchanges. Calcutta prices for textiles and tea were monitored across the Pacific. From the 1870s onwards, new roads, bridgeworks, railways (a new west bank Howrah (Haora) terminal opened in 1905), a tramway system electrified in 1902 and, in 1923, an international airport ensured that even if shipping companies did choose more predictable and less silted Indian harbours, Calcutta would remain the gateway to East Asia and the Pacific, and a world city in its own right.

Historians have pointed to a volatility destabilising any bureaucratic or modernised order in South Asian cities. In 2011, Eric Lewis Beverley identified ongoing racially-driven mechanisms of social control that extended through space and reg-ulated sexuality, mundane police work and popular politics.[4] Beverley understood early nineteenth century Calcutta through sharp segregation, a divide between a European or white South Town (down-river from Burrabazar) demarcated from an indigenous North Town, extending upriver from the major market. In Beverley's survey, 'a space of autonomy', partly enabled through municipal governance, could simultaneously subvert social controls. Douglas E. Haynes and Nikhil Rao—in their 2013 review—likewise remark on late colonial instability.[5] They emphasise mass rural–urban migration, revitalised small-scale industry, suburbanism and autonomous civic planning.[6] The dissonance apparent in these surveys indicates one source for

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3. 'King George Dock', *The Statesman*, January 3, 1929: 4.
4. Eric Lewis Beverley, 'Colonial Urbanism and South Asian Cities', *Social History* 36, no. 4 (2011): 482–97; 482.
5. Douglas E. Haynes and Nikhil Rao, 'Beyond the Colonial City: Re-Evaluating the Urban History of India, *ca.* 1920–1970', *South Asia: Journal of South Asian Studies* 36, no. 3 (2013): 317–35; 322.
6. On suburbanism, see Swati Chattopadhyay, '"Bourgeois Utopias"? The Rhetoric of Globality in the Contemporary Suburban Landscape of Calcutta', Working Papers in Contemporary Asian Studies 30, Centre for South and South-East Asian Studies, Lund University, 2009, accessed November 3, 2022, https://lucris.lub.lu.se/ws/portalfiles/portal/3032587/3127786.pdf; see also Debjani Bhattacharyya, 'The Indian City and Its "Restive Publics"', *Modern Asian Studies* 55, no. 2 (2021): 665–95.

our visitor's unease: a failing late colonial knowledge of urban locales, with markets being amongst the most contested.

Marketplaces both condensed and amplified the tensions between control and autonomy. Imperial officials feared, correctly as it turned out, that markets could easily become flashpoints for nationalist politics. Pramod Kumar Mohanty stressed a more sensualised European recoil from garbage and insanitary open space.[7] From another vantage point, Martin Beattie emphasised the hybridity of Burrabazar, a fused materiality, drawing on both the modern and the vernacular, the controlling and the autonomous. Modernity, as experienced in his marketplace, was neither exclusively indigenous, nor entirely subordinated to mechanisms of social control.[8]

Westernised visitors balanced unease against curiosity. After all, our Calcutta wanderer only grew uncomfortable in Burrabazar's darkness. So long as modern electric lights cast a glow, however dim, he continued to enjoy the bazaar traders' 'good humour and jollity'. To elaborate on often conflicted links between indigenous autonomy, urban morphology and a Westernised visitor's experiential unease, in this paper, we turn away from official cartography to explore dissonance between control and autonomy at a personal level. Several techniques can be used to capture personal maps of Calcutta. Urbanists tracking street-level experience have applied 'space syntax' to Bagbazar Street and to traditional house forms.[9] Amit Chaudhuri's city journeys rediscovered modern Kolkata after a childhood spent partially in the city. He separately reflected on the pioneering theorist of urban wandering, Walter Benjamin, whose explorations exposed the way that 'the modern is insinuated subtly, and seductively, into a vocabulary of backwardness'. Some of this reflection informs Chaudhuri's own journeys through Calcutta, even though he stops short of bringing Benjamin's observational techniques to bear directly on the city.[10] Another juxtaposition informs the writing of the well-known Chinese 'Silent Traveller', Chiang Yee, who subtly reflected on spaces and local practices in British and North American cities from a perspective uncommitted to Westernised urbanity.[11] Pre-empting any of these reflections, the Scottish polymath, Patrick Geddes (1854–1932), drew up plans for Indian cities between 1915 and 1919. Geddes arrived in India as an inventor of regional planning, a daring sexologist and imaginative theologian. Even before his Bombay landfall, Geddes enjoyed a deep engagement with Asian philosophies. He celebrated Asian townscapes, in which people's movements and urban structures were oriented by religious sites, ensuring a humane social geography. His proposed 'conservative surgery' for Burrabazar drew on kinetic alternating spaces of alleys, courtyards and shop-houses. This syncretism, integrating modern town planning

7. Pramod Kumar Mohanty, 'The Bazaar as a Public Domain of Cultural Contests at Colonial Cuttack, 1870–1940', *Studies in People's History* 9, no. 2 (2022): 180–90.
8. Martin Beattie, 'Sir Patrick Geddes and Barra Bazaar: Competing Visions, Ambivalence and Contradiction', *The Journal of Architecture* 9, no. 2 (2004): 131–50, https://doi.org/10.1080/1360236042000197835.
9. Shilpi Chakraborty and Shiva Ji, 'Evolution of Bagbazar Street through Visibility Graph Analysis (1746–2020)', in *Proceedings of the Satellite Workshops of ICVGIP 2021*, ed. Aditya Nigam et al. (Singapore: Springer, 2021): 63–78; Abir Bandyopadhyay and Arif N. Merchant, 'Space Syntax Analysis of Colonial Houses in India', *Environment and Planning B: Planning and Design* 33, no. 6 (2006): 923–42.
10. Amit Chaudhuri, 'Introduction', in Walter Benjamin, *One-Way Street and Other Writings* (London: Penguin, 2009): xiv; Amit Chaudhuri, *Two Years in Calcutta* (London: Union Books, 2013).
11. Chiang Yee, *The Silent Traveller in Edinburgh* (London: Methuen, 1948); Chiang Yee, *The Silent Traveller in Boston* (London: Methuen, 1960).

into vernacular South Asian urban forms, met with a generally negative response from Calcutta's municipal authorities.

To expand on the tensions of modernity through haptic experience, as implied by Chaudhuri, Chiang Yee and Geddes, we have taken up a typology which, broadly speaking, continues in this tradition. Initially devised by Kevin Lynch, this experiential typology has been adapted by other scholars to diverse cities, including those of South Asia. The practice of mental mapping takes us beyond any unease exaggerated by public health fears or road-widening strategies, to the expansion of autonomous space, ambiguities in Westernised responses and loss of confidence in mechanisms for a predictable, spatial authority. Lynch thought that his framework could be applied to 'any given city' and sought out 'that quality in a physical object that gives it a high probability of evoking a strong image in any given observer'.[12] This experiential urbanism he defined through five elements. City-dwellers circulated along intimately understood pathways. These he thought of as 'channels along which a person moves and observes'. Alternatively, city-dwellers defined their own edges between the familiar and the foreign. These edges were 'lateral references rather than coordinate axes'. Districts he understood as significant two-dimensional spaces 'always identifiable from the inside they are also used for exterior reference'. His nodes were 'strategic spots'. In contrast, landmarks were external, locative points. An individual experienced their presence by moving around them, rather than entering into their internal space.[13] Lynch's five interlocking elements enabled a sense of psychological control over an otherwise alien urban environment. However, where residents or visitors were unable to shape their own urban legibility, they inevitably arrived at a sense of unease in urban space. Lynch tested his techniques in both North American cities and those of the Global South. In these settings, the five elements of mental maps, as locative and topographical practice, enabled psychological relief from the instability of cities as they modernised.

What might our visitor's disquiet, once analysed through Lynch's legibility, tell us about this modernising of late colonial Calcutta and South Asian cities more broadly? These five-fold 'cognitive maps' address 'physical qualities which relate to the attributes of identity and structure in the mental image'.[14] Lynch expected that individual images would merge into 'group images' and, potentially, a singular 'public image' or shared mental map. Scholars of South Asian cities in the twenty-first century sound less sanguine, with several now lamenting the loss of any such legibility. Vishek Yadav and K. Sengupta turned to Lynch's elements to analyse Jaipur as an historic city with new accretions. They discovered a disorienting townscape 'sprawling from an old core…[,] while the sense of satisfaction of finding ways through legible environments is missed'.[15] Drawing on both Lynch and architect Jan Ghel's design theories, Manika Agrawal explored Bangalore's (now Bengaluru) massive flower market, itemising human qualities that had vanished and suggesting ways to 'bring

12. Kevin Lynch, *The Image of the City* (Cambridge, MA: MIT Press, 1960): 7–9.
13. *Ibid.*, 47–49.
14. *Ibid.*, 9.
15. Vishek Yadav and K. Sengupta, 'Imageability Analysis of Contemporary Indian Cities—The Case of Gurugram', *International Research Journal of Engineering and Technology* 8, no. 10 (2021): 1160.

back that life quality, sense of place and culture'.[16] In their phenomenologies of urban space, these observers lament the triumph of confusion over legibility, of unease over imageability.[17]

Here, we reflect on these cognate, topographical elements to comprehend perceptive, haptic precarity in Calcutta marketplaces. We apply the five elements to the personal and group image of lower-level colonialist observers rather than that of builders and shapers of the city. They are observers marginal to municipal and imperial bureaucracies and they confront a subversion, sometimes through hybridity, of that absolute division between Western and indigenous, or the modern and traditional. Although Lynch's typology does have limitations (as we will acknowledge), his five elements of perception, when analysed one by one, take us beyond a generic unease. Here we isolate the mental maps of one group in the city and one type of urban node, the marketplace. Lynch's elements are applied to Burrabazar (Ward 7) and New (Sir Stuart Hogg) Market (Ward 13), as node and district, to neighbouring streets as both pathways and edges, and to the ambiguities of landmarks. Through this typology, we can identify spaces of autonomy subverting the mental maps of colonising observers, disoriented as they so often were by the distinctive modernity of the city around them.

Burrabazar as node and district

Burrabazar consistently confused observers. Outsiders like R.J. Minney, even when alert to the modernity of Calcutta after 1920, could reflect on his bazaar experience: 'colour, colour, colour; colour and filth all around you'.[18] Minney could draw on his own sensual experience and long-established Western tropes of the colonial market as a failing replica of trading nodes in European or North American cities. Typically reducing market complexity to a locus of superficial exotica, the casual European traveller's mental image registers little legibility. This confusion arose because of both spatial and trading practices within market lanes. In other words, cognition of space drew as much from cultural confusion as from built form itself. Visitors who engaged with market trade frequently acted as small-scale commodity buyers, seeking out best prices, a task often beyond their capacities. They looked, without sharing in the market's principal commodity: knowledge. 'The trader who lives in India's bazaars…knows what he wants and how much to pay for it…. He can also tell you how much his nearest competitor paid you for certain lines last year…, for no man's trade is a secret', warned one English market buyer.[19] Looking back to Calcutta market neighbourhoods, more recent observers defined this knowingness

16. Manika Agrawal, 'Crisis of Urban Experience and Life Quality—In Indian City Market: A Case of Krishna Rajendra Market, Bangalore', *Ekistics, Architecture for Masses* (2019): 8.

17. Several scholars have sought to apply Lynch's elements to other Asian cities: see, for example, Yan Tang, Sisi Liang and Ruizhi Yu, 'Theoretical and Practical Influences of Kevin Lynch in China', *Journal of the American Planning Association* 84, nos. 3–4 (2018): 293–305; Ahmed Read Al-Sham and Nurwati Badarulzaman, 'Evaluating the City Image: A Focus on Landmarks of Kuala Lumpur, Malaysia', *Asian Social Science* 10, no. 4 (2014): 242–54.

18. R.J. Minney, *Round about Calcutta* (London: Humphrey Milford & Oxford University Press, 1922): 58. Born in Calcutta in 1895, Rubeigh James Minney became a prominent British film producer.

19. 'Commercial Exchange in the Bazaar', *Moora Herald* (NSW), August 14, 1914: 7.

by way of a 'hierarchical conglomeration of highly specialised bazaars'.[20] By 1925, the Calcutta Corporation inspectors were checking on five municipal markets, and another 39 or 40 private markets within city boundaries.[21] Buyers without direct knowledge of municipal oversight could hardly grasp the subtleties of each of these places, distinguished as they were by specialised trades in perishable and non-perishable goods and sustained by personalised loan chains.[22]

Chasing bargains in the trader's shop-home disconcerted the inexperienced visitor.[23] At first meeting, the market trader might appear 'courteous and deferential… [but] unless prices are at rock bottom and terms favourable, you will do no business', warned one frustrated buyer.[24] Historian Ritu Birla identified 'the slipperiness of indigenous market practice' that routinely inverted colonising claims on superior knowledge.[25] Built density further confounded visitors. Our disconcerted wanderer in Burrabazar was responding to the immediacy of three-dimensional, lightless space, comprehended by way of isovists.[26] Compressed and darkened height and an occluded field of vision disoriented the walker's haptic response, breaking down any cognitive maps.[27] Reflexive fears about crime, disease and, eventually, political insurgency, rendered these spaces even more threatening to the outsider bereft of that priceless commodity: knowledge.

Immigrant Marwaris emerged as the most recognisable traders along most of the market's streets. They occupied that routinely obscured juncture between the bazaar's knowledge system and its socio-centric networks. Colonial record-keepers readily admitted that Marwari 'was rather a loose term' to define traders who had come from India's north-western provinces, and who controlled the 'piece goods' trade in textiles. Census officials described Marwari traders as 'well-off' and, unlike most other immigrants, they had come to Calcutta with their families.[28] When reflecting on the 1931 Census for example, the colonial statistician, A.E. Porter, complained that:

> …omissions such as occurred in Wards 5 and 7 where Marwaris form a considerable proportion of the population were due to the intransigence of the Marwari community and Guzrati traders who are not native to Bengal but reside here for purposes of trade

20. Calcutta became Kolkata in 2001. European power had been solidified in the McKenzie Act of 1899, which set aside seats for the Port Authority and Chamber of Commerce. Only after 1923 were Indian property owners able to shape urban policy. Even then, police powers remained with the Province of Bengal: 'Municipal History', Kolkata Municipal Corporation, accessed December 23, 2020, https://www.kmcgov.in/KMCPortal/jsp/KMCPortalHome1.jsp.
21. *Report on the Municipal Administration of Calcutta, 1925–6, Vol. I* (Calcutta: Calcutta Commissioners Printing, 1926): 27.
22. See generally on market financing, Bimal Ghose, *A Study of the Indian Money Market* (London: Humphrey Milford & Oxford University Press, 1943): chap. 13.
23. Informal financing by street traders and their importance to formalised commodity markets confused colonial policymakers (Keynes included) as much as market customers: see Ghose, *A Study*, 26 ff.
24. 'Commercial Exchange'.
25. Ritu Birla, *Stages of Capital: Law, Culture and Market Governance in Late Colonial India* (Durham, NC: Duke University Press, 2009): 144.
26. Isovist is a concept drawn from Hillier's space syntax, and increasingly defined in algorithmic form as the edges visible from one vantage point, altering in movement through space.
27. See Beattie, 'Sir Patrick Geddes'.
28. 'Calcutta', in J.T. Marten, *Census of India, 1921* (Calcutta: Superintendent of Government Printing 1924): 21.

and paid the city from which they extract their material prosperity the delicate compliment of declining to be enumerated amongst its population.[29]

Underlying the exclusivity so troubling to imperial statisticians, Marwari trading in cotton goods was always the unstable impetus for cash exchange and credit in the market alleys.[30] With a close eye on cotton-goods prices and the import-export trade, Marwari mercantile families constructed modern interpersonal systems of commerce and communality around Cotton Street. This street emerged in the early twentieth century with a fixed cultural structure, the site of rain gambling yards, gymnastics clubs, a Marwari commercial centre, hotels for recent arrivals, newspaper offices and medical services.[31] Marwari familial businesses extended into Harrison Road and Zakaria Street. These traders were also alert to real-estate opportunities opening up along arterial roads as they were modernised by the Civic Improvement Trust.[32]

The standard pathway for a Rajasthani or Punjabi immigrant extended from an initial business as a dealer in foodstuffs or cloth in his north-western town.[33] Relocating to one of India's cities, he once more turned to bazaar trading, at first in day trade, then through a shopfront, before taking a chance on moneylending and, if that worked, speculating in real estate. These traders adapted quickly to new commercial opportunities by supplying consumer goods to both Indian and British households. A very few prosperous traders might then buy into British manufacturing firms, perhaps acting as knowledgeable go-betweens. Christopher Bayly traced the movements and the evolution of commercial structures amongst bazaar traders, emphasising their independence from imperial mechanisms. He lamented that amongst historians, the stark divide between the modern and traditional 'curiously…lingers on…[;] voluntary association is thought to have come with the railway and the electric telegraph in a simple adaptation of the methods of the Anti-Corn Law League or of Irish nationalism'.[34] In his history, just as in the space of Burrabazar, mercantile networks of immigrant traders had restructured business around new forms of Westernised consumption. By the 1920s they were expanding commercial interests from market warehouses to new general stores and the service industry of low-level white-collar professionalism. As Marwari traders moved beyond the cotton-piece trade, their networks altered to encompass these and other commercial opportunities. A Marwari Chamber of Commerce supported expansion and Marwari businessmen succeeded in elections for the Calcutta Corporation.

29. *Census of India, 1931, Vol. VI, Parts I and II* (Calcutta: Central Publication Branch, 1933): 2.
30. The centrality of piece cotton is reflected in the mandatory newspaper columns tracking cotton prices amongst '*dhootie*' traders and the responses of Burrabazar's Marwari Chamber of Commerce: see regular columns in *The Statesman* of Calcutta.
31. *Thacker's Directory of India, 1911* (Calcutta: Thacker & Co., 1912).
32. Partho Datta, 'Patrick Geddes and the Metropolis', in *Cities in South Asia*, ed. Crispin Bates and Minoru Mio (New York: Routledge, 2015): 54–57.
33. See, by way of background, Rahul B. Parson, 'The Bazaar and the Bari: Calcutta, Marwaris and the World of Hindi Letters' (unpublished PhD thesis, University of California Berkeley, 2012): 36–50.
34. C.A. Bayly, *Rulers, Townsmen and Bazaars* (Cambridge: Cambridge University Press, 1983): 449.

Amongst many successful market figures, G.D. Birla seemed the model entrepreneurial Marwari.[35] Arriving in Burrabazar in 1896, Birla eventually turned to manufacturing jute, making a fortune through wartime trade.[36] In Cotton Street, the Marwari node of Burrabazar, he joined the Marwari Trading Association and a Marwari gymnastics and body-building club.[37] Commercial and cultural connections around Cotton Street enabled fellow Marwaris to shape municipal politics in Calcutta. Amongst the nodal figures in these networks was Sir Hari Ram Goenka. Born in Jaipur, he was elected to represent Burrabazar on the Calcutta Corporation in 1890. He continued as ward representative until 1924, at which point the wealthiest Marwari families had begun to move away from Burrabazar. Sir Hari Ram simultaneously held posts as president of the Marwari Association, commissioner for the Calcutta Port Trust, a member of the Bengal National Chamber of Commerce and director of the P&O Bank.[38] Rita Birla puts the connection between Marwari material and spiritual merit succinctly, describing the 'porous boundary between kinship as a symbolic logic and commerce as a material one'.[39] Sir Hari Ram was no exception in this and:

> …gave liberally for charity, among his gifts to the public being the Zenana bathing ghat near the Howrah bridge, the pilgrim *dharamasala* near Kali's temple at Kalighat and a charitable hospital and dispensary in the same neighbourhood.[40]

Labelled as an outsider, colloquially, and often officially, the immigrant trader quickly became the perfect urban scapegoat in disputes over commercial cartelism, especially in cotton cloth trading, and between Marwari and provincial officials over crime and morality, with rain gambling a source of drawn-out conflict.[41] By controlling hundi credit networks, and then speculative commodity futures, backed by kinship and religious ties, Marwari financiers proved adept in synchronising capital accounts with imperial structures such as the trust regulations of the Indian Companies Act, 1882, and, eventually, income tax rulings. In effect, much of the city's formal capital-raising endeavours depended on the itinerant and then established Marwari market bankers and their informal promissory notes.[42]

The constantly reiterated imagery of Burrabazar, in which an oppressive built form was matched to disorganised and dangerous cultural diversity, does need to be set against Marwari commercial and social order.[43] In fact the entrepreneurial

35. Alan Ross, *The Emissary: G.D. Birla, Gandhi and Independence* (London: Collins Hawill, 1985); G.D. Birla, *In the Shadow of the Mahatma: A Personal Memoir* (Bombay: Orient Longmans, 1953).
36. Ross, *Emissary*, 18.
37. See generally, Birla, *In the Shadow*.
38. 'Corporator for 34 Years', *The Times of India*, March 1, 1935: 3.
39. Ritu Birla, *Stages of Capital, Law, Culture and Market Governance in Late Colonial India* (Durham, NC: Duke University Press, 2009): 16.
40. 'Corporator for 34 Years'.
41. 'Rain gambling' was a common form of betting on how much precipitation would occur. For one outsider's account of rain gambling in Burrabazar, see 'Rain Gambling in India', *Bay of Plenty Times* (New Zealand), March 15, 1893: 2, accessed December 2, 2022, https://paperspast.natlib.govt.nz/newspapers/BOPT18930315.2.4?
42. Ghose, *Study of the Indian Money Market*, 26–29.
43. On the wider political consequences of these local networks, see Nabaparna Ghosh, *A Hygienic City-Nation: Space, Community, and Everyday Life in Colonial Calcutta* (Cambridge: Cambridge University Press, 2020).

Table 1. Major immigrant settlements, North Town, 1911 (by birthplace).

Birthplace	Ward 5 Jorabagan	Ward 7 Burrabazar	Ward 8 Kalutola	Ward 10 Bowbazar
Bihar	7,055	3,737	16,821	5,567
Orissa	1,556	647	3,932	1,346
United Provinces	8,291	6,867	6,712	1,997
Punjab	537	1,246	1,765	290
China	–	5	1,351	315
Britain	31	103	41	183
Other Europe	3	28	35	32
Ward totals	49,095	30,292	56,075	24,911

Source: Census of India, Vol. 5, 'Calcutta: Subsidiary Table III'. Note: We use birthplace data because it captures ethnic difference more precisely than other census data calculations.

flexibility of these traders probably accounted for the recurrent attacks on their local dominance. Marwari business networks understood capital accumulation and charitable goodwill. Once they were acquiring political influence through commercial acumen, familial strength and the prominence of their formal voluntary associations, Marwari trading gave the marketplace structured depth, unknowable to anyone not familiar with trading networks.[44] Visitors were unable to make market space legible since they had no grasp of these dynamic linkages. Spatial, commercial and communal knowledge underpinned cognitive maps of the market, a knowledge architecture denied both to the colonial bureaucrat and to the casual visitor.

Districts in Lynch's terms derived in the first instance from immigrant concentrations. Popular discourse about Burrabazar typically assumed that the locality was both market node and immigrant district, home to Marwari residential streets and their trading centres. Beyond Cotton Street, Burrabazar was a diverse place, a district in Lynch's terms, but one far less disorganised or diverse than some accounts suggest. By 1911, immigrant minorities shaped life in the older wards of North Town (very rarely by then dismissed as 'Black Town') even though very few localities were defined by any exclusive segregation. In fact, the most concentrated minority in the North Town were neither Marwari nor British but composed of Chinese artisans trading in Tiretta and concentrated in one ward (Kalutola, no. 8). But even in this, the densest Chinese settlement, these immigrants formed less than 3 per cent of residents (Table 1).

Looking back on Burrabazar, it is clear that the market forms a recognisable node for traders and immigrants and a confusing space for Western visitors. Beyond this node, to outside observers, any surrounding district is neither so clearly defined nor distinguished by legible edges. The failure of Europeans to grasp the complex underlying order of the market derived, at least in part, from the apparently eclectic mix of land users along both major roadways and local alleyways. Seemingly incompatible land users lined the city's modern east–west thoroughfare, Harrison Road, by 1911. Clusters dismissed as 'petty shops' were interspersed with a photograph framing workshop, printers, a retail centre for Singer Sewing Machines, the Great Eastern Hindu Hostel and several cycle workshops.[45] Harrison Road also signalled an expanding space of autonomy, as Marwari social and commercial networks penetrated its commercial frontages. The modern thoroughfare ran past the Marwari

44. Birla, *Stages of Capital*, 24–39.
45. *Thacker's Directory of India, 1911.*

Chamber of Commerce, a Marwari Traders Association and import-export firms, creating a public space that exemplified Bayly's account of adaptive bazaar trading. At the same time, minor roadways such as Ezra Street included medical supply warehouses, printers' workshops, an electrical supply depot and the workshops of the Calcutta Aerated Water Works.[46] Ward 7, Burrabazar, a district comprising both ethnic concentration and a diverse trading exchange, can be understood as shifting in roadway commercial sequences while stabilised and autonomous from the perception of traders within it, and certainly opaque to colonial surveillance and a visitor's cognitive map.

New Market: From order to autonomy

A more predictable and modern division of space was supposedly reflected in the official pattern of stall-holding and day trading at Calcutta's New Market. Calcutta bazaars and markets numbered about 60 by 1870, many of them small and run outside local government control.[47] When opened as the official municipal market in 1874, replacing Fenwick's Bazaar, New Market was intended as a trading centre within easy striking distance of the most concentrated settlement of Europeans in Calcutta.[48] Divided by block, then alley and then stall, the market pathways ran outwards from a central rotunda, with new blocks of stalls added regularly. In place of Burrabazar's disorienting alleys, New Market followed a predictable rectilinear, geometric floor-plan, deliberately differentiated from street trade and traffic. Stalls were solidly constructed, initially around three sides of a rectangle, and the Calcutta municipality oversaw segregated trades, food cleanliness and overall pricing.[49] Trade ranged from mundane foodstuffs to exotic specialist imports, expensive furnishings and cloth. Traders included Hindu cloth merchants, Moslem butchers, British and European specialty importers and Jewish general store traders. Working together in a largely enclosed space, their market formed, in Lynch's terms, an 'introverted' node in contrast to an 'extroverted' Burrabazar. And yet even though the municipality regularly introduced new controls on entry and hygiene, market traders and customers could never really avoid uneasy encounters with the same complex communal networks that had characterised Burrabazar. If market committees and shoppers sought regularity in floor-plans and predictable pricing, day hawkers, alms gatherers, delivery carters and street people more generally, used the market space differently. Their cognitive maps constantly subverted even the simplest projects that could be called Westernising.

Consistently defied by street hawkers, market committees demolished ramshackle stores and tried to banish any hawkers gathering at the southern, open section of the market space. To organise bureaucratic approval for their exclusions, the Calcutta

46. *Ibid.*
47. Estimates from *Calcutta New Directory, 1865*, summarised by Mondira Sinha Ray, 'The Municipal Markets of Calcutta: Three Case Studies' (unpublished PhD thesis, University of London, 1976): 22.
48. For a detailed summary of Calcutta's local government role in running markets, see Ray, 'Municipal Markets', especially chap. 1. In the century following the opening of New Market, the corporation took over or built a further nine markets: Ray, 'Municipal Markets', 52.
49. *Engineer's Report, Administration Report of the Calcutta Municipality, 1888* (Calcutta: Printing Office of the Commissioners, 1888): 53.

municipality launched an initial inquiry into the market in 1878. They were told by stall-holders that informal trading arrangements in private markets meant their stall-holders could consistently beat New Market rivals on price. Order and regulation had failed to ensure value for shoppers.[50] The simplest response was to shut down or buy out private competitors, which the Corporation eventually did; Babu's Bazar was squeezed, and the private Dharmataallah Market became a municipal market.[51] A second tactic was to remove signs of the disorderly city from around the market's edges. Municipal engineers and health officers worked to clear bustee dwellers from laneways to the east and were happy to report that after closing the adjacent Free School, 'the population dislodged from these demolished bustees is moving eastwards and southwards and special action is being taken to lay out areas in advance for their occupation'.[52] Internal upgrading was stepped up, with new arcades running through the central quadrangle. Later 'progressive improvements' included tiling floors, expanding the market into Dutt Lane and extending westwards, with a new block for seafood sales, all lit by the electricity that was to so conspicuously fail in Burrabazar.[53]

Extensions in 1907 and 1914–15 reorganised poultry and beef sales. At a 1909 ceremony welcoming the larger trading floor (extended by 170 percent), Dr. Banks, then president of the Market Committee, enthused about the 'great new extension'—convenient, stylish and, above all, hygienic. Shoppers were going to be delighted by 'walls and floor glazed with tiles, stalls of polished marble with iron fitments, no wood, an abundant supply of filtered water and disinfectant [that] ensured cleanliness'.[54] To keep out the enormous black and blue crows, his staff tied netting above the meat stalls. What's more, 'the beggar nuisance was checked and the dangerous habit of spitting in the market was practically stopped, being made a punishable offence'.[55] Sheds for day vendors were added, with spaces for tobacco sales, footwear and children's toys. The market continued to evolve between the World Wars.[56] To complete the project, new blocks for stalls were brought into use, allotted to 'a separate class of retailers on an infinitely better principle than in the past'.[57] Expanded several times, New Market was then joined by other supposedly modernised municipal markets after 1900: Landsdowne Market (1903), Sir Charles Allen Market (1910), College Street (1917), Entally Market (1923) and Lake Road (1929).[58]

For every improvement sought by the market authorities, traders—and more often those drifting into the market—re-imagined its spaces on their own terms. Conflicts sometimes took a religious turn as well. Moslem butchers were already in a tense stand-off with the Calcutta commissioners when they carried out a burial within

50. *Market Report, Administration Report of the Calcutta Municipality, 1878* (Calcutta: Printing Office of the Commissioners, 1879): 43.
51. *Administration Report of the Calcutta Municipality, 1878.*
52. *Report of the Municipal Administration of Calcutta, 1925–26, Vol. 1* (Calcutta: Calcutta Corporation Press, 1926): 61.
53. *Ibid.*, 61.
54. 'Calcutta Markets: New Extension Opened', *The Times of India*, August 6, 1909: 9.
55. *Ibid.*
56. Ray, 'Municipal Markets of Calcutta', 78.
57. 'Calcutta News: Gigantic Improvement Scheme', *The Times of India,* October 6, 1922: 19.
58. Ray, 'Municipal Markets', 52, 62.

the market. Over time, the municipality's sporadic rather than orderly improvements frustrated the market traders as much as the itinerants who evaded municipal control. The up-country sellers of foodstuffs especially found themselves at odds with modernising projects. By the 1920s, New Market was subject to conflicts over fish trading, the comparative price and quality of meat, and traffic congestion. One of the local trade representatives complained in 1929 that the 'fish problem' in Calcutta was not so much a product of stall arrangements but because extortionate middlemen manipulated wholesale pricing. Fishing boat crews enjoyed very slim returns, the stall-holders in New Market likewise, whereas the wholesalers were earning profits of up to 500 per cent.[59]

In 1929, after more than five decades of the market's adjustments and expansion, Calcutta's European Association lost patience and complained to the municipality about their once modern New Market. Looking at the market from the viewpoint of buyers rather than sellers or managers, the Association claimed that dirt and offensive smells were driving customers, or at least their kind of customers, away from fruit and vegetable stalls. Because the market had too few loading bays, carters were dumping perishable stock on roadways. Unregulated tea stalls had blocked side alleys. Beggars had found their way into the food aisles and could only be kept out by closing off most entrances and by stationing guards at those left open. Ventilation had failed, since traders stacked goods across the southside air vents. All in all, the market no longer lived up to its promise. The place and its people eluded racially-ordered social control and found space for autonomy. The market, complained one regular shopper, had 'the characteristics of a ruin' with no system—fruit and vegetables on the floor, 'pariah dogs' uncontrolled, and no checks over pricing.[60] In other words, imageability and legibility for Europeans was failing just as spaces of autonomy for the indigenous expanded. Whereas visitors to Burrabazar might have sensed an undercurrent of unease, here, the European Association gave full voice to frustrations about disorder, hygiene and, eventually, as they delineated space, a dangerous decline.[61]

Marketplace and district

The streets enclosing New Market were both nodes for petty trading and hawking, and sites of new modern uses. This is neither then a colonial modernity in any coherent sense nor the syncretic fusion that Beattie identified in Burrabazar. As the market lost its formalised modern order and bustee settlements were demolished, the European character of residential streets around the market did intensify. But these wards were no more exclusively European than Burrabazar was Marwari. Even in Ward 13, abutting the market itself, British immigrants were vastly outnumbered (Table 2).

British and other colonists may well have desired exclusivity in their very own segregated district. It did not look as if—at least at the scale of the city wards—they

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59. 'Fish Supplies, Calcutta', *The Statesman*, October 19, 1929: 16.
60. 'Market Controls', *The Statesman*, July 11, 1929: 6.
61. 'Dirt and Disease, State of Calcutta Markets', *Week* (Brisbane), October 11, 1929: 34.

Table 2. Major immigrant settlements, South Town, 1911 (by birthplace).

Birthplace	Ward 12 Waterloo St	Ward 13 Fenwick's Bazaar	Ward 16 Park Street	Ward 22 Bhawanipore
Bihar	1,301	8,222	1,483	7,814
Orissa	446	1,671	855	1,930
United Provinces	1,938	2,110	700	8,788
Punjab	403	275	106	267
China	131	135	51	2
Britain	584	519	631	393
Other Europe	161	165	76	51
Ward totals	6,049	27,591	4,901	53,970

Source: 'Subsidiary Table III', *Census of India, Vol. 5*, Calcutta.

ever achieved this. More likely a European world was invented in isolated 'chummeries' shared by young men working in trade or colonial administration.[62] Lindsay Street, onto which the market faced, attracted new residential builders who put up blocks of self-contained flats for a later generation of English-speaking young professional men.[63] As Calcutta transformed from company town to imperial capital, and then to a post-imperial mercantile centre—a transition from an orderly legible and urban form to a more syncretised space outside the framework of municipal bureaucracy—the market functioned as a node, but one with few clear boundaries and with an always relocatable edge. Autonomous land use rather than geometric order amongst day traders and street hawkers subverted that imageability and legibility through which Westernised cognitive maps cohered.

Pathways and edges

By crowding Lynch's pathways and disturbing any notion of an edge, the motor car, technocratic symbol of the modernising twentieth century city, emerged as a crucial barrier to legibility in late colonial Calcutta. Census officials in 1921 noticed that in both Burrabazar and Ward 13, shops and houses had made way for automobile repair yards. Traffic on new boulevards, especially those running north–south, were subjected to an ever more complex jumble of private cars, motor lorries, taxis, bullock carts, trams, cyclists and horse-drawn carriages. Despite such visible confusion, to R.J. Minney, the motor car, along with the cinema, was emblematic of a modernising, inter-War Calcutta. Minney described streets with:

> cinemas, flung with a lavish hand northward and southward; tramways, taxis and buses; the most modern of modern motors to the number of ten thousand and a population of above a million, which makes a car for every hundred people; without considering carriages and motor cycles.[64]

If the car was a marker of modernity, enthusiastic observers could also claim it as a triumph of Western superiority. One visitor watching traffic in the city asserted:

62. Swati Chattopadhyay, 'Blurring Boundaries: The Limits of "White Town" in Colonial Calcutta', *The Journal of the Society of Architectural Historians* 59, no. 2 (2000): 154–78, https://doi.org/10.2307/991588; for comments on chummery life amongst the port's professional pilots, see M.H. Beattie, *On the Hooghly* (London: Philip Allen, 1935).

63. 'Modern Calcutta: How the City Has Changed', *The Times of India*, November 23, 1923: 8.

64. Minney, *Around Calcutta*, 18.

> The clash of East and West is carried into Calcutta…the clumsy bullock-cart with its rumbling wheels…. On the other hand the modern method with petrol-driven cars, rubber-tyred…the brains of the mechanical world hidden under their steel bonnets… the motor car has come to stay and the days of the bullock cart are numbered. The east must give way to the west.[65]

Had this motoring enthusiast bothered to check, he would have found that on Indian roads, motor cars were obliged to give way to all livestock, bullocks included.[66] And as historian David Arnold pointed out, any move towards motorised manipulation of road space was always contested.[67] Even Minney was forced to acknowledge that Calcutta roads could not live up to the moderniser's promise of speed and uninterrupted travel along exclusive pathways. He recollected a typical journey from Howrah Station to South Town in which, once crossing the river, 'Your taxi has shot down Strand Road and chances are that by now it has burst a tyre…. There are more nails on the surface of Strand Road than would stop a hundred packing cases gaping'.[68]

If city roadways never made for legible pathways, then Calcutta's indigenous mechanics failed to work by the 'modern method' that Western and Westernised commuters expected. Taxi passengers, in particular, were surrounded by sounds quite distinct from those of 'the brains of the mechanical world'. In the most 'terrible' of Calcutta's taxis:

> A series of holes on the dashboard mark the place where instruments once did service. A collection of loose wires are entwined around the steering wheel…. From under the bonnet comes a series of knocks conveying the impression of a bunch of keys attached to the crankshaft.[69]

Taxi drivers' routine rule-breaking further disturbed any notion of an edge to city districts. These road users proved just as adept in inverting colonial knowledge as had traders in Burrabazar, with passengers often finding themselves just as powerless in bartering over the fare as in trying to strike a deal in the market. While the state of their machines often terrified passengers 'appalled at the dangerous, decrepit condition of taxis generally', some of their clients sought to exempt drivers from the criticism of motor mechanics. Their taxis might just splutter along, but the drivers were 'Sikhs possessing a high standard of ability and road sense'.[70] Despite their skills, this traffic—confused and agonistic rather than hybrid—disturbed the sensory experience of seamless order that modern technology promised. The roadway in any case had become a lived space for the city's bustee dwellers. Even along the Calcutta Improvement Trust's avenues, the old was fused with the new. An antiquarian devotion to repair, reassembly and reuse amongst motor mechanics and

65. *Horsham Times* (Victoria), March 4, 1927, accessed August 20, 2024, https://trove.nla.gov.au/newspaper/page/7097445.
66. Part 2.4, Indian Motor Vehicle Act, 1914, modified to 1931, Act VIII of 1914, http://lawmin.nic.in/legislative/textofcentralacts/1920.pdf.
67. David Arnold, 'The Problem of Traffic: The Street-Life of Modernity in Late-Colonial India', *Modern Asian Studies* 48, no. 1 (2012): 119–41, https://doi.org/10.1017/S0026749X1100059X; see also Tarini Bedi, 'Thinking through Urban Obsolescence: Tinkering, Repair and the Politics of Joona in Bombay/Mumbai's Taxi Trade', *International Journal of Urban and Regional Research* 45, no. 5 (2021): 848–68.
68. Minney, *Around Calcutta*, 20.
69. *Horsham Times,* March 4, 1927.
70. *The Statesman* (New Delhi), November 14, 1929, State Library of Victoria, Newspapers: 6.

drivers hardly fitted with a Calcutta that had left uneasy undercurrents behind. The unease of the motorist and taxi passenger whenever they ventured onto roadways reflected the manner in which local drivers co-opted their own autonomous spaces on the road. Their cars, kept running by amateur, folk knowledge of oiling, steering and engine cooling, symbolised an inventive modernity lying somewhere beyond a fusion of the Western and the indigenous. If the motor car and the boulevard were, as Minney asserted, harbingers of modernity, then this was the modern world reimagined and reordered by ingenious, often self-taught, motor mechanics and taxi drivers.

Modernity, legibility, landmarks

Modernity had come to play a contradictory role in a colonising mental imagery: in some cognitive maps, it destroyed Calcutta's distinct identity; in others, it ensured Calcutta's uniqueness, or so one American visitor in 1905 remarked more or less blandly:

> Calcutta is a modern city compared with the rest of India…. [It] is a fine city. The government buildings, the courthouses, the business blocks and residences, the churches and clubs are nearly all of pretentious architecture and imposing appearance…. [M]ost are up to date.[71]

Knowing they had little choice, Western observers acknowledged the modernity of post-imperial Calcutta and were then quick to subordinate the 'up-to-date' contemporary townscape to a more comforting past. Expatriate Montague Massey, looking back over his 50 years in the city, was forced to admit that a modernised Lindsay Street, leading into New Market, had undergone 'some wonderful and striking changes'. Alongside the market itself, he was glad to discover once ugly and tortuous laneways 'straightened out and brightened up'. He was, though, quick to retreat to the churches, mansion compounds and British clubland of his early days in Calcutta.[72] Western wanderers in late colonial Calcutta routinely followed in Massey's footsteps, acknowledging modernity before turning back to the familiar landmarks of Calcutta as company town and imperial capital. 'Old Calcutta with its traditions and remembrances loved by both writer and poet, is dying slowly', lamented one journalist. A modern Calcutta arising in its place had 'much that is good and little that is romantic'. Now blocking vistas of spires and domes, Calcutta's novel skyscrapers 'proclaimed the advent of the modern age, business-like but unlovely'.[73]

Landmarks were regarded by Kevin Lynch as locative points, singled out by the viewer from an endless range of potential orienting sites. A landmark could be a prominent building, familiar signage, or simply a landform. In other words, the landmark systematised all of Lynch's townscape elements. In Calcutta, these landmarks for the Westernised were icons of an historic city, singled out from the modern townscape. Nostalgic retreat to the landmarks of Old Calcutta led Europeans

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71.   William E. Curtis, *Modern India* (Chicago, IL: Fleming H. Revell, 1905): 483.
72.   Montague Massey, *Recollections of Calcutta for over Half a Century* (Calcutta: Thacker, Spink & Co., 1918): 100–08.
73.   'Modern Calcutta: How the City Has Changed', *The Times of India*, November 23, 1923: 8.

to a reflexive comparison between the 'natural tendencies' of mercantile centres. One chronicler, who fully embraced Calcutta's vernacular idioms, could still find himself looking across the Hooghly and wondering about parallels with Dublin, Cork, 'the great wharves of New York or the earliest streets in Boston'.[74] In recognising the modern without enthusiasm, while resurrecting a romantic Old Calcutta, these writers were able to divorce themselves from the diverse, complex districts and nodes of the wider city. Memories of the old, together with the functionalism of the new, allowed them a bridge over any hybridity in everyday life in Calcutta. They could look beyond the burgeoning space of autonomy and processes of subversion. Their mental maps gave a sense of ease and comfort in the face of secular transformation, so that observers only reluctantly adapted to the religious, ethnic and commercialised diversity of the late colonial city.

'The bazars are India's social nerve-ganglia', wrote one retired soldier, on his final sub-continental tour.[75] Burrabazar, the extroverted node, presented an impenetrable confusion to the colonialist, whilst sustaining a cognitive order for traders and up-country immigrants. Recognising familiar markers of the modern amidst the confusion only intensified unease. The market's extroversion unfolded into spaces of subversion. Traders' autonomy was adapted to the opportunities of the city as it modernised in built form, technological networks and consumer preferences. In New Market, constant rebuilding in a crudely modernist idiom did little to exclude alms seekers, day traders or street hawkers who constantly reworked space. The pattern of edges or districts in colonisers' urban phenomenologies remains less clear. A coloniser's mental map of Calcutta would also need to encompass zones of exclusion, such as the military-controlled Maidan around Fort William, or the barriers posed by the Port Corporation, the city's largest land user. Any network of landmark sites could never exclude spiritualised spaces: Kalighat Mandir, Dakshineswar Kali, the Parsi Agni Mandir, the Jain Temple or Nakhoda Masjid. Finally, public space could be infused with an ephemeral material geometry, as sites for annual festivals and processional routes rather than permanent structures. Only with great difficulty can these be embedded in Lynch's mental images of legibility.

Mapping modernity

Urban technological modernity destabilised Western mental maps of the city, whilst giving self-consciously 'modern' travellers a sense of agency: as in Amit Chaudhuri's reading of Walter Benjamin's *flânerie,* they became interpreters of the 'up-to-date' and masters of the antiquated. Their own paradoxical retreat to the historic and nostalgic was driven by recoil from autonomous localised adaptations of modernity, expressed in the confusion of modern, traditional and hybrid in Burrabazar, the loosening of geometric modern order in New Market and the antiquarian reconstruction of the taxi-cab on the city's modernised arterial roadways.

Where do these experiences of pathways and nodes, edges and districts leave a Calcutta of modernity? There remain limits to any reconciling of haptic precarity,

74.　 John Oliver Hobbs, *Imperial India: Letters from the East* (London: T. Fisher Unwin, 1903): 56.
75.　 Mark Channing, *Indian Mosaic* (London: George G. Harrup, 1930): 105.

or metropolitan entropy, with modern spaces of social control. One particular 'fly in the ointment' confused bureaucrats across the late colonial period and beyond. As an adulatory account of civic improvement warned:

Barra Bazar has not yet been bereft of its horrors—its narrow alleys almost choked with refuse, its dark, dingy houses, its stench, its flies, its neglect of all rules of sanitation still go unheeded. The Improvement Trust has just commenced to touch a mere fringe of the problem....[76]

Decades before Lynch developed his typology, the pioneering urbanist, Patrick Geddes, had proposed an alternative to the top-down, set-piece clearances through which sanitarians and road-building engineers sought to replace the 'narrow alleys' of Burrabazar and its neighbouring wards.[77] Geddes designed urban spaces so as to resolve tensions between modernity and tradition, or between indigenous and imported spatial form. Rabindranath Tagore thought that Geddes' plans for Indian cities revealed a sense of place drawing on 'the precision of the scientist and the vision of the prophet'. Moreover, Geddes was 'an artist able to use the language of symbols to transform the mechanics of the city plan' through a vision attuned to the 'mystery of life'.[78] Geddes' plans for Calcutta realised some of this potential harmony while avoiding the failures of technological modernity. He brought a street-level experiential urbanism to his planning schemes for Burrabazar. Best known for a respect for traditional building in strategies of a preliminary building-by-building or 'diagnostic survey' and 'conservative surgery' in renovating traditional structures, he also accepted appropriate demolitions. In Calcutta's case, these included land clearing for a concentrated warehouse district in Burrabazar. Beattie identified additional elements in his plan that allowed for modern land uses. Geddes, however, consistently emphasised respect for vernacular building traditions and was scathing about the standard bureaucratic and engineering solutions to mobility and sanitation. The 'cult of the state' meant to Geddes an ignorance of intimate local patterns in alleyways and courtyards.[79] Engineers masquerading as town planners were obsessed with straight lines blasted through towns 'regardless of both cost and consequences'.[80] Municipal authorities remained loyal to their engineering advisers and eventually abandoned Geddes' vision, confident that the confusions of the markets would vanish once they cleared bustees and drove roads around edges.[81] It was this engineered planning to which Patrick Geddes objected and for which he imagined human-scale alternatives in the South Asian city. In proposing adaptive reuse for traditional buildings and by remaining sensitive to the spatial awareness of pedestrians rather than the demands of motorists, Geddes foreshadowed that faith in organic form promoted by a later generation of radical urbanists. His desire to enhance rather

76. 'Calcutta Improvement Trust: How the City Has Changed', *The Times of India*, February 7, 1929: 16.
77. Beattie, 'Sir Patrick Geddes'; Noah Rubin, 'The Changing Appreciation of Patrick Geddes: A Case Study in Planning History', *Planning Perspectives* 24, no. 3 (2009): 349–66.
78. R. Tagore, 'Foreword', in Amelia Defries, *The Interpreter Geddes, The Man and His Gospel* (London: George Routledge & Sons, 1927): xiii.
79. See, for example, photographic plates in Jacqueline Tyrwhitt, ed., *Patrick Geddes in India* (London: Lund Humphries, 1947).
80. *Ibid.*, 32.
81. Martin Beattie, 'Colonial Space, Health and Modernity in Burrabazar, Kolkata', *Traditional Dwellings and Settlements Review* 14, no. 2 (2003): 7–10.

than obliterate 'courtyards, rooftops, thresholds, pavements, small shrines and parks' found echoes in later community activism.[82] For this reason, the planning historian Peter Hall observed that his ideas were to be resurrected in the 1960s readings of experiential urbanism, such as the typologies of Kevin Lynch.[83]

It is tempting to assume that widespread adoption of Geddes' concepts may have made up for the loss of a human-scaled urbanism that is now lamented. Lynch, however, was not confident about how any experiential, humanised design could function at a metropolitan or regional scale, let alone in the megapolitan expanses of a twenty-first century city such as Kolkata. Beyond his five urban elements, Lynch differentiated subsets to legibility reflected in problems of coherence, reversibility and visibility at a metropolitan scale.[84] Today's observers are no doubt justified in seeing the late colonial city as possessing a more stable urban form than the contemporary megapolitan expanse. However, applying Lynch's method to the late colonial city points us to a more precarious sense of place. In Burrabazar, confusion in reading commercial and cultural networks compromised any systematic legibility evident in the market's material form. Historians have successfully identified ways in which vernacular practices and built forms incorporated modernising opportunities. They have less to say about the extremely limited inroads that modernity had made in the early twentieth century European city. Looking across the diverse category of European cities in the early twentieth century, there is no reason to suppose that their constricted modern elements operated with an authority or efficiency to match modernised Calcutta. In much the same way, mental maps of Westernised observers never fully comprehended the city's South Asian urban character, which could, in different localities, become hybrid, agonistic, flexible, autonomous or reinvented through vernacular technique.

Lynch's elements can appear excessively descriptive rather than analytical. As both Burrabazar and New Market demonstrate, cultural and commercial confusion could undermine any attempt to locate nodes, follow pathways, define districts, avoid edges or to orient by landmarks. Nonetheless this fivefold typology of a pedestrian's image helps to disaggregate an otherwise generic recoil from autonomy and subversion. In place of either fusion or conflict between tradition and modernity, this typology elucidates a Western mental map destabilised by the complexities, both imported and vernacular, of Calcutta. As indigenous autonomy challenged topographical social control in the city, so Western observers, both inquisitive and uneasy, lost confidence in their own ability to read its spaces. The imageability thesis of Kevin Lynch takes us beyond the city's markets as products of 'racial' hierarchy. Mental maps, despite some blind spots, present the modernising and vernacular city in a rich complexity, rather than a crude binary.

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82. Partho Datta, 'Patrick Geddes and the Metropolis', in *Cities in South Asia*, ed. Crispin Bates and Minoru Mio (Milton Park: Routledge, 2015): 47–63; 51.

83. Peter Hall, *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century* (Oxford: Basil Blackwell, 1988): 244–53.

84. Lynch, *Image of the City*, 105–14.

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