

Perspective

# After the Contagion. Ghost City Centres: Closed “Smart” or Open Greener?

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**Abstract:** This paper has three main objectives. It traces the “closed” urban model of city development, critiques it at length, showing how it has led to an unsustainable dead-end, represented in post-Covid-19 “ghost town” status for many central cities, and proposes a new “open” model of city design. This is avowedly an unsegregated and non-segmented utilisation of now often abandoned city-centre space in “open” forms favouring urban prairie, or more formalised urban parklands, interspersed with so-called “agritecture” in redundant high-rise buildings, shopping malls and parking lots. It favours sustainable theme-park models of family entertainment “experiences” all supported by sustainable hospitality, integrated mixed land uses and sustainable transportation. Consideration is given to likely financial resource issues but the dearth of current commercial investment opportunities from the old carbonised urban model, alongside public policy and consumer support for urban greening, are concluded to form a propitious post-coronavirus context for furthering the vision.

**Keywords:** urbanity; closed model; open model; repurposed ‘agritecture’; urban prairies



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## 1. Introduction

Today’s planners are seriously ill-equipped to deal with the most significant crisis they are likely to have faced in their professional lives. They are confronted with profound and multiple dislocations in the city-regional fabric with which they habitually interact as design facilitators. They retain some strategic competence although nowadays they have largely relinquished tactical design responsibility for the renewal of built environmental facilities that meet their “soft planning” aspirations. However, such is the scale and complexity of the task confronting them that new skills have to be learnt or old ones re-learned. A typical opinion-piece on the subject can be seen to express a common concern:

“... city centres have become ghost towns ... In large urban areas, from Boston and Milan to Tokyo and Mexico City to New Delhi and Toronto, city centres show large declines in mobility ... Covid-19 could speed up the pull of suburbs for families and move more jobs out of city centres. ‘The pandemic will not only reshape cities, but it will reshape suburbs and rural areas,’ says Richard Florida, professor at the School of Cities and the Rotman School of Management at the University of Toronto, and Distinguished Visiting Fellow at the Schack Institute of Real Estate at New York University”. [1]

Were these observations to turn out to be true in the long-run then their effects would be momentous, overturning the conventional perspective on how cities are structured for all of those listed and many other global and local urban settings. The late twentieth and early twenty-first-century city evolved to portray a generally recognisable “core-periphery” configuration. The suburbs surrounded the inner-city of residential or mixed artisan/residential older housing and the core concentrated the central business district (CBD), city administration facilities, major retail, entertainment and subsistence (restaurants, bars and cafes) outlets and transportation hubs (road, rail, tram, metro and bus services) linking core to periphery, including cross-town connections [2] While the largest

global cities, like Tokyo, might also have sizeable secondary business districts (SBDs) these were recognisably intrinsic functional nodes even in more modestly-sized cities and towns.

One thing that seems to have united the experiences of more than a few city residents faced with Covid-19, has been the desire to escape the densest residential and business areas in the core and flee to the suburbs and beyond into exurban or rural settings. In 2020 London house prices grew by 25% less than the rate for smaller towns in semi-rural locations [3]. Moreover, London's population was forecast to decline for the first time in 30 years by 300,000 in 2021 according to accountants PwC [4]. This has been stimulated by households seeking rurality or augmenting the hitherto mainly residential function of their suburban dwelling by treating it effectively as their main workplace. Hence the "ghost town" effect of their departure from working in the CBD or its surroundings, depriving retail, entertainment and subsistence functions of their customer base and imperilling thousands of jobs in the often surprisingly huge hospitality labour market. Meanwhile, suburban SBDs, with protected essential status like supermarkets or unlocked-down retail, suffered less because they retained domestic and work-based customers even if many of the latter were also dwelling-based.

Accordingly, SBDs saw their suburban residential areas rising in value as some inner-city locations—even often—"gentrified" ones—were perceived as architecturally constrained while the former, containing larger, possibly more flexible spaces, were perceived as allowing one or more household member to be "working from home" (WFH). This could occur internally and conceivably externally because suburban dwellings also usually entailed much more spacious gardens than the average. These settings gained value from both available fresher air than prevailed in the inner-city suburbs and opportunity for contemplative or other leisure pursuits as well as space for converting or building external WFH office-premises. They would also be cheaper than more urban residential locations while the travel-to-work imperative and cost of daily commuting were cancelled while furloughing prevailed.

In what is presented in the following sub-sections, three possible exits from the current urban malaise are proposed to assess, against key criteria derived from the preceding diagnostic sketch, as interpreted in contemporary urban theory, the extent to which they meet expressed needs. The first such "model" is what [5] considers a traditionally "closed" but also contemporary high-tech solution, popularly referred to in the literature as the "smart city". Contrasted with that is a more networked, "generative growth" design which fits what he refers to as a more "open" urban model for future living and working. Finally, a third variant, operating at a city-regional scale combines a few of the first model elements but more of the second, albeit on a larger spatial canvas than either.

## 2. Evolution and Extension of the "Closed" Urban Model

The societal imperative of "discipline and punish" [6] as means of controlling the established social order of potentially turbulent classes, slave, indentured or otherwise dependent but oppressed societies, is at the heart of modern psychological analysis and is the origin of its sub-discipline of behaviourism. As such, it has been the subject of profound and arguably irresponsible specialist research into behavioural psychology of the kind advocated by notorious practitioners like B.F. Skinner, Alex Pentland [7–9] or companies like IBM, Google and Facebook. These are now understood as fundamentally intent on ensuring "predictive" social control, seeing democratic politics and collective policy action as undesirable "friction". For Skinner, "smooth" operations obviate illogical, unintentional or unreasonable outcomes. For IBM extolling the Internet of Things (IoT) as "liquification of the physical world", means "the Internet becomes invisible" as everyone's personal ID becomes data stored on smart devices, hence a secondary revenue source. Contrariwise, unstructured data that have not been "datafied" or encoded cannot, by definition be so "liquified" or like financial assets "liquidated" thus they are *friction*. IBM calls this "dark data" lawless, contrarian and "out of control" [9]. She continues: "... Note the echoes of MacKay (early animal behaviourist) here, with his determination to penetrate the secrets of

*unrestrained animals and inaccessible regions.*” From this perspective geographical “space” becomes “friction” until it is planned in such a way that, as Skinner puts it: “political action is to be avoided” (Skinner, *Walden Two*). The clarification is obvious—“data”—are the “free good” that facilitate “data miners” in creating untold wealth from robbing “users” of their identifying “data”. Absence of that facility causes “friction” that prevents data miners from selling the user’s free “data” to advertisers to attract the same user’s “attention” to influence them to make a purchase [10].

Comparably, [11] admires the prospect of “predictive management” that replaces established frictions like “market” and “class” in what he presents as an “instrumentarian society” with cities as “idea engines”. Thus it is the owners of these “idea engines” that control, with small incentives and “nudges”, the regulation of the inhabitants of geographical space. Writing in a time of coronavirus, this envisioning is almost a description of daily reality, with international league tables ranking the most compliant and least successful “instrumentarians”. Those who performed well-conducted “predictive management”, were well prepared and controlled the “dark data” (Korea, Germany). Those that performed badly were those driven by political “friction” displaying illogical, unintentional or unreasonable policy action (UK and US). Failure to be actual “idea engines” equalled mounting death totals as a consequence. For [7] the idea engine that counted is the stealing of “attention” in what [12] calls the “attention economy”. While Fogg prioritised “Vanity” as the most persuasive form of attention-grabbing at his hitherto known as the Stanford University Persuasive Technology Lab, now moderated even more creepily to the Behavioural Design Lab, he taught many of the “class of 2007” digital technology social media entrepreneurs from Instagram, YouTube and Twitter. Recall that “attention” was the [13] deduction that an information society means everything must compete for the individual’s scarce attention. The logic of that is an “economy of attention”, as [12] calls it, which ranks observer status by how many of their posted website “likes”, “follower” and “influencer” tags are scored. These bestow the status of “celebrity” on the victors and “nonentity” on the rest in a prodigiously polarised and differentially rewarded simulacrum [14] of society at large. Accordingly, the attention economy is the psychological means by which markets segment society and space into an entitled, privileged group (celebrities), a service class (influencers) and an adoring mass of unentitled (non-celebrities).

We are thus led to the [5] treatment of modern urban closure as a key means of social control for such nefarious exploitative practices as identity theft, racial discrimination and promotion of addictive behaviour by such “data-mining” companies as those listed above. These are also leading promoters of “smart” living and working from “smart” houses and “smart factories” to “smart cities”. Urban closure excludes “undesirable” social groupings from normal contact with “celebrified” elites by spatial segmentation. In the contemporary era, “gated communities” are the most obvious indicator of such social exclusion. The current crisis and the need for safeguards to secure social control in the face of global pandemic conditions reminds us of this lineage. Traditional cities were closed—Sennett cites the Italian originated word “ghetto” as an early form. This enclosure “degli Ebrai” occurred first even in pre-Christian Rome though its ghetto was officially established in 1555, the pope following Venice’s official designation of the eponymous New Foundry (Ghetto Nuovo) in 1516. So enclosure and separation, specifically of Jews, initially behind high walls crossed by gated bridges controlled with curfews formalised these traditions, which were also emulated elsewhere in Europe wherever Christianity and significant urban trade or commerce involving Jews, or other foreigners, prevailed. Frankfurt in Germany (1462–1811) had an enclosed ghetto. But in Spain Jewish quarters were less ghettoised, especially Toledo, Girona, Barcelona, Palma, Seville and Cordoba in Spain (until 1492).

Interesting as the way such exertions of absolute power occurred over bodily persons and their communities by papal or ducal administrative decrees, edicts and injunctions, they were only exemplifications of the near-extreme inhumanity of which such regimes are capable, without even touching on their later apotheosis in Germany 1933–1945. More to the point, they show that while segregation was humiliating from the outset, even ghettos

could feature co-operative, collaborative and communal interactions among the “other”. Recall also that while pogroms were routine in otherwise liberal cities like Frankfurt or Odessa that hosted large, settled “alien” communities, and even the ghettos of Spain where Jews enjoyed royal protection yet were killed in thousands well before the Inquisition and Jewish expulsion in 1492 at the behest of, as usual, Christian powers. So segregation of the kind described was, in medieval times and beyond, widely practised in Europe and lethal in its periodically brutal effects.

Between then and now, extreme segregation of ethnic or religious communities behind walled enclosures such as Ghetto Nuevo has thankfully disappeared from history. But modern urban segregation has become far more pervasive along ethnic and social class lines at the behest of modern land-use markets. We sketch elements of the evolution of destinations for erstwhile “segmentees” from Odessa, Riga, Frankfurt, and such locations to reception cities in the West, taking as contrasting exemplars the large cities of Los Angeles and London. We select these as illustrative instances of cities situated in highly marketised social economies that display typical socio-spatial grading of domestic and commercial locational patterns that exert “granular” urban closure through social and economic segmentation. Typically, poor people, including especially those from immigrant communities, occupy the densest, most overcrowded and unhygienically polluted and Covid-19-rife quarters of cities. Income and wealth levels vary the occupancy of almost exquisitely defined and refined residential distinctions in suburbs like transitioning Mar Vista, Los Angeles, expressed as “south of Santa Monica (Boulevard) but north of Pico (Boulevard)” in bourgeois relief at the former but anxiety about the latter locational status [15].

“... starting with the remarkably evenly spaced military bastions that punctuated the outer limits of fragmented and fragmenting Los Angeles in 1985. Even with extensive peripheral development and the growth of outer cities, the centre still holds. Contained and protected in the urban core were the crown jewels of then contemporary capitalism: the Western world’s fastest growing and largest industrial growth pole and job-generating machine; its largest weapons arsenal; the largest cache of federal government investment in the United States; the biggest pool of (then) malleable immigrant labor from the developing world; and reputedly the largest concentration of scientists, engineers, and computer specialists anywhere. A new intra-metropolitan geography was taking shape, however, as both the urban core and the periphery were changing significantly”. [15]

Unaccountably, this list manages to overlook the world’s premier cinematic and entertainment complex, as found in the Hollywood film production district. Alternatively, it had been settled in an unchanging space whereas everything else was in segmented motion or in the form once described as “all that is solid melts into air” [16] and more recently as “liquid modernity” [17]. Los Angeles had more robust suburban SBDs than London although Croydon was a single “Edge City” mainstay of retail and office employment. This changed slightly with the shopping mall boom of the 1990s and early 2000s, many of which are now increasingly in distress as their chain stores are bankrupted by Covid-19.

London displays comparable but inverted segmentation to Los Angeles. From Savile Row (suits) to Jermyn Street (shirts) men’s bespoke clothes markets have long been in distinctive streets albeit mostly, like downmarket Carnaby Street, in the West End. Bookshops used to dominate Charing Cross Road, electronics Tottenham Court Road and newspapers Fleet Street though these became more “liquid” in recent times; something to which we return to below. Gentrified residential districts that once housed slums, clock manufacturers, or food processing are found in Notting Hill, Islington, Clerkenwell and Shoreditch *inter alia*. Brick Lane has long been an East End “zone of transition” nowadays for South Asian migrants, while earlier Indian immigration selected Southall, near London airport. Pogrom refugee descendants from the old Russian Empire predominate in Hasidic or Haredi Jewish areas like Stoke Newington to which various aspirant East Enders once moved. Successful ones moved further out to Finchley, Golders Green and Barnet in more northerly as well as eastern suburbs. Elsewhere, as [5] notes of his Saffron Hill abode, once

a Dickensian “Rookery,” it is close to the London diamond cutting market of Hatton Garden, another centre of Haredi settlement. London had little history of high-tech electronics or biotechnology but now that it has its King’s Cross Knowledge Quarter, it has coalesced and grown with a massive government subsidy of reconverted railyards and other massive urban regeneration. Much of its public administration is centred on Westminster while its lawyer’s districts of the Inns of Court (Temple) have also traditionally included nearby Lincoln’s Inn Fields near the River Thames. Fun used to be concentrated over the river in Vauxhall and Southwark across London Bridge but migrated to the West End where major department store retail, accommodation and hospitality added significant support to London’s fluctuating labour market.

Two things are striking about the contemporary era of urban spatial segregation first, through *specialisation* of functions which were once pronounced as with Marshallian industrial districts in the nineteenth century, of which the Clerkenwell clock-making district was an exemplar. However, the second refers to the exclusivity of such specialisation and its attendant inclusivity for insiders. Many critics have commented upon the negative side of so-called “smart city” imperiousness as a contemporary form of cultural or “creative class” “ghettoisation.” Even the aforementioned Richard Florida has now auto-critiqued his evangelism for the: “... vexing challenges: gentrification, unaffordability, segregation, and inequality ...” entailed by creative class techno-utopianism [18–24].

Concentrating, first, on the modern revival of spatial specialisation from its heyday in the Victorian era through the intervening century until the present, such commercial segregation gave way to greater diversification of uses with the rise of mass production and the large corporations that destroyed competition from “factories without walls” composed of small, specialist businesses occupying specific spaces. Regarding housing segregation, gentrification, war-time bombings, Thatcherite privatisation and “blockbusting” of Edwardian mansion apartment rentals have been London’s main forces for shifting the fates. These include either the former “Rookeries” and other decrepit slum residential areas or established middle-class residential blocks in central city areas. By contrast, more generally, suburbia remains a stable if not static feature of great swathes of our two main comparators.

This is particularly true of Los Angeles, which lost its erstwhile epithet as “the suburb in search of a city” when it developed a markedly high-rise city-centre townscape in the 1980s–1990s. This now rivals the commercial, financial and real estate CBD of Wilshire Boulevard that, unusually, pre-dated it, extending all the way to Santa Monica some fifteen miles distant. Five key SBDs concentrate on different commercial specialisations, not untypical of the city’s penchant for automobility. These are: Wilshire Grand Center, which is identifiable from the presence of an early contestant for California’s tallest building. It is a major US financial centre with luxury hotel accommodation and related hospitality services. One Wilshire is a huge office tower occupied by lawyers in the 1960s but overtaken by some 300 telecoms companies attracted by AT&T’s major Pacbell switching station. Also of importance is “Miracle Mile,” which is a major metropolitan art gallery and museum concentration. The Los Angeles County Museum of Art (LACMA), The Petersen Automotive Museum, A+D Museum, Craft Contemporary, George C. Page Museum, and La Brea Tar Pits pavilions, among others, create “Museum Row” on the Miracle Mile. Next is Century City, the former studio lot of Twentieth Century Fox. The Fox and MGM studios are now located in a series of skyscrapers, along with many historic Los Angeles hotels. Finally, Koreatown has occupied its area of Mid-Wilshire since its first immigrants settled in the 1960s. Korean and some Latino transportation, tourism services, accommodation and hospitality predominate. Thus Asiana Air, Korean Air and TACA (El Salvador) have major sales and operations offices here. It is also a major centre for Consulates including those of: South Korea, People’s Republic of China, El Salvador, Guatemala, Nicaragua, and Bolivia, Indonesia and the Philippines and related consular services. Hence this corridor contains spatial “cluster” communities for: financial services; telecommunications; arts and museums; cinematic and creative industries; and international consular and air transportation.



Thus to conclude this sub-section on a contemporary note, the most widely aspired to and promoted by apologists for high-tech urban living today are particularly enamoured of the idea of “smart cities”. As the label suggests their principal proponents are Silicon Valley or other West Coast technology billionaires ranging from Facebook’s Mark Zuckerberg to Seattle’s Jeff Bezos, the world’s second-biggest billionaire and Bill Gates, the third. Keep in mind these, and others to be listed below, proselytise to their workforces on this subject with a view to converting them to the “smart city” ethos not simply wishing to express their own singular, personal taste as rich oligarchs. Accordingly, of relevance to this section [25] investigates six exemplars of the rise to fashionability of the company town phenomenon disguised as the “smart city” discourse. The key promoters of “smart cities” as “techno-utopian” urban solutions include Google affiliate Sidewalk Labs, led by [26]; Facebook at Willow Village, designed by Signature Development Group abutting two poor Hispanic communities [27], Warm Springs for Tesla at the former NUMMI car-plant at Fremont, designed by Lennar Group, Amazon’s “smart campus” in Seattle, designed by NBBJ [28], and Bill Gates’ Belmont, Arizona scheme, designed by Cascade Investment [29]. The narrative begins with Google’s Silicon Valley “model village” development in Mountain View, California; it assesses progress on the activities of Sidewalk Labs, a subsidiary of Alphabet, the parent company of Google that recently abandoned the design and development for Quayside, Toronto, of so many of the [30] list of inhuman innovations.

These include: “Ordering and home delivery” (Amazon, Deliveroo, Instacart etc.); “Digital music” (iTunes, Spotify); “Ride-hailing apps” (Uber, Lyft) where even the driver has the address in a social media device, obviating the need for conversation; “Driverless cars” (Google; Apple) further elimination of stranger drivers; “Automated checkouts” (Amazon Go; Tesco Express) zero human contact; “AI” (Google, IBM, Apple, Facebook Healthcare diagnostics) superior to human medical skill; “Robot workforce” (Kuka; ABB etc.) automated 24/7 workforce, no worker overheads; “Personal assistants” (Amazon Echo “Alexa”, Google Home, Apple 24me) non-human instructioning; “Big Data” (Facebook, Google) pattern recognition, identity harvesting; “Gaming & Virtual Reality (VR)” (Microsoft, Oculus, Google, Samsung) interaction virtual and anonymous; High frequency trading (HFT) post-human AI decision making; MOOCS (edX, Coursera, FutureLearn) automated higher education lecturing; “Social” media” (Facebook, Google, Microsoft, Apple) simulated “social” interaction. Among the advocates pitching third is Elon Musk’s endorsement of “smart city” development on former industrial land at Warm Springs, Fremont, California, the home of electric car production by Tesla. The fourth instance is Amazon’s “smart quarter” version of the contemporary company town in downtown Seattle. Fifth, this is followed by an update of the Willow Park project of Facebook owner Mark Zuckerberg at Menlo Park, Palo Alto, California. Finally, we feature a vignette of plans for a more “steampunk” company town scheme in Arizona as the brainchild of former Microsoft owner Bill Gates. Meanwhile, as [5] informs us, alienating yet repurposed office blocks like New York’s Googleplex—to which could be added Google’s “linear skyscraper” in London—alienate the outside as they coddle their insiders with pool tables, ping-pong, food-trolleys, sushi and chill-out zones. Contemporary spatial segmentation values internal interaction for enhancing innovation but offers little interest for those disinterested in the discourse [20,22–24].

### 3. Exploring the Looming Crisis of Closure: In Search of Open Urbanity Post-Coronavirus

Segregated and later, segmented, spatial structures of cities have been characteristic of cities in ancient, medieval and modern times but have yet to fulfil the “openness” associated with “liquid modernity” [17]. However, the onset of urban dislocation and commercial disruption of human mobility, trade and commerce contingent on successive lockdowns, working from home (WFH) and the flight of the professional service class to the suburbs and beyond, have occasioned a massive urban policy re-think. First, for example, in the period leading up to the global contagion, the emergence of “smart cities” heralded a looming crisis of urban closure. The widespread vilification, critique and

dismissal of the Google subsidiary Sidewalk Lab's plans for the "smart neighbourhood" of Quayside in Toronto's harbour district led to its shelving. The popular response to its wildly over-ambitious design "from the Internet up" bore witness to the failure of its autocratic "Big Data" identity theft business model of urban planning. Such "smart city" resistance echoed a more Confucian compliance response from urban analysts in South Korea's Songdo "smart city" albeit reminiscent of chief planner Dan Doctoroff's Quayside promotional hype. Thus where [26] extolled:

"... ubiquitous connectivity; incredible computing power including artificial intelligence and machine learning; the ability to display data; sensing, including cameras and location data ... target ads to people in proximity, and then obviously over time track them through things like beacons and location services as well as their browsing activity". [26]

Confronted with the "smart city" Songdo, observers commented upon its "fantasy of ubiquitous computing", "lite" urbanity, "ghost town" ambience, "arid" algorithmic logic, and "inert" sense of place—perceiving Google's "bells and whistles" as an "urban nightmare" [5]. Accordingly, both critical receptions towards "smart cities" noted above stress their "stupefying" nature arising from "attention economy" reductiveness, on the one hand, and "algorithmic logic" on the other [5,31]). But there are further critiques that question the sustainability credentials sometimes claimed for such projects and, more recently their reliance on artificial intelligence (AI) [19,32]. In all directions, such critiques point to consistency among negative viewpoints that question their exclusivity, closure and segmentation in contrast to a lack of democracy, diversity or "openness". Moreover, we can infer that the other "repurposings" and "diversifications" listed as superior criteria listed below are also unlikely to be fulfilled.

So now we have two "ghost town" examples in a sense vying for primacy in the post-coronavirus era. It seems, on this reading, that if, Ghost Town No. 2 is an algorithmic dead-end, what about Ghost Town No. 1? To recall it is the version that has for much of 2020 been bereft of life, activity, commuting, vitality and inspiration due to the enforced absence of people on the streets. So much so, that thousands of retail and office employment locations have been closed down temporarily or permanently by the coronavirus. It is possible that the scars of this disease wreaked upon urban society, especially in large, densely populated cities whose CBDs and other productive zones have been abandoned will need repurposing. In the remainder of this section, we make five brief points following a "pattern recognition" methodology [33]. These are, in the following:

- Opening up the city
- Repurposing redundant office blocks
- Repurposing redundant commercial and retail premises
- Providing new mixes of consumption activity
- Systematic "greening" of city functions and facilities.

### 3.1. Opening Up the City

Desegregating and de-segmenting city space is implied by the ultimate failure of the closed pure-market hegemony over the city in ways that, insofar as possible, de-capitalise laissez-faire capitalism. At one extreme this could take the form of seeding prairie or other landscapes that hitherto accommodated hard-surface concrete, asphalt, steel, brick and cladding supporting buildings that have by now obsolesced central urban space in the larger downtown areas. The outlines of repurposing such urban hardscapes can be seen in settings like the *Jardin des Plantes de Paris* opened in 1993 near *Gare d'Austerlitz* covering 28 hectares on the banks of the Seine. Since opening, the entire garden and its contained buildings, archives, libraries, greenhouses, *ménagerie* (a zoo), works of art, and specimens' collection are classified as a national historical landmark in France. It has four main Galleries, Evolution, Mineralogy and Geology, Paleontology, and Botany. It began as Paris' main Herbal Garden and evolved a function such as that typically found in

Australia's Economic Botany Gardens or in South Africa such as Kirstenbosch National Botanic Garden in Cape Town. More recently, the modern "urban garden" idea received a repurposed concept in the form of New York City's High Line, in a redundant elevated railway line on the Manhattan Lower West Side. The beauty of the two ideas for "ghost city centres" after the contagion are the interactive opportunities for contrast in the lateral dimension between spatiality and linearity, on the one hand, and, on the other, verticality in the form of elevated pedestrian parkways that afford both broader vistas and top-down views among the landscaping. More recently, Paris mayor Anne Hidalgo announced "an exquisite garden" for the Champs Élysée, the base of the Eiffel Tower and the Place Concorde. Now London's Camden Highline is at design stage by the same Corner practice, assisted by Highline landscaper Piet Oudolf. Urban re-purposing is planned for Barcelona's green superblocs, Milan architect Stefano Boeri has 'greened' the Milan Pirelli towers and a redundant shopping mall is slated for replacement by riverside parkland in the UK.

### 3.2. Repurposing Redundant Office Blocks

There are many ways of achieving this aspiration—bad repurposing as in the UK where planning restrictions were lifted to allow conversion developers to transform inadequate stationery cupboards into uninhabitable "apartments" or sustainable adaptive re-use. The better idea here is repurposing such blocks for high-rise horticulture. This is not a new idea, though more is written about urban farming in general, rather than hydroponic horticulture in vacant high-rise office blocks [34] on Bologna. Here, four categories of urban vacant areas were identified as implementing "urban gardens": flower beds along streets and squares; balconies and rooftops; abandoned buildings; and abandoned neighbourhoods. It is the third of these that is of immediate interest (the fourth, in well-studied Detroit, already has nine hundred urban farms; [35]). In Toronto's Seneca College, the Ripple Farms start-up specialises in aquaponics in an adaptively reused shipping container at the former Evergreen Brickworks [36]. The ground floor is filled with a large fish tank, along with a filtering system that provides nutrient-rich water to the greenhouse on top of the container. This feeds salad and herb plants such as rucola, Swiss chard, kale, basil and mint. The system grows nutritious crops and creates no waste except rich fertilizer that is later used in traditional soil farming. Supported by the city's food policy, food underlies urban goals of health, nutrition, social inclusion, the environment and economic development. It coined the term "agritecture" to capture the innovative practice of repurposing buildings for food production. Hydroponics feature with organics in the whole greengrocery range of vegetables planned for growth in vacant high-rise buildings in Toronto's city food planning [37]. As noted above and in an earnest show of green intent, the Mayor of Paris, Anne Hidalgo, announced on 10 January 2021 that the *Champs Élysée* is to be turned into "an extraordinary garden" by 2030. The architect Philippe Chiambareta summed up the avenue's problems as "pollution, the place of the car, tourism and consumerism", needing to be redeveloped to be "ecological, desirable and inclusive" [38]. The decision includes plans to re-design the landscape of the *Place de la Concorde* and re-design the Eiffel Tower setting as another "extraordinary park at the heart of Paris".

### 3.3. Repurposing Redundant Commercial and Retail Premises

Here we focus not on vacant high-rise office buildings but shopping malls and other large vacant retail outlets. Some of these have been bankrupted by Covid-19, notably in the UK, department stores like Debenhams and clothing chains like Arcadia. Meanwhile, the commercial developers that have either been bankrupted or suffered commercial rent "haircuts" include the likes of Intu, the international commercial property developer, bankrupted with £4.5 billion debts on UK shopping mall investment, now presenting vacant or abandoned floorspace. The UK had 15,747 shop closures affecting 176,700 city employees [39]. What, apart from demolition, is possible for redundant out-of-town shopping centres. Short-term, low rentals have been offered to co-working spaces, school extensions, small independent shops, charity shops, even gymnasias but many of these



have proven prone to closure in the face of repeated Covid-19 “lockdowns”. In the US, Los Angeles’ Hawthorne Mall was temporarily repurposed as a film location, featuring as a dystopian backdrop for episodes of HBO’s “Westworld”. Ironically, the latter programme was originally designed to attract “attention” as a futuristic “immersive” theme park albeit “cowboy” in style, before finally being demolished in 2017. Meanwhile, Rolling Acres in “rustbelt” Akron, Ohio was observed by “deadmall” (deadmalls.com) urban explorers reported frogs spawning in the abandoned fountain. There is some overlap with the Agritecture theme reported in the preceding vignette, with abandoned mall car parks sometimes being repurposed as market gardens for “farmer’s market” style urban consumption. Elsewhere there are more examples of conversion of large scale abandoned commercial properties being adaptively reused as residential accommodation. The latter is in short supply in many ghost towns but the same strictures apply to callous developers who fail to meet minimum standards for converting malls to residences. The inadequacy of current notions for repurposing downtown retail is summarised in the UK Social Market Foundation report on turning shops into “health hubs”. Little thought is given to the wishfulness of sending sick patients to revitalise “the rise of ghost towns” [40] in this perspective.

### 3.4. *Providing New Mixes of Consumption Activity*

Once the Covid-19 vaccination has moderated the virulent effects of coronavirus, there will likely be a growth in demand for re-populating “ghost centres” with new mixes of tourist attractions—some of the “immersive” kind noted in the “Westworld” type of urban theme park. Shopping was, until coronavirus struck and stimulated massive growth in online shopping even among tourists as revealed in tourist attraction surveys, [41] the fourth most popular activity among global tourists. But, in the future, more city-regional catchment areas will be challenged to anticipate new “experience economy” demands. Hitherto, many theme-park attractions have been freestanding rather than embedded in the pre-existing urban fabric, not least because of lack of space for normally somewhat sprawling attractions in congested downtown or even suburban locations. However, as has been shown, both of these traditional constraints have been removed by the disruption of normal amenities and the emergence of “ghost town” ambiances. Accordingly, new, more local “experience” markets can be envisaged opening up creating opportunities for extended families to be specially catered for. In the current theme-park mega-league, in 2016 the £3 billion Dubai Parks and Resorts opened. This added to the world’s largest indoor theme park—IMG World of Adventure, ranking at only 58 on the US-EU biased TourScann [42] website. The newer one comprises three separate theme parks, Bollywood Parks, Motiongate Dubai (Hollywood-inspired) and a Legoland Park housing a separate Water Park. A new Six Flags park was planned for 2019 but was cancelled because attendances at Dubai Parks were below expectations. Despite—or because—of this, the latter offered more than one hundred rides and shows, the Lapita hotel and its themed retail and food zones. Such over-concentration of a clearly tired 1990s carbon-driven theme-park “fairground” model had by now lost global tourist appeal. So what might be the new and different thing? With appropriately sustainable forethought and planning regarding accessibility, mobility, subsistence and accommodation, urban theme-park experiences can easily be envisaged, particularly combined with innovations of the kind adumbrated in the preceding vignettes. In simultaneity with [11] below, [43] proposes a solution to “overtourism” is to replicate copies of tourist “honeypots” with copies fashioned from holograms and “immersive” technologies (digital VR or augmented reality AR) [44].

### 3.5. *Systematic “Greening” of City Functions and Facilities*

Instead of “theming” new attractions according to redundant “carbonised” models of 1980s infrastructure and “attention” or “experience” attraction for future audiences it might be worth considering adopting optima “green” principles while seeking to modify even vintage elements—such as rollercoasters—among more modern alternatives. Thus,

renewably fuelled “biomes”, “snowdomes” and “waterparks” have been built on a small scale in resort locations such as coastal Portugal and the Atlantic coasts of Wales and Scotland [44]. Among these are facilities that promote so-called “forest bathing”—the 40 hectare “National Forest of Sete Montes” in Portugal connects to its castle, now used by a religious order as an area for cultivation and foraging. Amid climatically appropriate vegetation that may comprise cypresses, olaias, oaks and secular olive trees, this forms a suitable space for forest bathing and its associated “mindfulness” therapy. A related “immersive” activity is developing a “GreenSphere” or circular economy exhibiting, demonstrating and training younger or energetic older persons to re-purpose redundant vehicles, machinery, buildings and fabrics for innovative, adaptive re-use. Abandoned caravans and other vehicles have been adapted for re-use as student and other accommodation as have facilities for “glamping” in the Tomar region of northern Portugal. This “experience” is also set within a forested context, adding to its attraction as an urban afforestation-based project. Accessibility, mobility and subsistence for daytrippers or overnight visitors would be enhanced by fully compliant sustainably designed infrastructure, subsistence and accommodation services.

#### 4. Discussion and Conclusions

The three possible futures sketched in the above narrative can be summarised as: first the traditional “closed” model of urbanisation revealed in typically segregated or more recently “segmented” urban space. Second, a modified version of such segmented urban “closure” labelled the “smart city” was then subjected to critical discourse from diverse angles. Finally, a five-dimensional account was provided that showed how such a framework was capable of being knitted together by imaginative mixing of as much as possible redundant, yet sustainably repurposed urban space, especially in “ghost town” centres. This could easily be envisaged as “opening” up abandoned commercial, retail and office space for sustainable and innovative adaptive re-use and returning mobility to public and private amenity opportunities, as indicated by the *Jardin des Plantes* in Paris. New uses such as hydroponic and aquaponic farming in a repurposed high-rise or former shopping mall settings emulating “agritecture” exemplars already pioneered in Toronto are available to be learned from. Mixed uses ranging from film-sets to gymnasiums and school extensions interspersed with new residential conversions are also to be found as currently isolated exemplars. To stimulate the return of family-focused attractions, suitably sustainable re-interpretation of theme-park and funfair or entertainment facilities in amongst repurposed redundant spaces re-designed as urban prairies or, more formally and even educationally-inspired urban parklands at ground level and above are envisaged. These once more, gain inspiration from existing albeit sporadic incidence in scattered urban neighbourhood locations in cities like New York and Paris. Other examples tie together such attractions, uses and facilities with sustainable urban land-use-transportation planning fuelled by electric and other renewable energy forms of heating, cooling and mobility. In the case of the “GreenSphere,” circular economy recycling complementing vacationing with learning renewable skills is complemented with amenities supporting “mindfulness” recreation in the form of afforestation for “forest bathing” in suitably-scaled urban woodland environments.

This “open urbanity” which eschews the clusterisation and over-specialisation of uses in segmented zones, often along urban highways that soon become slow-moving, congested and dangerously polluting private commuting axes, can be perceived as a generator of sustainable working, living and relaxation land-use combinations. The remaining discussion question is where to access the needed resources. Clearly, the proposed urban amenity mixes will need to gain public support for citizen-derived revenue investment based on sound principles of public finance. Given the dearth of private-sector downtown property demand, there will be commercial, private equity and hedge-fund resources readily available from these and interested banking financiers of the kind that stepped up swiftly to invest in the likes of New York’s Hudson Yards cultural complex built over

re-zoned railyards. Finally, this is not to mention commercial attractions suppliers like the theme-park corporations whose carbon-era “experience economy” model has shown itself to be in need of an overhaul. Finally, big governments everywhere have had their gaze turned in greener directions by the “shock of the new” work-life-consume form of urban practice. Online shopping, working from home and reduced commuting have overturned demand for established, segregated and segmented ways of managing livelihoods and aspirations. The future that has yet to be fully implemented anywhere, but aspects of which can be glimpsed sporadically amongst the “ghost towns” of today’s abandoned urban spaces, beckons as a sustainable vision of a more survivable, liveable and enjoyable way of urban or semi-urban life.

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