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The Politics of Digital Transformations of Housing[1]
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The advances associated with Tech Boom 2.0—including cloud and mobile computing, digital platforms, and automated, data-driven decision-making tools—are dramatically reshaping how housing is bought and sold by homeowners and investors (Casselman and Dougherty, 2019), operated by landlords (Fields, 2019) and inhabited by us all (Maalsen and Sadowski, 2019).   New technologies—from the early 17th century invention of the surveyor's chain to the digitization of real estate practice enabled by so-called property technology, or "proptech"—inevitably reshape how we "practice ownership, use, and exchange of the earth" ((Shaw, 2018: 6). And no wonder: in advanced economies the value of the residential real estate sector is substantial (just over $27 trillion in the US in 2018) (Housing Finance Policy Center, 2019), yet the industry has been slow to adopt proptech (what Shaw, 2018 terms "platform real estate"), making it ripe for 'disruption' by venture capital-backed startups (along the lines of the impact of ridehailing platforms like Uber have had on the taxi industry).

It is vital to embed the digital transformations of housing promised by platform real estate in their wider contexts, and to interrogate their consequences and whose interests they serve. As digital platforms intervene in housing markets, they are both transferring 20th century mechanisms of racialized exclusion into 21st century technologies, and actively shaping content in ways that can (and do) mimic calculated discrimination. Without an explicit focus on housing justice, platform real estate is likely to serve the interests of people and places already benefiting from property-led accumulation, undermining the interests of propertyless subjects and marginalized places.

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Facebook, Disparate Treatment, and Disparate Impact

The history of housing in the United States is inseparable from systematic, finance-mediated underdevelopment of Black geographies. The dual housing market forged in 20th-century America "conflated blackness with economic risk and deteriorating property values," producing racialized geographies in order to extract value (Taylor, 2012: 202). This segregation subsequently enabled predatory lending to Black borrowers in the lead-up to the 2008 crisis (Rugh et al., 2015). The ability for housing and mortgage advertisers to use Facebook to exclude specific groups (a capability the platform has now limited) points to how digital technologies can actively enable the persistence of these processes.

A 2019 lawsuit brought by the US Department of Housing and Urban Development (HUD) against Facebook alleges the social media giant's Ads Manager platform—widely used by mortgage lenders, real estate agents, and real estate listing services—facilitates violations of the Fair Housing Act (FHA). A signal achievement of the civil rights movement, the FHA outlaws housing market discrimination against members of protected classes.[2] According to the government's complaint (US Department of Housing and Urban Development, 2019), Ads Manager enables advertisers to target what kinds of Facebook users will (not) see an ad according to user attributes that correspond to protected classes, such as "Hispanic Culture," "single moms,", and "Christian". Yet such discriminatory personalization is largely invisible, attesting to Laura Forlano's (2018) argument that contemporary technologies "act on our biases by replicating them and distributing them into the background of everyday life, thereby reinforcing and even exacerbating existing structural inequalities" (np).

But platforms do not only transmit social bias. Despite framing themselves as neutral conduits (Gillespie, 2010), platforms are more than utilities facilitating the interaction of, say,

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[2] Defined in terms of race, color, religion, national origin, sex, disability, and familial status.

landlords and prospective tenants. Defining features of platform technology can also create new modes of inequality. Data collection is an inescapable condition of using platforms: the content of posts, clicks, likes, and reposts, and even how long a user pauses while scrolling through a news feed, all provide data points for platform operators. The information people share as they interact on Facebook is deeply valuable because of how it supports targeted advertising; it is also central to how Facebook can actively shape disparate housing market experiences that reinforce existing patterns of advantage and disadvantage. The platform economy giant constitutes a crucial piece of what Fourcade and Healy (2017) term the "information dragnet," by which stores of data are amassed, enabling the "process of sorting and slotting people" (14) to extract profits. Such classificatory systems also reflect structural biases in society and involve issues of control over and access to information, (mis)representation, and inclusion and exclusion (Noble, 2018).

Ads Manager relies on Facebook users' "sharing" to generate data on their attributes and behavior, which is subjected to predictive analytics to classify users and their likelihood of engaging with a given ad. These categories are the basis for creating eligible audiences for ads, selecting the users who actually view ads, and differentially pricing ads according to the groups that view them (e.g., charging more for the same ad to show up in the feed of women versus men). Facebook will not show ads to users deemed unlikely to engage, even if the advertiser wants them to see it. HUD's lawsuit (2019) argues that because pages visited and liked, apps used, and purchasing habits all vary in identifiable ways according to protected class, Facebook's targeted advertising "inevitably recreates groupings defined by their protected class" (5) As a result, it may produce housing market outcomes indistinguishable from intentional discrimination, for example by systematically showing members of protected classes ads for more costly loan products, in ways that carry economic punishment.

The suit against Facebook reveals how platforms can both serve as avenues of disparate treatment by landlords, real estate agents, and lenders, *and* automate housing market

inequalities through how opportunities are (not) made visible.

Tourists vs. Tenants: The New Dual Housing Market?

Short-term rental platform Airbnb provides another illustration of how platforms contribute to housing inequality. Not long before HUD's case against Facebook, the city of New York sued Metropolitan Property Group, accusing the brokerage of using fake Airbnb host accounts to operate illegal hotels. The individuals named in the suit legally leased apartments in dozens of buildings, listed them on Airbnb under profiles that looked like typical hosts, and created 18 corporations to route the income generated to themselves. The scheme generated over $20 million in revenue before the city's recent crackdown. This case points to how Airbnb, itself notorious for skirting regulations (such as zoning rules against hotel lodgings in residential areas) and taxes (including hotel taxes), also facilitates illegal behavior.

More compelling though, is what the case shows about how platform dynamics spill over into local housing markets. Airbnb was initially touted as a way for people to earn a bit of extra money by renting out ("sharing") a spare room or their home while they were out of town. But the imperative to up-scale—to "rapidly and consistently add users," is at the center of the platform business model (Langley and Leyshon, 2017: 11) For Airbnb, this means more and more listings, especially for entire homes, coming on to the platform, and those listings being available more consistently than would be allowed by hosts renting homes during the odd trip out of town. Drawing ever-increasing numbers of rooms or properties onto Airbnb draws them out of what must now be called the long-term rental market to distinguish it from the short-term rental market the platform has created and normalized.

The higher revenues to be earned from renting properties to tourists and travelers rather than to tenants, along with the lower legal/regulatory burden, have spawned commercial-scale Airbnb operators with multiple listings (and the fraud tactics discussed above). In New

York, Airbnb has removed thousands of rental units from the market for city residents, and is responsible for about 16 percent of the city's increase in rent between 2014 and 2017 (Wachsmuth et al., 2018). The growth of entire-home listings was especially high in predominantly Black and Latinx neighborhoods subject to gentrification pressures (such as Bedford-Stuyvesant), where the difference between the rents of long-time residents and potential Airbnb income was greatest (Wachsmuth and Weisler, 2018). The resulting loss of housing and rent increases are more likely to affect Black residents, while hosts in such neighborhoods—and therefore the economic beneficiaries of this process—are predominantly white (Cox, 2017).

In the case of platforms like Airbnb, the rush to "scale" creates new speculative opportunities for property owners and affects housing opportunities by pitting tenants against tourists. But this process also maps onto existing patterns of racialized capital accumulation via the housing market, in which communities of color are destabilized for the economic benefit of white landlords.

Digitizing Housing Justice

Digital platforms can clearly work to reinforce social and spatial hierarchies of housing (dis)advantage and reproduce ideology that privileges homes as vehicles for speculation. In addition to "uploading" long-standing strategies of racial and social exclusion, core features of platform operation (such as data collection, classification, and up-scaling) serve as novel mechanisms of housing inequality, albeit mechanisms that only work because of structural injustices within the US housing market.

Rather than embracing a dystopian technological determinism that forecloses progressive digital transformations of housing, we must look to movements that are using platforms and other tools of Tech Boom 2.0 to support long-standing struggles for housing justice. This includes the Housing Data Coalition, which uses New York City public data to create tools

such as "Who Owns What" to demystify property ownership, and "Justfix.nyc" to support

tenant rights; the Anti-Eviction Mapping Project's digital storytelling about dispossession and

narratives of resistance made with community partners in San Francisco, Los Angeles, and

New York; and *Wem Gehört Berlin* (Who Owns Berlin), which crowdsources data from

tenants to document property ownership and investment patterns. By looking at how

platform technologies are used from and for the margins, it is possible to generate more

radical urban futures.

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