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Urban value chains and re-framing agglomeration-centric conceptions of urban theory

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ABSTRACT

This paper engages with a new way to interpret agglomeration-centric conceptions in urban theory, acknowledging the diversity of local contexts, of places and various scales by developing the concept of Urban Value Chains (UVC). It explores how the stretching of UVCs engages with the hegemony of agglomerations; this is framed within accounts of city-regionalist orthodoxy and with an emphasis on concentrations of opportunity in core city environments founded upon concentrations of localized resources. To do so, we move beyond the value chain literature's focus on logistics and manufacturing processes to explore processes related to human interactions and activities within and beyond urban settings. By examining post-pandemic agglomeration dynamics through the lens of UVCs, we re-interpret the importance of cities in the future but also demonstrate that future cities may re-enforce the role of distant places, putting them within the reach of UVCs through extended value-creation stretching processes.

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Introduction

To date, the urban, and urbanization, have been framed within a conceptual discourse largely constructed around accounts of agglomeration positioned within city-first, city-regions and core-periphery models. The relationships between urbanization and non-city spaces (Brenner & Katsikis, 2021; Salder & Bryson, 2019) have been overlooked and so have multiscale interactions between individuals, firms' locations, and the built environment. Existing approaches to understanding and theorizing what constitutes the urban and where it is located are being challenged, particularly through the attenuation of agglomeration effects and their "stretching" to other locations. Agglomeration processes are central to urbanization, but there is a "possibility that no single theory suffices to account for the variegated nature of urbanization and cities across the world" (Leitner and Sheppard, 2016, p. 230). In this paper, we reinterrogate how the urban and urbanization can be understood and theorized in the context of

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accelerating and stretching value creation and extraction processes. Critically, in line with recent work on industrial clusters, co-location (Gordon & Kourtit, 2020) and cluster membership (Graves & Campbell, 2022; Shen & Puig, 2018), we investigate the extent to which the productive capacity of cities has been stretched by pandemic era remote work adaptations. This stretched urbanization process has created new economic relationships between cities and hinterlands. While cities remain essential nodes as collection points for knowledge and capital as well as experiential places, productive capacity has diffused. We conduct this examination in the context of exploring integrative and exclusionary as well as path-dependent and intersectional mechanisms affecting people, place, and sectors.

Cities are rich transactional spaces “where diverse ranges of relational webs coalesce, interconnect and fragment” (Amin & Graham, 1997, p. 418); they are “home to all kinds of economy” and “even the value chains of small firms and artisan workshops now course beyond a city” (Amin & Thrift, 2017, p. 104). A key point here is the stretching of what we term “Urban Value Chains” (UVCs) beyond the city with this stretching returning the hinterland concept to the center of urban theory and to a renewed understanding of urbanization processes involving value extraction through the built environment. Value creation includes a series of steps and stages that arise between the inception of a product or service and its delivery to a customer, including inventors, product developers, transportation, wholesaling and retailing, as well as associated services such as finance, logistics, legal services, advertising, and accounting. Productivity varies substantially between nodes in value chains, resulting in socially and spatially uneven returns in the forms of profits, wages, rents, and interest. Value chains are significant analytically because they allow for conceptual linkages throughout production processes, linking producers and consumers, and shed light on how value is generated and extracted through complex webs of interactions across multiple spatial scales. To date though, their translation to readings of the “urban” has been partial. While the Global Commodity Chains (GCC) approach is based on exploring “sets of interorganizational networks ... linking households, enterprises and states to one another within the world economy” (Gereffi et al., 1994, p. 2), the Global Production Networks (GPN) approach focusses on “the globally organized nexus of interconnected functions and operations by firms and non-firm institutions through which goods and services are produced and distributed” (Coe et al., 2004, p. 471). Cities along with urban agglomerations, are downplayed in both approaches including recent work exploring the impacts of COVID-19 on the interconnectedness of economic activity (Coe, 2021); similarly, the Global Value Chains literatures (both the GVC/GPN approaches) tend to ignore individuals and groups of individuals even if they are those making decisions within firms.

This paper develops and defines the concept of UVCs as urban-related relationships directly and indirectly involved in the creation of both exchange and use values. UVCs can be configured and controlled from cities or from non-city spaces. UVCs may be localized within an urban agglomeration and are stretched to include relationships with individuals, groups of individuals and organizations located in other cities or non-city spaces. The UVC concept foregrounds the contribution cities make to value creation by highlighting the ways in which urban areas act as key sites for configuring and controlling the value chains that support everyday living here echoing the corporate command geography literature (Schwartz, 1992). A UVC conceptual framework provides urban

theorists with an additional conceptual tool for exploring evolutions in the reach of cities and in urbanization processes and their influences on capitalism's current dynamics. This is to argue that extending the hinterland concept to embrace all types of urbanization impacts is a step too far; understanding the evolution of urban-related relationships involves exploring interrelationships between places constructed upon UVCs which are processes involving bi-directional flows of knowledge, information, money, people and groups of people within organizations whilst a hinterland is a territorial relationship often defined by dependency. Doing so is critical in the context of the pandemic and its legacy, particularly regarding accelerated alterations in value chains the COVID-19 pandemic has fostered, which for many are deeply rooted within urban agglomerations but also wider mechanisms inherent to global capitalism.

Urban debates and theories must explore the role that UVCs grounded in cities, which are not necessarily limited to cities, play in value creation and extraction. This goal is what this paper aims to achieve. While the impact of the pandemic to some extent is still speculative, and will take years to be fully accounted for, cultural, societal and economic shifts are already visible. This is particularly the case for specific economic sectors and workers. Emerging hybrid ways of working and new commuting patterns are altering the geography of UVCs by stretching the geographical location of work-related tasks – for some workers – into other places and spaces; in essence, the focus of this stretching is on individual workers and groups of workers whose living and working patterns have and will continue to be impacted by the pandemic due to the nature of their activities and with the emergence of new forms of multilocal work (i.e. not constrained in working within a specific setting, for example, a shop, a hospital or a school). We note and will discuss further that such stretching is concomitant to existing intersectional inequalities and will in some ways accelerate further the manifestation of capitalism on place, people, and economies. This contributes to questioning what roles will “city” and “non-city” spaces play in UVCs and correlatively what specific assets will be involved (Amin & Graham, 1997).

Post-pandemic urban adjustments to UVCs are already occurring, mostly grounded in accelerations of previous trends (Couclelis, 2020; Florida et al., 2021; Kleinman, 2020; Reades & Crookston, 2021), including their extension or stretching to embrace new places and affecting built spaces, collective actions, and governance. Through those accelerations, the Covid pandemic has provided a lens to visualize in a shorter timeframe, and through global manifestations, new relationships between urban cores and non-city spaces that were already undergoing changes but were to date viewed separately. The pandemic has catalyzed the need for academic debates to deconstruct inter- and intra-urban variations affecting the creation of both exchange and use values within urban agglomerations and intra-urban and inter-urban/rural UVCs. This paper is conceptual in emphasis and draws upon the pre-pandemic and pandemic-related literatures on urban economies and evidence from government and consultancy reports regarding predictions for future urban trends. The conceptual discussion is illustrated by examples from the US and Europe. After positioning UVCs conceptually and theoretically within critical urban theories, we turn to understanding UVCs in the context of intra-urban adjustments and the urban advantages of the experiential city. We then characterize and review UVCs, intra-urban interactions and multi-local work, and finally examine their role in the inter-urban stretching of urban agglomerations. This allows

us to examine the theoretical implications for reading the urban and urbanization processes whilst reflecting upon the wider critical impacts on places, people and economies.

UVCs, value extraction and urban assets in critical urban theory

Urban agglomerations consist of bundles of assets and resources that have evolved over time (sometimes over very long periods), including connectivity of all types with other places, but also place-based narratives, reputations, and stories. There is a continuous, iterative relationship between urban fixed and mobile assets, including individuals, but “fixed assets only succeed when they accommodate people in productive roles” (Braham et al., 2019, p. 65). Defining an agglomeration economy as representing a bundle of resources is informed by Penrose’s classic work on the theory of the growth of firms (1959) or an approach better known as the *resource-based view* (RBV) of the firm. Applying a RBV approach to cities and urban agglomeration processes is one way of understanding urban economic path development and creation and the contribution cities make to UVCs. To Penrose, “a firm is more than an administrative unit; it is also a collection of productive resources the disposal of which between different uses and over time is determined by administrative decisions” (1959, p. 24) and these decisions reflect firm-based capabilities. Similarly, a city is more than a governance unit, but is a collection of productive resources the disposal of which is determined by path dependency, and decisions made by people and firms based in that place and by people, firms and other agents located elsewhere. Resources are developed and acquired over time and are layered and converted within a place but connected with other places through relationships and UVCs.

Urban tangible resources include land and natural resources, the collection of firms located within urban agglomerations and their hinterlands, established connections, the accumulation of capital, research and educational establishments, institutions (e.g. regulatory, trade associations, lobbying groups), housing stock, infrastructure, and health care facilities, as well as local patterns of consumption, leisure, and entertainment. All enable and reflect intra- and inter-regional networks and flows of capital, labor, and information. Some resources are durable and continue to provide the same services for a considerable time. Intangible resources include people, human and social capital, skills, capabilities, the innovation ecosystem, relationships of all types and place-based reputations. These are often deeply rooted in local places (Cox & Mair, 1988) but any urban agglomerations may experience a major loss when intangibles are rapidly destroyed or reworked through some crisis. The services provided by a resource, or a distinctive bundle of localized resources, are a function of the ways they are used or combined; different uses and bundles of resources will produce different urban outcomes and distinct forms of localized path dependency/creation and place within global networks. The presence of a resource in an urban agglomeration does not imply that this will inherently provide any form of urban advantage; urban advantage is only related to the services or activities that are created through the incorporation of that resource into productive processes. Here, the purpose is key and connects to specific needs, which may change. Assets can be repurposed to support new forms of value creation and adaptability of the built environment is a core urban asset, but adaptability may be constrained by financialization.

Financialization, is a foundational part of contemporary value creation and capital accumulation (Moreno, 2014). This topic has a long history: Harvey (1973/2009) for example, emphasized this process as the secondary circuit of capital, in which surplus value is monetized. More recently, financialization has been the dominant face of urban rentier capitalism that constitutes an integral part of neoliberalism. Financial capital has become decisively transformed from a means of expediting land sales to being the driving force behind the reworking of urban landscapes. Such a process invites us to rethink land rent theory. A host of theorists have engaged in a sustained effort to revise the dynamics of urban change in light of financialization, including how this process has fomented a new asset class of property owners, particularly in housing (Aalbers, 2019; Fields, 2017, 2018). The assetization of land, even in deindustrialized cities (Ward & Swyngedouw, 2018), has transformed landlords into on-the-ground agents of urban neoliberalism. This includes delaying investments to serve speculative future rounds of value creation, a process fraught with dangers for marginalized residents living on the edges of precarity (Ferrerri & Vasudevan, 2019) or for temporary initiatives to be used for speculative value extraction (Ferrerri, 2021). Collectively, owners of land exert power over land markets through real estate investment trusts (Waldron, 2018). Despite its ubiquity and apparent invincibility, it is important to remember that financialization has its limits (Christophers, 2015) though connects directly with Brenner's planetary urbanization or in other words "the "planetaryization" of the urban, which focuses primarily on the spatiotemporal dynamics, contradictions, and contestations unleashed by capital" (Brenner, 2018, p. 583). Applied to UVCs, this plays a key role and means that financializing may potentially extend further along with its detrimental effects.

Value creation arising from urban agglomerations includes monetarized and non-monetarized values, inclusive of encounters, experiences and intangibles closely linked to population density. Central to these processes in advanced, information-intensive economies is the creation and transmission of expertise. This process includes the creation of agglomerative economies that are most pronounced in larger urban areas; smaller cities and urban hinterlands may benefit from a "borrowed size" effect by accessing agglomeration benefits of larger neighboring cities (Alonso, 1973). The concept of borrowed size highlights the relational nature of external economies based on the interactions that occur across urban networks and UVCs. Borrowed size includes performance and function stretching across interconnected urban areas with network embeddedness, connectivity and degree of integration being critical driving forces (Meijers & Burger, 2017). The existing emphasis in the borrowed size literature is on smaller cities benefitting from accessing the agglomeration benefits of nearby larger cities. Nevertheless, developments in the concept of borrowed size challenge urban agglomeration theory because agglomeration externalities "may not be confined to the borders of agglomerations and may instead be shared throughout city networks" (Meijers & Burger, 2017, p. 289) including non-city spaces and urban hinterlands (Acuto & Rayner, 2016). Borrowed size reflects one outcome of the configuration of UVCs that is distinct from the types of interconnections explored in the GVC or GPN literatures. The critical difference is the need to develop an urban-centric approach to understanding the interplay between agglomeration and network embeddedness within the context of financialization of cities and wider structural and conjunctural changes driven by capitalism. In the UVC approach, this process represents the

stretching of urban agglomeration effects to other places, including non-city spaces, through the development of flows, or transactional exchanges, facilitated for example by videoconferencing and work facilitation platforms. The on-going stretching of UVCs enhances the position cities play in configuring value creation and extraction processes. Here it is important to differentiate between a city's hinterland defined as a contiguous zone and UVCs that embed a city in a complex network of transactional flows of people, money, information, and resources that stretch beyond a city's contiguous hinterland. UVCs also result in path dependency and some cities are excluded from participation.

The application of videoconferencing and work platforms to work and everyday living has deepened transactions within and among urban agglomerations (Davidson & Poor, 2019) whilst simultaneously extending the reach and borrowed size effects of UVCs. Video technologies allow for some of the advantages of face-to-face interactions to unfold in more distant areas. A recent US study of 3,000 urban and rural counties revealed that rural workers make disproportionate use of online labor markets (Braesemann et al., 2020). This observation contradicts the emphasis typically placed in the agglomeration literature on cities being the location for highly skilled and creative labor (Herslund, 2012), as "rural counties supplied, on average, higher-skilled online work than urban areas" (Braesemann et al., 2020, p. 1). Online platforms enable skilled rural specialists to access demand for their services and to benefit from virtual ties, which reproduce the benefits of face-to-face contacts, albeit imperfectly. Thus, skilled workers, irrespective of their location, can be included in UVCs that are controlled and configured from an urban agglomeration as UVCs are stretched to ever-broader spatial scales. While remote work is not new, the pandemic era has allowed firms to accommodate knowledge production from individuals based in remote locations, a significant change from the clustered, face-to-face environments that were (assumed to be) required before the pandemic (Zook, 2004). However, it should be noted that the extension of UVCs to outlying areas is greatly shaped by pre-existing geographies of broadband internet and related digital divides (Lai & Widmar, 2021).

For UVCs, the immediate impacts of mobility restrictions and shifts in modes of consumption during the pandemic led to major disturbances with distinct and paradoxical consequences. COVID-19 enabled significant individual behavioral changes that allowed non-city knowledge-producing network locations to stretch much further. It created some cultural shifts, typically making telecommuting a more acceptable alternative allowing workers to migrate for the purpose of reducing housing costs or seeking amenities. Spatially, already-vulnerable downtown business districts and high streets were hit hardest, suffering declines in employment and consumption (Badger & Bui, 2021; Brail, 2021). The pandemic forced many firms to adopt remote and hybrid forms of work, with ICT substituting for face-to-face meetings and business travel (Belzunegui-Eraso & Erro-Garcés, 2020). This trend was particularly significant for white-collar office workers in producer services, which comprise the bulk of jobs in central business districts (CBDs). Less skilled workers, or those in sectors where work needs to be delivered in a specific location, were excluded from those dynamics. In the US, roughly 37% of all jobs can be performed entirely at home (Hicks, 2020), while in Europe the share ranges from 5% in Italy to 37% in Denmark (Gschwind & Vargas, 2019). Teleworkers tend to be White males more often than not, and the practice is most widespread

among managers, professionals, consultants, and technicians reflecting path-dependent intersectional inequalities.

In contrast to most white-collar workers, many of those laboring in low-skilled positions, including retailing and manual labor, were unable to work from home. Acknowledging this reality is important to avoid over-emphasizing the lived experiences of some workers (including the so-called creative class) at the expense of the majority of workers. In the US and in the UK, ethnic minorities are disproportionately concentrated in low-wage jobs and many such workers do not have the luxury of working from home (Selden & Berdahl, 2020). Low-income workers of all ethnicities tend to live in relatively high-density areas, including public housing, use public transportation frequently, and work in retail trade and health care where physical attendance is required. Similarly, working from home is relatively infrequent among workers in smaller towns and rural areas. In an early premonition of how UVCs would extend to rural areas, Beyers and Lindahl (1996) examined early adopters of telework; nonetheless, to this day only a small minority of rural workers engage in this form of labor (Davies, 2021), in part because of the broadband digital divide.

A wholesale, long-term switch to solely working from home has not materialized. Nevertheless, hybrid working, where an employee works some of the time at home or another remote location, and some of the time in a workplace or a central hub, appears to be the more popular management model (Bürkner & Lange, 2020). This was further confirmed in August 2022 when results from a short non-academic survey of 945 full-time employees including 358 senior decision-makers within UK businesses found that 61% of decision-makers admit they are struggling to get employees back to the office, with two-fifths (39%) seeking a new workspace to reflect their changing office needs (Bradshaw, 2022). A decisive shift from face-to-face to screen-to-screen working has thus emerged post-pandemic, a transformation that is profoundly altering the geographic configuration of UVCs. Althoff et al. (2022) using phone data demonstrated that a large outflow of business service workers left US large cities during the pandemic, worked from other locations and since then have gained further working flexibility. This was confirmed by Chapple et al. (2022, p. 8) who examined 62 North American cities and showed that “downtowns are recovering more slowly than the rest of the city, and that a distinct set of downtowns – typically older, denser downtowns reliant on professional or tech workers and located within large metros – continue to struggle to return to pre-pandemic levels.” Drawing on surveys results, they argue that “remote work will likely be a permanent feature of these types of metros, even under a hybrid model,” strengthened by tight labor markets for high-skilled workers forcing employers to be more adaptable to new forms of hybrid working. As such, one major impact of the pandemic has been to alter the configuration of places of work involved in supporting UVCs, and this includes their expansion to embrace other places. This process includes the ability of larger cities to borrow assets from smaller cities and even rural areas along with seeking to retain other assets through innovative strategies (typically design, planning or branding-led). Ultimately, what is queried here is the nature of the “urban-land nexus” (Roweis & Scott, 1978; Scott, 1980; Scott & Storper, 2015) and the principle that “owners and users of land (firms and households) demand selected kinds of proximity to one another while simultaneously seeking to avoid locations where they might

experience negative spillovers and other damaging effects on their activities” (Scott & Storper, 2015, p. 8). The nexus here is shifting from proximity to connectivity with socio-economic agglomeration processes involving several scales, both intra- and inter-urban/rural.

Re-framing the understanding of the urban and urbanization through a UVC lens rests upon acknowledging that contrasting dynamics between path-dependent continuities and disruptions will increasingly characterize urban agglomeration processes and the nature of urban hinterlands. Using a relational perspective, Massey (2005) famously argued that space is the product of interrelations as constituted through interactions, from the immensity of the global to intimately tiny interactions. Space is the arena of multiplicity, where heterogeneity and difference emerge; space is a process and is never a closed system. It is through this focus on interactions but also roles and flows that UVCs trigger different forms of value creation and extraction. These may be use values linked to everyday living including those that are part of the public realm (e.g. buildings or open spaces) in that they are available to all or others that are privately owned (office buildings, homes). All can be considered as urban assets involved in UVCs in some way (potentially many UVCs). A UVC includes different bundles of living or working styles, but each UVC makes a distinct contribution to value creation and extraction, and this is a multi-scalar process (local, regional, national or international).

Our argument engages with three linked spatial scales. Here it is important to explore the different UVCs that a city is positioned within. This includes, first, considering processes triggered by rapid pandemic alterations that have altered the role the city, and its existing build environment play in UVCs triggering adjustments to urban advantages and the experiential city. Second, it involves exploring intra-urban relationships within different parts of the city and, third, relationships that stretch beyond the city’s zone of influence at the inter-urban level.

UVCs, intra-urban adjustments and the urban advantages of the experiential city

Our focus in this section is on cities as concentrations of assets triggering investment and interactions, but also as sites of experience economies, including the commodification of leisure time (Pine & Gimmere, 2011). These processes are central to urban agglomerations, but alterations in the links between place and socioeconomic processes are altering the micro dynamics of agglomeration processes leading to new ways of sustaining key urban assets. There is no doubt that cities of all sizes will remain places of buzz and chance encounters (Storper & Venables, 2004) despite the shift towards e-commerce, which commenced well before the pandemic and the escalation in hybrid forms of work. Similarly, cities will continue to be heavily impacted by financialization of real estate based on capital-led value extraction strategies combined with extreme inequalities, precarity but also richness. Cities remain places of high densities, all types of flows (people, money, information), interactions, and activities (Reades & Crookston, 2021) but this does not mean that processes enacted in urban settings cannot change. This section focuses on the advantages the urban brings, and will continue to bring, to UVCs in the context of an enhancement of the experiential nature of cities post

COVID-19 and considers two consequences: the development and extension of the hinterland of urban built assets and correlatively, the spread of new transitional hybrid spaces positioned between home and work and traditionally including indoor and outdoor recreational places (e.g. restaurants, cafés, parks, religious buildings).

Urban-related relationships are directly and indirectly involved in the creation of exchange and use values within UVCs and particularly for large cities rest upon what Scott (2008) terms the rise of cognitive-cultural capitalism. While Scott's work conceptualizes the shift in contemporary capitalism away from the tradition of the white/blue collar divide, spatially his analysis emphasizes centralized agglomerations at the expense of ignoring the stretching of UVCs and the transformation of urban cores to post-industrial playgrounds. Given the rise of the post-industrial "creative class," city centers have been increasingly transitioning away from places to purchase products to experiential spaces as playgrounds for conspicuous consumption based on hospitality, tourism, entertainment, leisure, and business services (LSE et al., 2021). One consequence of the shift towards the experiential city has been the rise of various forms of temporary urbanisms (Andres & Kraftl, 2021; Andres & Zhang, 2020) or adaptable ways to promote ephemeral cultural events, city marketing or community uses. These represent temporary solutions to deal with vacant retail units through the multiplication of temporary initiatives, including pop-up or flash retailing, giving rise to fugacious and ephemeral landscapes of consumption. In some cities, this has spread beyond commercial uses. It has been attributing new roles for (temporary closed) streets, here used as places to play, exercise, socialize or learn new skills (biking, languages, etc.). This occurred in affluent and gentrified neighborhoods (e.g. Brooklyn and Manhattan in NYC) but also in deprived areas (former Covid hot spots) where access to outdoor spaces (particularly green spaces) were limited during periods of lockdowns (typically in Queens or Bronx).

Urban spaces do not generally change rapidly given long development lag times, path dependency related to laws and regulations, and the fixity of financial investments, which must be amortized over long periods. A building, or urban space, has a zone of influence which is relatively restricted within a planned and zoned intra-urban hinterland. An office building, for example, has local direct, indirect, and induced effects which contribute to value generation within UVCs. The impacts of these value creation processes may be focused at the scales of the city, the city's hinterland, nationally, or internationally. The occupants of an office building will use the space within and around it to support this value creation process through planned and serendipitous dyadic encounters. As the pandemic altered the balance between tasks undertaken within office buildings and those performed at home, the use of alternative places facilitated different forms of temporary urbanism directly linked to value extraction purposes. The pandemic transformed approaches to experiential adaptability by imposing radical changes on how "people engage with urban built form, real estate, design and streetscapes" (Florida et al., 2021). This process resulted in rapid improvisations driven by health and safety concerns and economic goals (allowing some restaurants and bars to reopen thanks to street dining, for example). It has involved nano (buildings) and micro (street grids) scale adjustments to a stretched urban realm (Andres et al., 2021) by extending their planned intra-urban hinterland and use of existing urban assets. This shift represents a move from conventional work and experiential places (e.g. indoor cafés) to alternative experiential places (e.g. sidewalk dining, creation of pedestrianized streets, use of

streets for recreational and non-car uses) that became safe temporarily laid out spaces for socially distanced interactions involved in supporting value creation within UVCs. This involved primary and secondary cities in Europe and the US and is still very visible in New York, Bristol (UK), and Marseille (France) for example. Such changes blur the once-distinct boundaries between privately owned, for-profit and publicly-owned, non-profit spaces, producing new types of highly adaptable intra-urban hinterlands. Such adaptability was made possible given the emergency context created by the pandemic, and by public health regulations (Flynn & Thorpe, 2021), which in most cases allowed planning restrictions to be temporarily eased.

The pandemic's urban legacy includes alterations to UVCs at the intra- and inter-urban scales reflecting changes in forms of living, work, and play. Sitting across these place-based urban processes are alterations in the relationships between work and home that are blurring the boundaries between places of work and everyday living. An office building has several local impacts, as does a home, but the blurring of the boundaries between home and work is altering the impacts a residential unit has on its locality. Both offices and residences have hinterlands and the function and nature of these intra-urban hinterlands is changing as cities' embrace new types of "live, work, play models" (World Economic Forum, 2021). Locally orientated lifestyles have become part of a narrative to bring people back to offices with the surrounding urban experiential playgrounds providing more active and varied spaces for relaxation, socializing, and entertainment. Existing urban assets are being adjusted to sustain the primary urban assets of cities, or the essence of the urban. This strategy is path-dependent on the limited supply of outdoor spaces in CBDs and reduced retail activities given the shift to suburban shopping malls and e-commerce. In that respect, higher-end retail outlets, for example in New York, London and Paris, had already adapted to a more experiential model of showrooming, outdoor spaces, and parallel entertainment (Alexander, 2019; LSE et al., 2021).

UVCs are not simply market phenomena. Policy interventions intended to enhance the benefits of agglomeration and the contribution they make to value creation within UVCs have developed. There is nothing new or revolutionary here, but a sustained and more frequent and larger-scale use of alternative experiential places. The extension of buildings and spaces into their hinterlands means that alternative experiential places have become "transitory settings" included directly and indirectly in the value creation process linked to UVCs. These processes apply to office and entertainment districts with high concentrations of interactions and flows, and are more pronounced in larger cities, but also operate at a reduced level in retail/service districts that support suburban lifestyles. Here there is a juxtaposition of two types of hinterland: one linked to localized built environment assets and their everyday uses, and the other linked to a district/city and its local, regional, national, and international zones of influence. Both types of hinterland represent a territorial relationship whilst UVCs reflect processes that link places together.

The transformation of UVCs at an intra-urban scale relies on micro-processes of stretching through more agile approaches to urban placemaking, liveability, and livelihoods in the context of an experiential and recreational setting and economy. These will spread where the built environment is flexible enough to accommodate such adaptations along with residents and visitors' willingness to embrace new practices and

routines. The outcome reflects local contexts and the variegated nature of the urban realm, of urban assets and of the diversification of intra-urban hinterlands. For critical urban theories, the importance of local urban assets and related hinterlands must be appreciated. Here it is important to appreciate the emphasis Brenner (2019) places on developing a non-universal view and theoretical generalizations about agglomeration-centric processes. Context matters with variegated urbanism reflecting different forms of urban living and livelihoods and differences in local urban assets and their relationships with UVCs. Nevertheless, alterations in working and consumption practices will continue to transform the geographic configuration of UVCs at the intra-urban level and it is to this process that we now turn our attention.

UVCs, intra-urban interactions and multi-locational work

We move here to intra-urban alterations affecting relationships between different parts of the city, particularly places closer to home and places where work can occur outside employer premises. Homes have local hinterlands, including experiential spaces, for example, access to green infrastructure, hospitality, and leisure infrastructure or other alternative experiential places. Because of the pandemic, some UVC work-related tasks became multi-locational initially when workers were encouraged by government guidance to “work from home – when possible.” This trend led some companies to develop and adopt new hybrid working environments as long-term alterations to their value creation routines with important implications for the configuration of UVCs and related intra- and inter-urban geographies. Of course, not all economic sectors are able to adopt multi-locational work and this has significant intersectional consequences including increased inequalities; sectoral, firm and city differences in how this process unfolds will form an important new research area particularly regarding impacts on value extraction. A bifurcated urban labor market has emerged based on tasks that can be delivered through blending different types of work-related environments and tasks that must be delivered within employers’ premises. This trend does not necessarily challenge existing urban agglomerations, although recently lower rents for downtown office space in large European and US cities indicates that it might enhance flexibility and reach.

The UVC approach highlights the impacts of an increase in multi-locational work on existing agglomeration processes founded on the proximity of the work/live nexus (Scott & Storper, 2015) and the ways these are being challenged by the emergence of a new connectivity nexus. Office-based work largely involves value creation through the deployment of expertise. The further extension of the spatial division of labor to office work has continued to alter the geography of office-centered UVCs, particularly those founded on trust-based dyadic relationships (Williams & Bryson, 2021). Tasks that required co-located team members may now be delivered via a hybrid work environment involving blending tasks undertaken in different places.

While hybrid working poses some concerns about cybersecurity, productivity, innovation, and performance management, it allows companies to access new sources of geographically distributed skilled labor and to expand their workforce without increasing property-related overheads (McKinsey, 2021). Accordingly, the use of virtual work teams linked by the internet has become an important dimension of UVCs. Nevertheless,

most people will remain within the orbit of larger cities, but this orbit has been stretched by the pandemic due to the shift in importance from proximity to connectivity permitted by hybrid and flexible working. Large cities have always attracted early career graduates whilst some families with young children migrate to develop lifestyles linked to suburbs, smaller cities, and rural areas. In 2020, for example, 73,950 homes were purchased outside the capital by London leavers, the highest level since 2016 (Hamptons, 2020). The majority of the moves remained in the South East, and within London's travel-to-work area. The median distance of these moves by Londoners reached 40 miles for the first time in over a decade. First-time buyers though purchased closer to London (median of 26 miles) given the need to maintain closer ties to the capital. For the US, much of the initial data is based on those people who can afford to move with any residential adjustments reflecting wealth and racial inequalities (Patino, 2020). For example, many high-earning professionals left New York when it became a national Covid hotspot; others cited the city's high taxes and homelessness problem (Son, 2020). One result was that in Manhattan during 2020, median rents for apartments dropped by 7.8%, but then reached a new high in 2022 (Miller, 2022). The key research question is not about the decline of large US cities, but much more about new forms of exurban growth, with urban residents heading beyond the suburbs to cities in the immediate hinterland of a large city. The key to such growth is the degree to which employers and employees embrace remote working (Patino, 2020) and the stretching of UVCs. The emerging post-pandemic geography of UVCs is explained by the occasional need to access networking events, airports, corporate culture, and training opportunities (Reades & Crookston, 2021) and to draw upon agglomeration benefits of larger urban areas, including the city as an experience economy.

Multi-locational work has two primary consequences for intra-urban alterations: the spread of co-working spaces and other alternative workplaces. In large European and American cities, coworking spaces mushroomed in popularity (Gauger et al., 2021). The enormous popularity of companies such as WeWork, Regus, Knotel, and Servcorp attests to the significance of this shift (Gauger et al., 2021). The growth in co-working will continue as on-going restructuring of in-store retailing released buildings (or large units within shopping malls) that needed to be repurposed, which includes conversion to co-working spaces. Co-working spaces have tended to be located close to transportation nodes such as train, bus, and subway stations and many advertise amenities and flexible payment terms. Demand has started to shift towards providing workspaces closer to where people live.

For employees, with the relevant skills and job occupations, hybrid working provides increased flexibility, reduces time and costs spent commuting, and may improve their work-family balance, but it transfers many workplace costs from employers to employees. There are important implications for residential unit design to facilitate homeworking combined with local access to alternative work and related entertainment/hospitality places, i.e. places, that provide the physical and social conditions required to support work away from employers' premises. Working from home does not necessarily mean that all work is home-based, as employees can deploy a multilocal approach based on "working near home" with the hinterlands around residential units increasingly including co-working spaces and other alternative workplaces. Post pandemic UVCs will include new socio-economic agglomeration processes linked to a new blend of working

in formal (co-working) and more informal workplaces resulting in very different intra-urban geographies of work and everyday living. The formal ones are organized co-workplaces that may be membership-based, and the informal ones are places where employees establish instant and temporary offices (e.g. cafés, gyms, libraries). This is associated with alterations in service provision and in the geography of hybrid workplaces that will continue to emerge as working partly outside the office place produces knowledge and monetary spillovers in local communities.

Alterations in the places in which work is enacted and working (contractually) from “home” significantly impacts the reach of urban agglomeration processes. The growing flexibility of where work can occur means that alternative interactions, flows, and roles occur in more diverse places leading to a diversification of intra-urban places involved in value creation linked to UVCs. Ability to adapt, but also “rights” to adapt, plays a critical role in this process highlighting the need to return people to the center of critical urban theories and the way the “urban” will be examined in the future. It is important to identify different lifestyles and adjustment processes as households and individuals adapt to alterations in the intra-urban geography of UVCs. Similarly coping mechanisms fostered by forced adaptations and lack of choices may arise for those excluded from more hybrid forms of living/working. This raises significant questions particularly if we are entering a new stage in capitalism – within planetary urbanization – where value creation and extraction will diversify further in a context of inflation, energy and water shortages, climate change and ongoing geopolitical and environmental crises. For urban theories, this implies that the new hybridity of work locations means that “urban jobs” are no longer limited to “urban places” even if urban places still significantly matter. This de-spatialization of where “work is located” – for some with the right skills – does not portend the end of cities but highlights the continued spread and stretching of UVCs beyond existing urban boundaries and hinterlands. There are important scalar impacts that reflect the on-going stretching of value creation supported by UVCs and the impacts this has on a new form of non-urban based urbanization.

UVCs and the theoretical implications of the inter-urban stretching of urban agglomerations

The on-going stretching of urban influences into other places will continue and perhaps intensify with the shift in importance of virtual connectivity compared with physical proximity. This stretching of urban influence requires theoretical clarification. One implication is that urbanization defined as city growth needs to be reframed to include growth based on the continued stretching of UVCs to non-city, or extra-city, spaces. The pandemic’s association with multi-locational and locationless work implies that urban agglomeration debates should be reconceptualized to include a combination of hinterland and stretched UVC effects. The old notion of the “urban” as something that declines asymptotically away from the CBD must be firmly dispensed with. Increasingly, distributed UVCs combine expertise located in larger cities, and their extended regions, with complementary skills and productive capabilities located in an array of other places, including non-city spaces. This line of thought engages with Brenner’s work (2018, 2019) on planetary urbanization and the new urban age and what this means for capitalist-led urban development. Changes and adaptations related to multi-

locational working imply that UVCs may stretch further and deeper into other places as connectivity supplements proximity in UVC value creation processes.

Multi-locational work, e-commerce, and the stretching of UVCs could possibly remove some of the pressures on large city housing markets but also extend the financialization process to other places. If achieved this would be path-dependent on the pre-pandemic affordability crisis which had already started to push the workforce away from large and very expensive cities (Chapple et al., 2022; Florida & Kotkin, 2021; Milder, 2020). Stretching, a form of time-space compression, extends the economic reach of UVCs at both the intra- and inter-urban scales. This process involves widened commuter sheds, the dispersal of back offices and data-entry functions, and some screen-to-screen activities to peripheral areas, remote working and learning, extended supply chains, and enlarged market areas for retail goods, services, and advertisers. As a result, the input-output relations of firms and cities have become ever-more widespread over broader spatial scales. Delocalization of economic activity has been a process underway for some time (Labrianidis et al., 2011), but the pandemic sharply accelerated this trend and extended this process to other sectors embracing hybrid forms of working. This stretching of the reach of existing urban agglomerations can be conceptualized as a process of coupling, decoupling, and recoupling in which connections are configured into temporary or more permanent project-based UVCs along which information, expertise, skills, money, goods, and people flows. This intra- and inter-urban stretching of UVCs is not about urban sprawl but the development of new inter-place connections and a re-configuration of the zone of influence of urban assets and of the UVCs supported by these assets. It is important to maintain the distinction between hinterland as defining a territory – usually contiguous – and UVCs that represent a value relational creation and extraction process based on flows and interactions between sites or places and their assets, firms, and people.

The on-going and enhanced stretching of UVCs has both positive and negative externalities. This process challenges existing urban political and economic boundaries as urban economies are stretched to embrace proximate and distant locations. One consequence is that the costs of high-density city living can be increasingly displaced or dispersed across the place-based work location connectivity nexus within which a city is embedded. Remote working is transforming the future of some peripheral, mature, or shrinking towns and cities. Scale here matters significantly and such transformations may occur rapidly in relatively condensed spatial configurations. In Ireland, villages located on the west coast, for example, were experiencing an on-going process of depopulation. Remote working linked to COVID-19 has seen a 250-person increase in the population of Kilkee, a small coastal town in west Clare, stimulated by the council's digital hub strategy launched in 2018 and expanded in July 2020 with the establishment of a co-working digital hub, with high-speed broadband, and opportunities for work-related social encounters (Deegan, 2021). Kilkee has been incorporated into the reach of Dublin's growing UVCs. Dublin as a "stretched" post-pandemic city alters the balance between the country's advantaged and disadvantaged places (Government of Ireland, 2021). Shrinking towns and cities and rural areas may be able to benefit as they attract remote workers who are linked to core centers of economic activity. Over time, however, this shift may lead to forms of remote work-related gentrification increasingly disrupting local and more remote housing markets. This reflects both positive and

negative externalities of UVCs that require further research. The Irish example highlights the importance of developing a non-universal perspective given the variegated nature of urbanization and UVCs. Thus, in the US knowledge professionals are choosing to relocate to mid-sized urban centers such as Durham, Raleigh, or Atlanta (Patino, 2020). These moves are often connected to corporate strategies by firms such as Google and Apple that are intended to stretch their UVCs by creating new physical office spaces in secondary cities where housing is less expensive, commutes relatively short, and strong connections to other offices in their corporate network exist, a condition which facilitates hybrid working (Eanes, 2021; Johnson et al., 2021; Putzier, 2022). These shifts contribute to significant escalations in housing costs in cities that were seen as affordable pre-pandemic and housing shortages are of concern in these areas for the first time (Mena & Torry, 2022).

The stretching of UVCs has important theoretical significance. To Brenner and Katsikis, “the dialectic of city/hinterland relations lies at the heart of the urban *problématique*” and requires “radical reconceptualization” (2021, p. 36). Our reframing of the urban and urbanization supplements the concept of a hinterland as territorially contiguous and directly linked to a city with an appreciation of the complex UVC nexus within which every urban area is embedded. Every city will have a very different evolving UVC nexus formed around a distinct bundle of assets and connections to other places. To Brenner and Katsikis, planetary urbanization as a process represents the “hinterlandization” of the world based on the subordinate appropriation by cities of non-city zones (2021, pp. 39–40), but the configuration of UVCs is central to this process. Hinterlandization requires theoretical clarification as it conflates a term that defines a local territory with a process that is much more global, fluid, and dynamic. A city, for example, might develop temporary connections with a non-city space, which can be classified as a temporary stretching of some form of “hinterland”; however, at the core of this stretching process is some alteration in the configuration of the geographies of one of this city’s UVCs that supports different forms of value creation. Some of these UVCs will be coordinated and configured by this city and some by organizations and individuals located in other places including locations in non-city spaces.

Value-generating processes sit behind the on-going literature on agglomeration economies but are central to the UVC concept. The pandemic has forced temporary and long-term impacts on UVC configurations. Short-term pandemic-related adaptations are easy to identify, but it is much more challenging to consider medium- and longer-term impacts. Longer-term impacts, for many, will probably be limited, especially for those involved in facing-based employment, but some governments are already developing and implementing new approaches to regional policy development intended to support the stretching of UVCs (Government of Ireland, 2021). For some workers, though, with the right skills, the pandemic has created new employment and lifestyle opportunities. This includes all those working in service-based sectors (either as employees or self-employed) where “flexible working” or “fully remote working” is not only contractually possible but is now also used as one approach to attract and retain employees (Chapple et al., 2022). It concerns many departments within firms but is particularly important for those holding managerial to leadership roles in sales, marketing, finance, management and IT for which tasks can be delivered without presential requirements. For these workers, getting physically to the office is conditional on performing

specific tasks or responsibilities and is either entirely flexible as of “when” or set up contractually (for example twice a week on specific days). While these are raising important exclusion/inclusion issues that are linked to a possible increase in existing socio-economic inequalities (including gender ones), which may be further intensified as a consequence of the cost of living crisis that commenced in 2022, these new forms of working practice are altering the configuration of existing UVCs and come with interesting and important intra- and inter-urban impacts requiring further research and theory development.

Conclusion: urban value chains and re-framing agglomeration-centric conceptions of urban theory

This paper has followed the call made by Brenner (2019) to engage with a new way to interpret agglomeration-centric conceptions of urban theory, acknowledging the diversity of urban contexts. The creation, consumption and extraction of multiple forms of value is central to understanding cities. This is a geographically inflected relational process involving complex connections between people and places that take the form of UVCs. By re-interpreting the directions of post-pandemic agglomeration dynamics through the lens of UVCs, not only are we re-interpreting the importance of cities but also emphasizing that the future “urban age” may re-enforce the role of non-city and relatively isolated places, putting them within the reach of UVCs through an extended value creation stretching process. People-to-people based work interactions and their geographies are central to UVCs, or to the extension of urban zones of influence on other urban areas and non-city spaces.

Alterations in the configuration of UVCs means that urbanization does not have to fundamentally entail continued city growth and is a much more complex process with cities appropriating and exploiting non-city productive spaces, but alternatively activities located in non-city spaces can appropriate and exploit operational and informational assets located in urban agglomerations. This could be described as a process of hinterlandization in which all places have the potential to become incorporated into a complex and ever-evolving matrix of planetary urbanization. However, this is to argue that a city has many hinterlands and the extreme version of this argument assumes that this planet has become one urban hinterland.

The concept of a hinterland is a place-based process constructed on the identification of a territory that is closely linked to an urban center in some way. An alternative perspective is to focus on identifying and delimiting the linkages and flows that exist between different places, organizations, and people. These reflect two very different approaches to exploring urban-related processes with one based on defining territory – or hinterlands, and the other based on identifying different forms of linkage and flow between places that support value creation activities facilitated by the on-going configuration and reconfiguration of UVCs. These are not mutually exclusive approaches. We use the term hinterland in the plural as a relational and relative term. A large city has many different business districts with smaller business districts emerging in the suburbs. This gives rise to UVCs with multiple nodes, with each having its own hinterland, here understood as activities linked to a contiguous territory to some defined urban area. Similarly, each building within a city has a hinterland. The hinterland

concept has been underplayed in the urban literature in recent years, but the pandemic has highlighted the importance of urban hinterlands. However, the hinterland concept needs to be supplemented by a focus on unravelling UVCs, at different spatial scales with a focus on individuals and groups of individuals, or people within firms and organizations. Brenner and Katsikis (2021) have argued for a reworking of the hinterland concept and in this paper, we have demonstrated that this concept is still conceptually useful but comes with important limitations. What is required is an addition to the urban theory debate or lexicon based on delimiting the characterization, form, and function of UVCs and their contributions to value creation. UVCs create value by configuring intra- and inter-urban level relationships, in other words, within a city and also across the contiguous hinterland, but they also stretch to other places. A city is thus inescapably intermeshed in a network of UVCs, or a UVC nexus, with each city being embedded within a very distinct and evolving UVC nexus.

The Covid pandemic accelerated long-standing tendencies for UVCs to reach into outlying areas and vice versa. Covid-induced behavioral changes have enabled the extension of the stretching of UVCs as some employers and employees have embraced new forms of work based around the adoption of various approaches to hybrid working. Simultaneously, organizations involved in UVCs are capitalizing on some types of urban advantage that are held by UVCs, here “borrowing” some advantages from urban agglomerations in which they are not located, but are linked to in some way by the stretching of a UVC. This stretching is a multi-directional process from an urban agglomeration and beyond, and from non-city space locations to urban agglomerations. The stretching of UVCs informs the debate on agglomerations with an emphasis on concentrations of opportunity in core city environments founded upon agglomerations of localized resources (Harrison, 2010; Storper & Venables, 2004). COVID-19 has extended the borrowed size effect via acceleration in the adoption of hybrid working, but it must be recognized that this is a “two-way process with larger cities dependent on peripheral places for critical resources including housing and land” (Salder & Bryson, 2019, p. 808). Smaller towns and cities, and shrinking towns and cities, now have new opportunities to be coupled with places with distinct agglomeration effects. As a result, value creation and extraction must be increasingly conceptualized as the outcome of a dynamic multi-locational process based on the configuration and reconfiguration of dyadic relationships and exchanges amongst dispersed and co-located individuals, organizations, and firms. This process involves many elements including skills, lifestyles, and livelihoods along with corporate employment practices. It is also by essence highly contextualized reflecting the variegated nature of the urban and urbanization.

The evolution of post-pandemic UVCs is intrinsically linked to an acceleration in new ways of working and living, all more adaptable and flexible, but with important differences between sector and context, hence groups of individuals (their skills and job occupations), as well as being overlain on existing wealth and racial intersectional inequalities. Remote working extends the reach of large cities into peripheral areas but significant regional inequalities (those places and individuals left-behind) will continue to persist. The stretching of UVCs may alter the geography of disadvantage, mitigating some of the consequences of isolation long endured by many smaller towns and rural areas, or even urban areas in emerging economies but it will not resolve them. In any case, the stretching of UVCs is a two-way process with some economic activities located within

a city's screen-to-screen laborshed eventually breaking-out from this relationship to establish new firms that will configure their own consumer/employee/partner UVCs. It is important to appreciate that UVCs may be configured and controlled by firms/individuals located in major urban agglomerations or from other locations, including non-city spaces. The ongoing stretching of UVCs, and related theoretical and policy impacts, urgently requires further conceptual refinement and empirical research.

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