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Putting the Digital Growth Machine in Place: Shifting Growth Genres in Silicon Valley's Urban Politics

Abstract

A growing body of scholarship has raised important concerns about the swelling power of the technology industry in the politics of urban development. Yet in helpfully sounding the alarm, some scholars have risked obscuring the variegated ways that tech sector growth has been politicized and materialized in different places and times. To allow for greater attention to variety and the specificity of places, this article proposes that digital growth machines assemble, and are partly assembled by, cultural genres of growth that arise, stabilize, and change in relation to the political and historical configurations of particular places. By tracing the changing politics of tech-led development in Mountain View, a small city in the heart of Silicon Valley that is home to the global headquarters of Google, the article argues that local growth machines have repeatedly shifted growth genres once an established genre had been problematized politically. During these moments of transition, growth coalitions dialogically assemble new genres of growth that they figure as a pragmatic and promising way to help remedy harms of previous growth. While shifting growth genres can help temporarily ease political tensions and allow digital growth machines to carry on, many of the problems stemming from industry expansion continue to worsen, thus setting the stage for future backlashes.

Keywords

Silicon Valley, digital growth machine, growth genres, housing, local government, technology, inequality

Introduction

In June 2023, the City Council of Mountain View, a small city in the heart of Silicon Valley, unanimously approved an ambitious mixed-use development agreement that the

city's largest employer, Google, had put forth. Nearly ten years in the making, Google's plan proposed to develop several "complete neighborhoods" consisting of up to 7,000 new residential units – of which up to 15 percent would be below market rate – nearly 300,000 square feet for retail, restaurants and "community uses," a site for a potential new school, 26 acres of parklands, and 3.1 million square feet of office space – of which 1.3 million square feet would be net new – across 127 acres (Martin, 2023). The city's agreement with Google was championed by a diverse coalition of governmental actors, including progressive elected officials, pro-housing nonprofits and activists, building trade unions, and even factions of environmentalists. For many who regularly participate in urban governance in Silicon Valley, Google's agreement with Mountain View appeared to mark a welcome change in the Valley's dominant approach to growth, which had for decades privileged office space expansion while curtailing residential development.

While Mountain View's agreement with Google is in many ways exceptional, it is also an interesting case to think with in light of growing scholarly concern about the swelling power of the tech industry – and associated discourses valorizing innovation – in the politics of urban development (McNeill, 2017, 2021). This recent scholarship critiques how, following the 2008 Great Recession, tech sector firms, investors, and entrepreneurs came to be figured as especially enticing, even indispensable, agents of economic renewal in cities such as New York (Zukin, 2020a, 2020b, 2021), San Francisco (McNeill, 2016; Stehlin, 2016; Walker, 2018; Schmahmann et al., 2023), London (Nathan et al., 2019), Rio de Janeiro (Rossi and Di Bella, 2017), and many other municipalities across the planet

(McNeill, 2021). The recent critical literature helpfully challenges boosters' claims that tech- or innovation-led urban growth will lead to improved conditions for all by, for example, noting how the urban emplacement of tech industries often contributes to extreme housing inflation, gentrification, and racialized displacements (cf. Stehlin, 2016; Maharawal and McElroy, 2018; Schafran, 2018; Zukin, 2020a). But in laudably ringing the alarm, the new critical literature has at times perhaps also overswung its hand. To account for the urbanization of tech, much of the new critical scholarship identifies a familiar mechanism, the urban growth machine (Molotch, 1976), but now buttressed with the tech industry's considerable resources and allure, leading some scholars to posit an emergent "innovation complex" (Zukin, 2020a) or "digital growth machine" (Rosen and León, 2022) as a defining feature of contemporary urban politics in cities around the world. However, and much like debates from the 1990s over the "New Urban Politics" scholarship (cf. Cox, 1993; MacLeod and Goodwin, 1999) and its growth machine variants (Jonas and Wilson eds., 1999), some scholars have begun to question just how general and just how novel the recent urban emplacement of the tech industry actually is (cf. Le Galès, 2022; Semi, 2022). Since the new critical accounts tend to be based on case studies of a few iconic cities, these scholars warn about treating the experiences of select cities as representative of tech-led urban growth writ large, since doing so could occlude and distort variegations in the forms and processes of tech-led development that arise in different cities at particular moments.

This article focuses on one case in order to examine how variegated approaches to tech-led growth arise in relation to the cultural, political, and historical context of particular places. When viewed from a distance, Google's plans for Mountain View appear to have much in

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common with the innovation districts, the digital growth machine, and the innovation complex that scholars have identified as a prevalent developmental trend in cities during the 2010s. However, when viewed up close and in its historical context, Google's plans for Mountain View are also a distinctively local phenomenon. Unlike New York City's innovation complex or even Google's development schemes for nearby San Jose, Google's plans for Mountain View were primarily justified not with promises to unleash innovation or to bolster job creation but rather as an ecologically amenable way to substantially increase the city's housing stock. Relatedly, the growth coalition that assembled to help construct Google's plans for North Bayshore included progressive activists and environmentalists, groups that often oppose urban growth machines in other contexts. Relatedly, and unlike many of the cities examined by the recent critical literature, the tech industry had been deeply embedded in Mountain View since the decades following the Second World War, the region had already been through several political backlashes to tech-led growth, and these backlashes helped bring about significant transformations in the prevailing ways that tech-led growth was imagined, justified, and enacted in the region. As such, Mountain View offers an interesting case to think through how tech-led growth machines can arise, transform, and sustain themselves in relation to place-based aspirations and controversies.

To help make sense of these issues, this article introduces the notion of *growth genres*. While the term genre is more commonly associated with literary theory, anthropologists and sociocultural theorists have also fruitfully extended the notion in their attempts to

explain the structuration of various domains of social life.¹ On one hand, a cultural genre is a type. On another hand, and unlike many of the typologies used in the social sciences, cultural genres draw attention to the interpretive, imaginative, and dialogic dimensions of social structuring. Rather than simply being imposed from above, genre conventions mediate expectations and practices for cultural producers and consumers alike. As such, the notion of growth genres can be a helpful way of thinking about how different approaches to tech-led development come to take root and change in particular places at a given historical moment without falling into overly structural or deterministic explanations.²

In the case of Mountain View, these shifts in the dominant genres of tech-led growth have been assembled as governmental actors in Silicon Valley have repeatedly attempted to resolve contradictions and tensions stemming from decades of tech-led growth. As we will see, growth coalitions have attempted to resolve these tensions not by halting or substantially slowing tech-led growth in the region but, rather, by turning to further tech-led growth but of an altered kind. On one hand, local governmental actors have recurrently attempted to identify creative ways to handle and mend various contradictions and tensions of tech-led growth once some of those repercussions had been problematized politically. On the other hand, and in keeping with growth machine theory as well as urban regime

¹ My use of the term genres is inspired by the interdisciplinary work conducted at the Institute for Research on Learning in Palo Alto during the 1980s and 1990s (cf. Nunberg, 1993; Brown and Duguid, 1994). These scholars extended and adapted the concept of genre from its usage in literary theory, particularly Bakhtin (1986), to the realm of design. My usage follows a similar trajectory but applies the notion of genres to conventional ways of doing urban growth politics in particular settings.

² During the 19990s, one of the critiques of the urban growth machine thesis was that it was too deterministic and that it undertheorized culture. See Jonas and Wilson (eds) (1999) as well as Molotch's (1999) response. The notion of growth genres offers one way to treat culture as integral to the politics of urban development.

analysis (Stone, 1989), governmental actors were often beholden to further tech-led growth in order to garner capacities for, among other things, attempting to contend with tensions and contradictions stemming from previous genres of tech-led growth. The structural conditions that have made governments in Silicon Valley dependent on tech-led growth have led them to dialogically and pragmatically develop new growth genres that they believe will be less harmful, or more socially beneficial, than the growth genres that had hitherto been dominant. They do so even though further tech-sector growth is likely to exacerbate many of the tensions and contradictions that helped bring forth a backlash, most recently inequality, housing inflation, and displacements.

The remainder of the article precedes as follows. First, it situates the concept of *growth genres* in relation to classical works in urban political economy and their more recent tech-inflected reformulations. Then, the article empirically sketches how Mountain View's dominant growth genres have shifted since the Second World War, and it analyzes how these changes arose in relation to local concerns about the genre of growth that reigned at the time. As we will see, Google has been the premier, but by no means unilateral, actor in the most recent attempt to shift Silicon Valley's dominant genre of tech-led growth, a shift that remains unresolved at the time of writing. The article concludes with a short reflection about if and how Mountain View's recent experiences with Google might generalize to other contexts.

(Digital) Growth Machines and Shifting Genres of Tech-Led Growth

As mentioned, to account for the tech-sector's ascent into influential positions in urban governance during the 2010s, much of the recent critical scholarship identifies a familiar mechanism: the urban growth machine (Molotch, 1976; Logan and Molotch, 2007). According to Harvey Molotch's influential thesis, much of urban governance, at least in the U.S., is driven by local elites who, despite their differences, share an interest in promoting regional growth. These elites form coalitions to promote growth, Molotch contends, either because they have a direct financial interest in enriching the exchange value of their landholdings (rentiers), because their enterprises stand to benefit from aggregate local population growth (local media, utilities, businesses serving local populations, cultural institutions), or because their organizations depend on the goodwill of more powerful members of the growth machine (various non-profits). Especially under neoliberal conditions of constrained governing capacities and inter-city competitions for global capital investment, city officials in the U.S. have often had little choice but to take an entrepreneurial (Harvey, 1989) approach to urban governance, aligning themselves with pro-growth activists in order to garner a "power to" govern, to use Stone's (1989) urban regime analysis formulation. While local residents who primarily orient to the city for its use values may organize campaigns to oppose growth coalition agendas, more often than not they are outgunned by pro-growth activists.³

³ For a helpful synopsis of the growth machine thesis, critical responses, and Molotch's response to his critics, see Jonas and Wilson eds. (1999), MacLeod (2011), and the preface to Logan and Molotch's (2007) 20th anniversary edition of their landmark book

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The recent critical scholarship on tech-led urban development extends the contours of Molotch's growth machine thesis to a historical moment when Big Tech had ascended to the pinnacle of global capitalism and when the tech industry's discourses and practices of "innovation" had become increasingly hegemonic across the planet (cf. Zukin, 2021; Rosen and León, 2022). According to much of this emergent work, the tech industry has become increasingly powerful in the politics of urban development in large part because it has successfully grafted itself onto existent local growth coalitions (cf. Zukin, 2020; McNeill, 2016; Schmahmann et al., 2023), forging what Rosen and León (2022) refer to as the "digital growth machine" and what Zukin (2020) terms "the innovation complex." For example, Zukin (2020) meticulously documents how, following the near implosion of the financial industry at the end of the 2000s, officials in New York City saw the tech sector as a singularly promising engine of economic recovery, widely shared prosperity, and modernization. As such, they offered generous subsidies, land, and policy reforms in an attempt to attract and grow the "innovation" sector. In doing so, officials found largely enthusiastic allies in familiar growth coalition participants, such as real estate developers, owners of office space and apartment buildings, and university leaders. At the same time, investors and executives in New York City's growing tech sector became increasing organized and involved in urban politics, forming political action committees, making campaign donations, and mounted public relations campaigns when their interests were threatened by municipal regulation. Similar tech-aligned growth coalitions, but at a smaller scale, have been documented in San Francisco (McNeill, 2016), London (Nathan et al., 2019), Rio (Rossi and Di Bella, 2017), and many other cities (McNeill, 2021). Much of this emerging work also directs critical attention to who benefits from and who carries the

burdens of recent tech-led urban restructuring initiatives, noting that existent inequities tend to be intensified by the urbanization of tech.

This recent critical work offers a sobering corrective to the more politically dominant and often value-free discourses that were – and still often are – used to justify tech-led urban restructuring projects in elite planning, business, and governmental networks: it highlights the unequal and undemocratic power relations that bring these initiatives to life, and it draws attention to how such schemes often reinforce, rather than dismantle, systemic inequities. Yet in helpfully puncturing the hype, the new critical work has at times presented the experiences of a few iconic cities as representative of what occurred in cities across the planet during the 2010s.⁴ As Le Galès (2022) observed in their reading of Zukin (2020), we should be careful about deriving a general template of tech-led urban restructuring when the model is derived from a case study of a single city, especially one as distinctive as New York.⁵ Relatedly, Semi (2022) questioned whether the post-2008 flurry to erect innovation districts and complexes was all that novel, noting that similar discourses and patterns of development have been active in many cities since the 1990s.⁶ Indeed, when viewed comparatively over the duration of decades, most technologically innovative industries have agglomerated in major metropolitan centers (Castells and Hall, 1994), all of

⁴ For example, in writing about post-2008 urban politics, Zukin (2020b: 944) states: "*In every major city*, an 'innovation complex' arose, with a built environment of computer research labs, tech and creative offices, and coworking spaces; an organizational environment of partnerships among tech companies, universities, and economic development agencies; and a discourse of 'innovation and entrepreneurship'" [emphasis added]. ⁵ Rossi and Di Bella's (2017) comparative analysis of New York and Rio is a welcome analysis of variegation

in recent trends in tech-led urban growth.

⁶ Le Galès (2022) raises similar critiques, noting that efforts to install an urban tech economy have flourished in cities such as Helsinki, Bangalore, Seoul, and London long before the 2008 financial crisis.

which raises questions about how tech-led growth machines arise, vary, and change in relation to different historical, geographic, and political contexts.

In this regard, Mountain View is an interesting case to think with. As mentioned, growth machines in Mountain View have pursued several different models of tech-led growth since the Second World War, and they have built new models in part as a response to political backlashes to growth. To help account for this process of tech-led growth machines persisting through change, this article introduces the notion of growth genres. While a full exposition of the term genre is beyond the scope of this article, a brief sketch will suffice for the subsequent analysis. The notion of a genre allows analysts to attend to how forms of cultural productions – including, but not limited to, the built environment – can acquire relative stability and coherence without resorting to explanations that render social actors devoid of agency and interpretative capacities. In keeping with structuration theory (Giddens, 1979) as well as social practice theories (Bourdieu, 1977), cultural genres acquire stability, coherence, and a taken-for-granted quality among the social actors who engage with them primarily through repetition. Genres are socially constructed interpretative conventions that mediate between cultural producers and consumers. Textual genres can include generic figures and characters, generic plots and dramas, generic acts and counteracts, generic settings and scenes, generic artifacts and material forms, generic valorizations and demonizations, and so on. The innovation of anthropologists and sociocultural theorists was to recognize that much of social and cultural life is structured in a similar manner: differently positioned participants in various culturally figured worlds (Holland et al., 1999:

49-65) actively engage with, orient to, and (de)identify with the genre conventions that structure the cultural productions of their social worlds.

In my usage, growth genres refer to the fairly stable conventions that arise around particular ways of doing the politics of urban development in a city or region at a given historical moment. They entail the fairly generic spatial forms and patterns, scripts and roles, dramas and contests, protagonists and adversaries, idealized imaginings of futures and pasts, and values and sentiments that constitute "normal" developmental politics in a given time and place. Like any other realm of social life, the installation and hegemonization of a particular growth genre is also subject to power relations. In the United States, the growth coalitions identified by Molotch (1976) and the business elites noted by Stone (1989) often play an outsize role in specifying, animating, justifying, and normalizing a dominant growth genre, and they often succeed in mobilizing resources to overcome, deflect, or neutralize opposition.⁷ However, the notion of growth genres also invites a more dialogic analysis of how particular patterns of development come to take root in a given locale at a given time, as well as how these patterns change over time. The elites that play such a prominent role in the growth machine thesis and urban regime analysis cannot simply impose their will on a city, even though they often have considerably more resources than those who oppose them, nor do growth coalition participants and tactics stay the same for time immemorial.

⁷ See, for example, Stone's (1989: 186-199) analysis of how business elites provision selective incentives and 'small opportunities to non-business elites in order to assemble coalitions that promote their interests, a "go along to get along' dynamic, as Stone puts it.

Rather, growth genres are assembled and stabilized through the "friction" (Tsing, 2005) of contingent, unequal, and practical place-based encounters across differences.

While a given way of doing developmental politics can acquire a hegemonic, conventional, and taken-for-granted quality for some time, growth genres are also vulnerable to attack, especially when contradictions and tensions stemming from an established growth genre pollution, inequalities, gentrification, displacements, homelessness, etc. - become difficult for governing coalitions to ignore and a counter-coalition becomes strong enough to successfully politicize them. As we will see, these politicized problematizations have not led to a cessation of tech-led growth in Mountain View nor to a resolution of its contradictions. Instead, when an established growth genre was successfully politicized, participants in local developmental politics attempted to shift the growth genre from one that had been rendered harmful to one that was figured as a promising remedy to those harms, even though doing so extended and deepened many of the tensions and contradictions of tech-led growth. By way of shifting growth genres, some of the participants in local growth coalitions and anti-growth coalitions can change, and the material forms of and discursive justifications for development change as well. But the underlying relations of dependency between city governments and local growth coalitions persists and, if anything, can become more entrenched. Rentiers remain wedded to local governments in order to advance their interests in land-use intensification and enriching the exchange value of land, and local governments remain dependent on further growth in order to sustain and garner capacities for, among other things, attempting to mend tensions and contradictions stemming from previous cycles of growth.

The remainder of this article analyzes substantive shifts in the tech-led growth genres that have been imagined and pursued in Mountain View since the Second World War. The empirical material for this article was gathered as part of research for an ethnographic book manuscript on land politics in Silicon Valley during the 2010s and early 2020s. Research consisted of participant observation, semi-structured interviews, and a review of journalistic, governmental, industrial, and non-profit documents.⁸ In total, 92 interviews were conducted with 87 different people, ranging from elected officials (including five current or formal mayors of Mountain View and Palo Alto and the county supervisor representing northern Santa Clara County); nonprofit leaders and employees working on regional housing issues; local experts in planning and regional economics; leaders of regional think tanks; home owners; activists and volunteers working on problems associated with housing unaffordability and homelessness in the region; architects and developers; and service and care sector workers who were struggling to find and keep a place to live in the region.

Setting the Stage: Mountain View's Emergence as a Technoburb and the Shift to an Office-Skewed Growth Genre

⁸ Participant observation focused on campaign events for politicians, city council meetings, social events organized by activists and nonprofits, and community outreach events sponsored by Google as part of their efforts to win community approval for their planned developments. Newspaper archives, government documents, and other media were consulted to corroborate and extend accounts shared in interviews.

In the decades following World War Two, Mountain View's initial explosion of tech-led growth followed a familiar developmental model: the genre of post-war suburban sprawl in its "technoburb" (Fishman, 1990) formulation. Mountain View is located in the northern portion of Santa Clara County, bordering Palo Alto to the northwest, the southern portion of the San Francisco Bay to the north, the Moffett Federal Airfield and the City of Sunnyvale to the east, and the wealthy residential enclave of Los Altos to the west and southwest. Before the electronics industry transformed the region during the post-war decades, Mountain View was an ethnically diverse working-class residential suburb that contrasted sharply with its tony neighbors to the north and west. During the post-war decades, the electronics industry initially concentrated in the northwestern portion of Santa Clara County, first in Palo Alto - home to Stanford University and the much-emulated Stanford Industrial Park (Mozingo, 2011: 166-171) – before spreading south to the neighboring cities of Mountain View, Sunnyvale, Santa Clara, and Cupertino. Fruit and nut orchards were ripped out and replaced with low-density housing, office parks, strip malls, and production facilities for the booming electronics industry. During the same period, most residential development was concentrated in the southern and eastern portions of the county, primarily San Jose, where city leaders and their local growth machine allies aimed to make San Jose the "Los Angeles of the North" (Saxenian, 1983: 244). The pace of techno-suburbanization during the post-war decades was meteoric. Between 1940 and 1970, both jobs and population grew rapidly in Santa Clara County: employment doubled each decade, adding approximately 350,000 new jobs, while the county's population increased by almost one million (Saxenian, 1983: 237).

However, as Saxenian (1983) observed, the initial techno-suburbanization of Santa Clara County was also highly contradictory, with remarkable economic dynamism coupled with dangerous levels of pollution, extreme traffic congestion, rising inequality, and soaring house prices. Moreover, the spatial organization of industrial development and residential growth was highly segregated by race and class within Santa Clara County, a pattern that spread throughout the San Francisco Bay Area in later decades (Schafran, 2018). By the mid-1970s, these tensions and contradictions in Silicon Valley's techno-suburban growth genre engendered a backlash. Ascendent environmental movements (Walker, 2007: 98-108), political leaders worried about the fiscal impacts of further growth on municipal budgets (Molotch, 1976: 319), and middle and upper-middle class residents who were concerned about degradations in their quality-of-life mobilized counter coalitions that successfully politicized the techno-suburban growth genre (Schafran, 2018: 153-155).

However, the dominant governmental response to these backlashes was not to try to halt tech-led growth in the Valley. Rather, the dominant response was to transform the growth genres pursued and enacted, from ones that had been politically problematized as ecologically, fiscally, and socially harmful to ones that were understood as less damaging and even socially beneficial. What emerged and eventually became hegemonic was a seemingly ecologically and fiscally prudent genre of growth that I shorthand as *office-skewed*. This new growth genre maintained industrial expansion for the tech sector while also appearing to rectify its disagreeable impacts. Polluting facilities, especially those focused on semiconductor production, were forced by labor and environmental activists to curb their most ecologically damaging practices (Pellow and Park, 2002; Lécuyer, 2017),

and most firms moved their production facilities out of the region in subsequent decades, thus easing pressure from activists. At the same time, cities in Silicon Valley, and especially those clustered in the northern portion of the county, tightly constrained further residential development as they also preserved green spaces that had not yet been suburbanized (Walker, 2007: 100-104), thus mollifying middle and upper-middle class residents' concerns about the impacts of further growth on their quality of life. Yet substantial tech-led industrial growth continued, primarily in the form of office space and research and development labs for the tech sector (Schafran, 2018: 156), most of which were placed in parts of the Valley that were not adjacent to existing residential neighborhoods. The result was the stabilization of a new growth genre that was heavily skewed towards office production above all else.

Like other cities in northern Santa Clara County, Mountain View largely enacted this office-skewed growth genre since the 1970s. Since the 1990s, most of this office development has occurred in the northernmost portion of the city, in a district called North Bayshore: a roughly 220-acre tract separated from the residential heart of Mountain View by a 12-lane highway, U.S. Route 101. Before the city converted North Bayshore into an office park in the early 1990s, the area hosted a medley of predominantly non-residential uses: light agriculture, a company that developed roller coasters, a drive-in movie theater, a rock-crushing plant, and a 650-acre landfill that collected refuse from San Francisco and other cities on the peninsula. The dump was closed and converted into a park and amphitheater in 1980s, and in the mid-1990s Silicon Graphics became the anchor tenant of

the new business park when it leased over 20 acres from the city to build its global headquarters.

In keeping with the growth machine thesis, urban regime analysis, and critiques of urban entrepreneurialism, this office-skewed growth genre was constructed and adopted by local governments in large part because it helped cities maintain and enhance their governing capacities in a broader political and economic environment that offered few pragmatic alternatives. Lenny Siegel - a Mountain View resident since the 1970s who has worked as a community organizer, progressive activist, environmental consultant, and City Council member and Mayor in Mountain View - shared a similar diagnosis. "We did studies in the seventies that looked at this. Cities around here believed that offices generate more revenue than they cost. And homes costs more to serve than the revenue they generate," Siegel shared. According to local planners and public officials in Silicon Valley, the pragmatic attractiveness of a growth genre that significantly expanded office space while throttling housing production was augmented by the tax revolt at the end of the 1970s, especially Proposition 13, the 1978 voter initiative that limited the annual increase of property taxes and required a two-thirds supermajority in order to raise most taxes, including at the local level. "Prop 13 incentivized cities to emphasize anything but residential land use," Timothy, a city planner who has worked on long range planning in Silicon Valley for decades, told me. "All across the state, but particularly here in the Bay Area, cities had a very attractive option, and a feasible option, which was office," he elaborated.

The pragmatic attractiveness of the office-skewed growth genre was further reinforced by North County residents' proclivities towards NIMBY ism and resource hoarding. "Residents and constituents seemed to be naturally more suspicious of housing than office," Timothy, the city planner, explained. According to Timothy, residents would often mobilize against new and denser housing out of concern for how the new housing would impact school quality – a major draw for many local residents – as well as classed and racialized anxieties over who might move into new, denser housing complexes. Office growth, by contrast, not only fed the municipal resource base, it also often occurred in parts of the city that were spatially separated from residential neighborhoods. As such, the officeskewed growth genre provoked less resistance from existing residents than the genre of techno-suburbanization. "You could build half-a-million or a million square feet [of office space] and it would generate amazingly little concern [from residents]," Timothy recounted.

As the next section illustrates, it was this office-skewed growth genre that was increasingly problematized politically in Mountain View during the 2010s. Much like the earlier backlash to techno-suburbanization, the politicized problematizations of the office-skewed growth genre led participants in local growth machines to, once again, attempt to erect a new growth genre that they claimed would help remedy the harms of the antecedent genre, a transformation in which Google has played the starring, but by no means exclusive, role.

"The Jobs-Housing Imbalance" and the Emergence of a New Urbanist Growth Genre

During the 2000s and early 2010s, the City of Mountain View planned to garner additional resources for major maintenance and improvement initiatives by continuing to enact the office-skewed growth genre in North Bayshore. Many of these initiatives promised to address problems stemming from past growth, near and far: building large infrastructure projects to guard against rising sea levels, improving transportation infrastructure to relieve traffic congestion, and maintaining the 439 acres of buried refuse that the city had collected when it operated a dump for San Francisco. To raise resources for these projects, the city planned to allocate "bonus" floor-area-ratios (FARs) to existing property owners in North Bayshore, a scheme that would densify the office park and make the underlying land more valuable, thus increasing the tax base, while also allowing the city to collect sizable impact and development fees. Additionally, the city's discretionary allocation of bonus FARs could be used to exact community benefit proposals from different property owners in North Bayshore, effectively pitting landowners against each other for the benefit of the city.

Compared to previous decades, when Mountain View had offered land, subsidies, and infrastructural resources in an attempt to lure tech companies to North Bayshore, the city's strategy of trading land use intensification rights for higher tax revenues and extensive community benefits signaled improvements on the established growth genre. Yet the city's plan to develop millions of additional square feet of office space but no new housing in North Bayshore was still in keeping with the region's decades-long attachment to office-skewed growth, and by 2014 some of the contradictions and tensions of this growth genre

were being problematized in ways that demanded responses from elected officials, commercial developers, and large technology firms.

Preceding national and international trends, these problematizations found their most potent political articulations around housing costs, a problem that many residents of the Bay Area were blaming, at least in part, on the astounding agglomeration of tech firms, and their highly compensated workers and investors, in the region (Walker, 2018: 224-232). While lower income residents had been bearing the brunt of the region's high housing costs for decades, and while the tech industry had long bemoaned the impact of high housing costs on their bottom lines, housing affordability did not become a central political issue until middle and even upper-middle class residents found themselves squeezed by housing markets and once some of the housing related hardships of the region's lower-income residents could no longer be kept out of public view. Taken together, these circumstances drew increased political scrutiny to the region's office-skewed genre of growth.

These politicized problematizations of the region's established growth genre were particularly acute in Mountain View, and it was in response to such problematizations that a new growth genre emerged as an appealing and pragmatic solution for governmental actors in Mountain View. During the 2010s, housing costs became so high in Mountain View that even well-compensated, but newly arriving, Google employees were dismayed by the quality of the dwellings they could afford, so some of them organized a local "Yes in My Backyard" (YIMBY) chapter to advocate for removing regulatory barriers to housing

development. Working class tenants, mostly Latina women, were so distraught by large and frequent rent hikes and the forced displacement of friends and family that they organized approximately 300 of their neighbors to attend Mountain View City Council meetings, where they shared harrowing testimonials to slack-jawed officials and pleaded the Council to please do something to rein in massive rent hikes.⁹ Executives at some of the wealthiest companies in the world, leaders of business-oriented think tanks in Silicon Valley, and local regional economists all worried that high housing costs were hindering companies' ability to recruit and retain tech workers from around the world (a threat to the "golden goose," as one regional economist put it to me). At the same time, more and more people, many of whom worked in the service and care sectors in the Valley, started living in cars and recreational vehicles on the streets of Mountain View, including adjacent to the tech campuses, and this visibilization of poverty provoked a backlash from the city's more affluent residents.

Just as the earlier backlash to techno-suburban sprawl had helped install the office-skewed growth genre in the 1970s, governmental actors once again worked to erect a new growth genre when the office-skewed genre was politically problematized during the 2010s. Rather than halt the tech-sector's spatial expansion until housing growth caught up with demand, reconfigured growth coalitions developed and championed new ways of doing tech-led growth, ones that they claimed would help address growing concerns about housing scarcity and Silicon Valley's jobs-housing imbalance. In particular, emergent growth

⁹ Local officials initially tried to deflect and diffuse the tenants' political intervention, but the movement grew and ignited a yearslong, hard fought, and ultimately successful campaign for rent control.

coalitions in the Valley increasingly advocated for what I, following my informants, will shorthand as a New Urbanist genre of growth, one that increased densities through mixeduse infill developments that combined office, residential, retail, and parklands, typically in areas zoned for commercial uses.¹⁰ The emergent genre appealed to tech companies and familiar growth machine participants who stood to benefit financially from the genre's land-use intensifications, but it also, and somewhat surprisingly, appealed to many progressive politicians, environmentalists, and housing activists who were concerned about the region's jobs-housing imbalance, housing costs, and long polluting commutes. Additionally, because the new developments would occur in areas that were largely separated from existing residential neighborhoods, advocates for the genre saw it as less likely to provoke a NIMBY backlash and, thus, as a pragmatic way to try to increase the region's housing supply. Mountain View was one of the first cities in Silicon Valley where this shift in growth genres began to emerge, and contestations over the future of development in North Bayshore was the main drama through which the outlines of the new growth genre started to take shape. As we will see, Google emerged from this contest as the central player in determining the material forms and temporalities of Silicon Valley's emergent genre of tech-led growth, but they did so dialogically, shaping and selling their plans in relation to local concerns about housing costs and ecological degradation.

¹⁰ While the shift towards a mixed-use tech precinct shares spatial characteristics with the more general trend towards innovation districts during the 2010s, I am using the phrase "new urbanist" instead of innovation district because the former was the term used by local actors who helped champion the new genre. As mentioned, an interesting feature about Mountain View's turn towards mixed-use tech development during the 2010 is that "innovation" and its familiar corollary of "job creation" were rarely used as justifications for new developments, likely because so-called innovation industries were already pervasive in the region and the city was being critiqued for having too many jobs relative to housing. The lack of such justifications helps illustrate how growth genres are produced dialogically with local concerns and cannot be reduced to patterns of spatial form.

Google's heightened involvement in Silicon Valley growth politics during the 2010s dovetailed with the company's expansion into not just owning and inhabiting office space but also developing it. Google began to establish a prominent presence in the North Bayshore district of Mountain View in 2003 when it leased the Silicon Graphics campus, converted it into the company's global headquarters, and then bought the property in 2006. As Google grew astronomically during the 2000s, so did its appetite for real estate in North Bayshore. By 2010, Google occupied over four million square feet of office space across more than 65 buildings in Mountain View alone, the vast majority of which was located in North Bayshore (Swift, 2010). Until the 2010s, Google expanded its footprint in North Bayshore exclusively by purchasing, leasing, and renovating existing buildings. But in the early 2010s, Google released for the first-time its own proposals to design and develop office buildings in Mountain View, and in doing so the company took on a more activist role in local growth politics, albeit often behind the scenes.

As mentioned, prior to the mid 2010s, the Mountain View City Council had planned to permit substantial additional office space but no new housing in North Bayshore, thus perpetuating the office-skewed growth genre that had provoked relatively little resistance in Silicon Valley for decades. But in 2014, a grassroots group calling themselves "The Campaign for a Balanced Mountain View" succeeded in making housing production in North Bayshore the central issue in that year's election for City Council. The campaign was spearheaded by Lenny Siegel, the progressive activist, community organizer, and environmental consultant mentioned previously. Siegel had long advocated for more

housing production in Mountain View, problematized the city's "jobs-housing imbalance," and touted the social and ecological benefits of a new urbanist approach to planning. With the City Council prepared to permit more office space but no new housing in North Bayshore, Siegel and his allies managed to assemble a broad counter-coalition that aimed to raise awareness of how decades of developing office space but not housing had produced a jobs-housing imbalance that was fueling severe housing inflation and overcrowding, the displacement of lower- and middle-income residents, and long commutes for not just highly paid tech workers but also thousands of service and care sector workers who kept the Valley running. Siegel entered the race for city council on a platform of building housing alongside offices in North Bayshore, and by the time of the election Siegel and two other pro-housing candidates won, tipping the balance on the City Council in favor of building substantial amounts of housing in North Bayshore for the first time.

As the new City Council went to work on revising the precise plan for North Bayshore to include housing, Google competed fiercely with other large property owners in North Bayshore for the city's allocation of the bonus FARs for office space. The contest took several twists and turns but, in the end, Google managed to acquire all of the city's density bonuses. With land and development rights secured, Google drafted plans for North Bayshore to be in line with the new City Council's commitment to housing production. Google had expressed interest in building a smaller number of apartments in North Bayshore at the end of the 2000s, but they were rebuffed by the City Council. But with housing struggles now thrust into the political spotlight, Google found an emergent and somewhat surprising local growth coalition that was willing to support the genre of large-

scale, mixed-use developments that the company was also exploring through its subsidiary, Sidewalk Labs, in Toronto (Filion et al., 2023) as well as around the Diridon Train Station in downtown San Jose (Angst, 2021). To develop a suitable plan for North Bayshore, Google worked in partnership with elected officials, city staff, and a local nonprofit called Silicon Valley at Home that had formed in 2015 to focus on housing issues in the Valley.¹¹ After several years of planning and negotiations with city officials and Silicon Valley at Home, in February 2021 Google formally filed a proposal for a mixed-use development that would include up to 7,000 new residential units and 3.1 million square feet of office space, of which 1.3 million square feet would be net new. It took over two more years of reviews and revisions before Google's North Bayshore Master Plan was unanimously approved by the Mountain View City Council in June 2023 with broad support from local business, labor, housing, and environmental organizations.

The approval of Google's North Bayshore Master Plan demonstrated, once again, how digital growth machines can overcome forces that threaten to throttle it. They do so by shifting the genres that narrate and organize growth, from one that had been rendered politically problematic to one that promises to help remedy prior harms. The fashioning of a new growth genre also brought together a diverse and somewhat surprising growth coalition that included newcomers – such as Google, some environmentalists, new

¹¹ Google and many other tech companies are sponsors of Silicon Valley at Home. This sort of public-privatenonprofit partnership between Google, Mountain View, and Silicon Valley at Home exemplifies what Swyngedouw (2005) termed "governance-beyond-the-state" and has much in keeping with the sorts of institutional arrangements that Zukin (2020a) documented in New York City. It's also an example of the selective incentives and small opportunities that Stone (1989) figures as key to business dominance in urban regimes.

nonprofits, and housing activists – and it largely succeeded in delegitimizing political actors who remained committed to the office-skewed genre of growth. Yet, in trying to address problems stemming from past tech-led growth, governments in cities like Mountain View have also committed themselves to further tech industry expansion, developments that are likely to exacerbate many of the tensions and contradictions that have given rise to recurring backlashes.

Conclusion

To help make sense of how digital growth machines and the restructuring schemes that they pursue arise from and vary in accordance with local contexts, this article proposed the notion of growth genres. The notion of growth genres helps draw attention to how tech-led development occurs dialogically, albeit highly unequally, between the tech industry and other local users of urban space, many of whom are concerned with the negative consequences of past cycles of tech-led growth. As I have tried to show, tech-led growth genres are assembled through the tensions – what the anthropologist Anna Tsing (2005) calls the "friction" - of contingent, unequal, and practical place-based encounters across differences. In Mountain View, such frictions have led to several substantive changes in the dominant approaches to tech-led development that have been proposed and pursued since the Second World War. In the most recent instance, widespread concerns about housing costs and the ecological impacts of exurban sprawl fueled a political backlash to the officecentric genre of tech-led development that had reigned since the 1970s, which was itself a response to the techno-suburbanization growth genre of the post-war decades. Google and other large commercial developers in Silicon Valley have responded to this recent backlash

by proposing significant housing development in their plans for massive office expansions. In doing so, they managed to assemble a growth coalition that included groups that often oppose large scale industry developments in other settings.

As housing inflation has become a national and even international political issue, it remains to be seen if growth genres analogous to the one recently constructed in Mountain View will be assembled in other locales where the tech industry concentrates. Even in Silicon Valley, the "new urbanist" genre that Google did so much to bring forth has yet to stabilize, not least because pandemic-induced remote work policies have, for the moment, weakened demand for office space, thus undermining the feasibility of projects that tether housing production to office expansion. Five months after the City Council approved Google's plans for North Bayshore, Google announced that it was parting ways with the developer that Google had contracted to build housing in North Bayshore and San Jose. Nine months prior, Google also announced that it was "reassessing" the timeline of its mega-project in downtown San Jose. Both projects remain in limbo at the time of writing. What does seem more certain is that – absent alternative ways for cities to garner governing capacities or a tech industry exodus – some genre of tech-led growth will emerge, the digital growth machine will carry on, and many participants in local governance will tout the new growth genre as a pragmatic and hopeful remedy for the region's perennial contradictions...until the next backlash.

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