

The Sharing Economy: Rhetoric and Reality

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Abstract

The “sharing economy” is widely believed to have introduced major changes within the corporate economy, claiming markets for lodging, ride-hailing, home services, and other sectors that previously lacked person-to-person alternatives. Yet little agreement has emerged concerning the meaning of the sharing economy or its consequences for consumption patterns in the advanced capitalism world. We critically review the existing literature, focusing on the origins of the sharing economy, its internal tensions and contradictions, the motives of users, its efforts to generate user trust through digital means, and its tendency to reconfigure and even exacerbate class and racial inequalities. We close by speculating about the future of the sharing economy in the time of COVID-19.

Keywords: sharing economy, digital technology, trust, Airbnb, Uber, platform cooperative

1. INTRODUCTION

Few recent developments have created as much public buzz and scholarly interest as the “sharing economy.” It became an object of fascination in part because of its novel technology and economic arrangements, but also because it has been controversial from its early days. Is it “neoliberalism on steroids” (Morozov 2013)—the latest stage of capitalism, in which predatory platforms act with impunity to grow, dominate markets, and exploit users? Or does the combination of digital technology and common good aims represent a genuinely horizontal economic structure and the “end of employment” (Sundararajan 2016)?

Answers to these questions depend in part on how the sharing sector is defined. While the large commercial platforms have gotten most of the attention, from the beginning the sharing economy was capacious, and included not only platforms for accessing accommodations and rides, but food swaps and donation apps; rental, gift, and loan sites for household items; clothing exchanges; repair cafes; and labor services such as time banks and errand sites (Botsman and Rogers 2010; Gansky 2010). This combination of Silicon Valley corporations and community-based entities helped legitimate a utopian discourse promising economic, social, and environmental benefits (Cockayne 2016; Martin 2016; Schor 2014, 2020). For-profit companies justified their existence by their contributions to the struggling middle class (Airbnb), immigrant women (Josephine, a meal preparation site), or the climate (Zipcar), while non-profits emphasized community-building. Rhetorics of common good attracted participation. There is debate about whether the “sharing economy” should be considered a field, but if it is, it has been characterized by much diversity among its actors, particularly in Europe. Whether its configuration is sustainable is an open question.

Assessing the size of the sector is difficult, as it lacks a presence in official statistics. It includes a number of “unicorn” firms, including Uber, Lyft, and Airbnb, and is expected to be a \$335B market by 2025 (PriceWaterHouseCoopers 2015). A 2014 national survey found that between 10-14% of Americans had participated in tool-lending libraries, peer-to-peer lodging, car sharing, bicycle sharing, and ride-hailing (Center for a New American Dream and PolicyInteractive 2014). More recent figures are difficult to find, perhaps because of increased scrutiny of the concept itself.

The sharing economy has generated a host of important sociological questions about trust, inequality, and its relationship to the conventional capitalist economy. To answer them we have organized our review into three main sections. (Because our 2020 *Annual Review of Sociology* contribution, “What do platforms do?,” addressed labor issues, we cover those only briefly.) We begin with a discussion of the factors which led to the emergence of the sharing economy, including its intellectual origins, and proceed to debates about terminology and discourse. In the second section we discuss three empirical literatures on the impacts of sharing economy—on trust and social ties, social inequalities, and environmental effects. In the final section we address the question of how to understand the sector—is it part of an intensified neoliberalism, or can it help to construct an alternative future? To preview: we do believe a peer-to-peer structure operating with digital tools can organize significant swathes of the economy on solidaristic principles, potentially delivering on some of the original economic, social and environmental goals. But that

will require re-structuring ownership and governance of platforms, including those which have shown a willingness to evade, challenge, and openly defy socially-minded forms of intervention.

2. ORIGINS

The origins of the sharing economy lie in a number of earlier innovations and practices, some of which pre-date it by decades, as well as in economic developments. We highlight four areas—technological innovations, cultural practices among users, the economic conditions that fueled Silicon Valley’s growth, and the Great Recession. However, the sharing economy rests on more than these technological, cultural and financial influences. Its growth was also inspired by a number of key intellectual shifts, which explicitly informed the thinking and discourses of sharing platform founders and designers.

2.1 Technological and Economic Catalysts

Although the sharing economy dates to 2008-09, two precursor sites—Craigslist and ebay, both founded in 1995—provided early glimpses of how the internet could be used for the sharing of goods and information (Schor and Fitzmaurice 2015). Craigslist started as an email listserv that grew rapidly into a web interface providing user-posted information about jobs, housing, services, events and personal interests. Its community-spirit and non-commercial ethos would be replicated in later non-profit sharing sites. eBay used sophisticated matching algorithms to facilitate peer-to-peer (P2P) goods exchange. In addition, by crowdsourcing ratings for sellers and buyers it offered trust and quality metrics that facilitated “stranger sharing” (Schor 2014) and mitigated risks of opportunistic behavior by unrelated actors. Sites such as Amazon and Yelp also acclimated users to the ratings process, while PayPal established secure systems linking buyers and sellers. The emergence of web 2.0 moved the internet in a more horizontal direction, with numerous sites (Facebook, YouTube) for uploading content. Finally, in 2007, the introduction of the iPhone accelerated the spread of mobile devices and apps that facilitated connections between users and businesses. While many sharing sites began as web platforms, most migrated to mobile devices, whose convenience and high penetration rates were key to platform expansion.

Cultural practices among users dating from the early 1980s also inspired contemporary sharing culture. Grassroots user groups (such as the Homebrew Computer Club, which led to the initial design of the personal computer) advocated information sharing, mutual support, and open source technologies—normative influences that undergirded the horizontally-organized industrial system of Silicon Valley (Saxenian 1992). These led to the open source movement, which viewed private ownership of information and programs as an impediment to democracy and economic growth. Enthused about the democratizing power of web 2.0, in 2006 Time magazine named “You” as the person of the year—noting that the internet was all about “the many wresting power from the few and helping one another for nothing” (Marwick 2013:21). Although social media has in many ways frustrated these hopes, users embraced these new mechanisms for sharing information, goods, and services (John 2016).

Economic conditions since the 1990s also played a role. The growing power of Wall Street investors and monetary policies kept interest rates at historically low levels unleashing waves of speculative investment in the internet. More than 50,000 start-ups received \$250B in “angel” or

VC financing from 1998-2002. Technology stocks rose 300% between 1997 and 2000, and increased \$5 trillion in value (Srnicek 2017: 21). Although the dot.com bust cooled this “irrational exuberance,” digital-born sharing platforms have enjoyed particular ease accessing investment funds to fuel expansion.

Finally, the Great Recession catalyzed the sector. High rates of joblessness among youth led them to sites that offered stopgap income or helped pay student debt (Schor 2020). Struggling members of the middle class used the platforms to help pay mortgages or rent, supplement stagnant incomes, or cushion the blow of unemployment (Sperling 2015). The financial collapse also left many youth skeptical of the ability of global capitalism to meet their needs, and boosted the popularity of socialism (Pew Research Center 2011). Sharing platforms positioned themselves as an alternative to large, uncaring corporations and attracted users who rejected market logics and imagined sharing sites were personalized and humane (Fitzmaurice et al. 2020).

2.2 Intellectual Roots

Three intellectual developments laid the groundwork for new understandings of sharing: a rethinking of ecological commons centered on cooperation, the expansion of commons thinking to the digital space, and new work on diverse economies. Together, they challenged postwar views of human behavior which marginalized sharing. These literatures undergirded the cultural logics of the sharing economy, at least initially.

The first development challenged the postwar consensus in economics and biology, which was rooted in Social Darwinism and rational actor theory. In biology, Garrett Hardin’s *Tragedy of the Commons* had argued that self-interested users of common resources would inevitably over-use and degrade them. In economics, the concepts of free riding and the prisoner’s dilemma “explained” why people cannot cooperate. These approaches aligned with Cold War ideologies of the superiority of capitalism to communism, the centrality of individuality, and the irrelevance of other-regarding behavior. Markets and private interest were seen as inescapable. However, as scholars interrogated the specific assumptions of these approaches, they identified the conditions under which sharing became efficient and durable.

In economics, behavioral studies dealt serious blows to the rational actor model. In biology, Social Darwinism was undermined by findings establishing the centrality of cooperative behavior across many species (Bowles and Gintis 2011). Elinor Ostrom’s (1990) *Governing the Commons* showed that humans can share resources such as water and forests and achieve ecological and social sustainability over hundreds of years. Her work led to movements for sharing public spaces, housing, and durable objects (Peer to Peer Foundation 2005).

A second, analogous development addressed the digital commons. From its earliest days cyber-culture embodied opposition to privatization and the promotion of sharing, and these ideals found concrete expression in the movement for free/libre and open-source software, which created The Creative Commons License, CopyLeft, and GNU. Two contributions by theorist and legal scholar Yochai Benkler were especially important. “Sharing Nicely” (2004) used the examples of carpooling and citizen science to argue that “social” sharing among relatively unrelated persons is widespread and efficient. *The Wealth of Networks* (2006) analyzed communities of open-source

software developers and argued they were engaged in an efficient mode of production which should be recognized alongside market and state provision. These formulations would surface a few years later in sharing economy discourses (Bradley and Pargman 2017; Carfagna 2017; Schor 2020), informing its original terminology of “collaborative consumption” (Botsman and Rogers 2010). Discourse analysis associated with the French group *Oui Share*, found four main framings—commons sharing (Ostrom), libertarianism (cyber-utopianism) plus the gift and “access” (v. ownership) economies (Acquier, Daudigeos, and Pinkse 2017).

The third literature concerns diverse economies. Although this work is not as frequently cited by sharing economy participants, it underlies their thinking in important ways. Postwar economic discourse was largely confined to a debate about the relative importance of markets versus the state. The major paradigms of political economy—Social Democracy, Keynesianism, Neoliberalism, Austrian Economics—all focused on this divide. By the Millennium, scholars working outside these traditions, studying movements such as the Zapatistas, the World Social Forum and the solidarity economy, were becoming influential. J.K. Gibson-Graham (2006) and Erik Wright’s *Real Utopias* project (2010) described how these local, community economies, were adopting new political imaginaries outside of Social Democracy and in advance of a socialist revolution. This approach embraced ideas of pluralism, in contrast to the “one best way” commitments of capitalism and state socialism. These ideas are reflected in the community sharing entities, and to a lesser extent the discourse of the corporate actors, as they emphasized mutuality, caring, and opportunity.

2.3 A contested field

The confluence of these developments gave birth to the sharing economy, now configured as a polysemic space exhibiting high levels of contention. One flashpoint has been the use of utopian discourse to support profit-making. Economic arguments have been central to the sector’s presentation of self. Sharing is credited with creating a new way to work—as micro-entrepreneurs without bosses, with freedom to choose hours and schedules (Sundararajan 2016)—echoing earlier arguments about freelancing. Given their low barriers to entry, platforms claim to be more inclusive of people with disabilities, diverse ethno-racial groups, and residents in economically marginalized areas (Zanoni 2019). They offer “opportunity” in a recessionary time (Sperling 2015; for a critique, see Ravenelle 2017). The key social claim, especially among asset-sharing platforms, was that the P2P structure creates social ties and counters an impersonal and socially-isolating corporate economy. Finally, nearly everyone maintains that sharing reduces carbon emissions, relying on commonsense ideas about how it obviates new hotels and the ownership of vehicles, tools, and household goods (Geissinger et al. 2019).

One question that has attracted much attention is the nature of the sharing economy discourse. Analyses of media, participants, and texts confirm the centrality of this utopian rhetoric, and identify themes such as “non-market logics” (Laurell and Sandström 2017), “decentralized, equitable and sustainable economy” (Martin 2016) and “community-based economy” (Acquier et al 2020). Among the for-profit platforms, however, utopian discourse has long been paired with themes referencing conventional growth and profit goals, and behaviors to support them. This has created an inherent tension which scholars have conceptualized in various ways. Fraanje and Spaargaren (2019) describe it as a “set of social practices that move along the edge of ‘market’ and ‘civil society’ by merging understandings, teleo-affective structures and rules from both

spheres.” Frenken et al. (2020) argue that the institutional logics of market, state, corporations, and the professions are misaligned, generating ongoing tension within the field. Some have focused on how the sector is leading to a re-imagining of markets. Martin’s discourse analysis finds that field incoherence is itself a common framing (2015 p. 155), a conclusion similar to that of Acquier et al (2020). Studies of specific platforms also emphasize the polysemic nature of the discourse and the forms of ambivalence it exhibits (de Peuter, Cohen, and Saraco 2017: 689).

A further issue concerns the heuristic value of the “sharing economy” term. It came into use in 2012 (Schor and Attwood-Charles 2017), and entered the Oxford English Dictionary in 2015. Economics, management, and engineering researchers have mostly adopted it, in contrast to those in sociology, geography, and anthropology, who are more critical. A prominent exception is consumer researcher Russell Belk, who argues that sharing cannot include the exchange of money (Belk 2014). Belk’s position has been criticized, however, as unwittingly reproducing “problematic modernist binaries” such as agency/structure; gift/market; altruism/self-interest (Arnould and Rose 2016). Some have dismissed the discourse and the terminology itself as “sharewashing” (Kalamar 2013) and a cover for avoiding regulation. Critics (Slee 2015; Ravenelle 2019) argue that the idealist rhetoric of the companies is belied by their exploitative and predatory actions. Platform employees themselves also acknowledged this tension in interviews (Cockayne 2016), as they compared their companies’ actions to the less acceptable practices of Uber, papering over contradictions in their own discourse. Cockayne argues the rhetoric was always justificatory, and served to legitimate these organizations. However, especially in the early days, many ordinary participants were believers in the utopian discourse (Fitzmaurice et al. 2020).

While the terminological debate has often been normative, scholars have also offered a number of analytic typologies. Bardhi and Eckhardt (2012) distinguish the ownership, sharing, and access economies. Frenken (2017) focuses on “idle assets,” the core of the original collaborative consumption concept, and restrict “sharing” to cases of “consumers granting each other temporary access to under-utilized physical assets, possibly for money.” These critiques have led to other terms, such as “platform capitalism” (Srnicsek 2016) or the “platform economy.” These usages emphasize the connections between firms such as Uber and Airbnb and tech companies Google, Amazon and Facebook (Kenney and Zysman 2019). However, these formulations typically exclude community non-profits and downplay novel features of in-person sharing. As analyses and typologies proliferate (de Rivera et al. 2017; Vallas and Schor 2020) there has been little convergence to a common parlance. Some studies include platforms for freelancers as part of the sharing economy, arguing that platforms mediate the relation between requesters and service providers, rendering hierarchical organizations all but superfluous and thereby empowering participants (Sundararajan 2016), although this is not a widely accepted view. The sharing economy continues to be an umbrella concept with a lack of resolution between “validation police” seeking analytic coherence and advocates for a “pragmatic” term (Acquier, Dandigess and Pinske 2017). Related debates about whether the sharing economy is properly understood as a field (Mair and Reischauer 2017) remain unresolved.

These “plural framings” (Acquier et al 2020) provide opportunities for sharing entrepreneurs, but reflect ongoing uncertainty regarding an important part of the economy. Ultimately, the viability of the sharing economy as a concept may decline as the corporate and community players diverge.

2.4 Participation and Motives

The lack of high-quality data leaves us with an impressionistic view of who participates and why. Early U.S. surveys found that consumers were disproportionately young, white, highly-educated, and higher-income (PEW Research Center 2016). As the sector expanded the consumer base widened, and average income levels fell (Guttentag and Smith 2020), as predicted by (Fremstad 2018) who found that higher-income households are less likely to participate, controlling for access. In contrast to consumers, earners are less white, lower-income, and have less formal education (PEW Research Center 2016). Benner's (2020) survey of San Francisco ride-hail and delivery suggests a further shift toward more immigrants and full-time workers however, 80% still had some college education. We lack demographic surveys of participants in the non-profit initiatives.

Studies of consumers' motives consistently find that for commercial services, economic value is the main driver (Möhlmann 2015). This is true across the range of goods and services, including carsharing (Lamberton and Rose 2012) and accommodations (Tussyadiah 2016). However, consumers also have other motives. (Habibi, Kim, and Laroche 2016) find that Couchsurfing, Airbnb and Zipcar users seek the social approval associated with these activities. Airbnb guests are also anti-corporate, an attitude found by Schor (2020), although not by other researchers (Hawlitshchek, Teubner, and Gimpel 2018). Not surprisingly, the novel aspects of sharing platforms appear to be less important to later adopters (Guttentag and Smith 2020). Some studies find that environmental motives are not an important factor on commercial platforms (Möhlmann 2015). However, a large study of Amsterdam residents found that motives varied by type of activity (Böcker and Meelen 2017). Environmental motives mattered for ride and car sharing; economic motives were most important for accommodations; and social motives dominated for meal platforms.

On the earner side, in addition to incomes, researchers find that scheduling flexibility and the opportunity to "be one's own boss" are major draws for app-based work (Cameron 2020). However, Dubal's ethnographic exploration of ride-hail drivers finds an ambivalent set of motives. While flexibility is extremely important to them, the deterioration of earnings and working conditions has led many to advocate for employment status, even at the risk of flexibility (Dubal 2019). Kathryn Hill has found that real-time flexibility has attracted many disabled workers whose ability to work is unpredictable (Hill 2019). However, there are other motivations for platform workers. Social dimensions also matter to them, especially on Airbnb (Ikkala and Lampinen 2015; Ladegaard 2018; Cansoy et al. 2020), and some of the smaller on-demand labor apps. Our current research during the pandemic has found that for many, the ability to help people by shopping and delivering food is an important feature of the work.

Among community sharing participants, ideological commitments and the desire to effect positive outcomes predominate as motives (Bellotti et al. 2015; Schor 2020; Suhonen et al. 2010), but expectations vary across sites. Dubois, Schor, and Carfagna (2014) report that some time bankers consider their offerings charitable gifts. By contrast, Geiger and Germelmann (2015) find that Couchsurfers (a free lodging site) operate with expectations of reciprocity. Bradley and Pargman (2017) studied three 21st century commons (a DIY bike repair site, Hoffice, a free pop-up platform where strangers co-work in private homes, and Wikipedia), and describe their ethics as "post-capitalist."

3. WHAT DOES SHARING DO? ASSESSING THE UTOPIAN DISCOURSE

The utopian discourse promised that sharing would build social connections, achieve better economic outcomes, and reduce carbon emissions. There are now empirical literatures that speak to these claims. We address them in turn.

3.1 Trust and social capital

A mainstay of the sharing discourse is that it will build strong social ties among strangers. Paolo Parigi, Karen Cook and colleagues initiated this literature with studies of Couchsurfing and Airbnb (Parigi et al. 2013; Parigi and State 2014). They exploited a unique feature of the platform’s data—detailed information about interactions within the network, including whether people knew each other before, their level of trust, and the strength of their ties. Their first paper found that Couchsurfers who met through the platform became friends. However, a second study found that over time, these friendship ties weakened and users became “disenchanted.” The authors argued that the growth of online reputational data was responsible. Apparently on this site (which became known for romantic encounters) meeting a stranger in the absence of reputational data was more conducive to forming a close social bond than when there is more online information. Together these findings reveal a potential paradox: the reputational mechanisms necessary for getting users to trust the exchanges enough to participate, especially with diverse others, may also be impeding the establishment of durable ties based on in-person bonding. More research is necessary to understand this effect—particularly outside the unique Couchsurfing context.

Existing research highlights the trust-building associated with the public reputation systems used by most sharing entities. As social and generalized exchange systems, these sites can suffer from “social dilemmas”—tensions between individual and social rationality, such as non-cooperating and free-riding that have been studied extensively in game theory and behavioral economics (Yamagishi and Cook 1993; Bowles and Gintis 2011). Theoretical and empirical contributions illuminate how reputation systems foster trust and can reduce these social dilemmas, as reviewed by Corten (2019). Another paper by Parigi and co-authors, using experimental and transaction data on Airbnb users (Zhu et al. 2020), found that reputation systems enhance trust, often reducing homophilic choices. Yet the growing literature on reputation systems in the sharing economy also finds these metrics are often inflated and suffer from biases that limit trust-inducing effects (Zervas, Proserpio, and Byers 2015; Cansoy 2019). An interview study of Couchsurfers by Mikołajewska-Zajac (2018) finds that participants are generally unwilling to leave negative reviews, often preferring no digital trace of a bad encounter, perhaps because sharing economy norms inhibit the flow of negative information, thus undermining the efficacy of reputational systems. For-profit platforms are aware of these problems, and often overhaul their rating systems to adjust, but the resulting changes may create mounting uncertainty for earners, especially for those highly dependent on ratings (Rahman and Valentine 2020).

Qualitative studies of lodging sites find many hosts and guests experience meaningful social interaction (Ikkala and Lampinen 2015; Lampinen and Cheshire 2016). Interviewees discuss shared meals, trips to bars, and in rarer instances, enduring friendships. While there has been anecdotal concern that monetizing hospitality will crowd out altruistic sharing, some findings suggest that the backstage financial transactions ease interactional awkwardness and promote

casual, although not strong sociability. However, unsurprisingly, there are sociological cleavages at play here. Ladegaard (2018) finds that while hosts are eager to meet people from other cultures, they seek out guests who are “comfortably exotic,” i.e. of a similar social class.

Co-working spaces were expected to create meaningful collaborative ties among users, however Grazian’s (2019) ethnography of East Coast U.S. sites found that while some socializing did occur, surprisingly few relationships emerged, as users reported being too busy or competitive to interact. Moreover, the masculinist culture of WeWork in particular was off-putting to women, inhibiting interaction by gender. Social capital formation took the form of bonding rather than bridging, and organized social gatherings were largely “superficial” (pp 16-18). Richardson’s (2017) study of British co-working spaces finds only loose socialization, as well as efforts to network for business purposes.

Studies of transportation services find that social trust and interactional practices differ considerably across platforms. Bardhi and Eckhart’s (2012) early paper on Zipcar found that users adopted an individualized self-interested attitude and were averse to identifying with the brand community the company was attempting to construct. Studies of vehicle rental (or “sharing”) found customers prefer not to meet the cars’ owners (Fraanje and Spaargaren 2019; Shaheen 2018). However, Seteffi and Lazzer’s (2018), study of BlaBlaCar, a long distance European ride-sharing app, found that over time users develop shared knowledge of the practice and become more motivated to make new friends. The vision of the stranger shifts from one of “fear” to “opportunity.”

In these two-sided markets all three parties (consumer, platform, and earner) need to trust the other two. Therefore, trust depends on socio-technical design (Fraanje and Spaargaren 2019), via practices such as the protection of information on users, security and background checks, and insurance coverage. But provisions to establish trust can also structure inequalities among exchanging parties. Ravenelle’s (2019) study of ride-hailing, lodging, home tasks and food preparation platforms found that while some platforms make rigorous efforts to ensure that service providers are trustworthy, they do not similarly rate customers—reflecting their greater power in the triad. Likewise, platforms withhold relevant information from workers, such as details about destination for ride-hail drivers (Rosenblat and Stark 2016). Clearly, affordances can foster differential levels of trust in complex ways.

Research on hybrid and non-profit platforms also shows mixed evidence on social capital. Time banks—generalized exchange systems (Yamagishi and Cook 1993) that barter labor services—are an illustrative case. Two case studies of TimeRepublik, a for-profit global digital time bank, found that ties were instrumental, with no signs of “deeper sociality” and evidence of a poorly functioning “Trustmeter” (Arcidiacono and Podda 2017). Shallow interactions may be by design to discourage users from going off platform. del Moral and Pais (2015) also found a male skew and gender homophily on this site.

The literature highlights issues of class, race, and gender homophily on non-profit or hybrid platforms. TimeRepublik appears to be a platform for early stage freelancers, rather than a place to help unemployed and working class users, as envisioned by early time bankers. In the U.S, a set of case studies by Schor and colleagues found that participants in non-profit sharing activities were

disproportionately white and highly educated (Schor 2020, Appendix B). This research also found distinguishing practices and social exclusion which reduce transactions and undermine social ties. A time bank was plagued by low volume and unwillingness to trade on equal terms—the very organizing principle of banks. An ethnography of a makerspace found that the organizational culture valorized impractical and esoteric making, with little support for functional activity. A food swap failed on account of snobbish and racially exclusionary behavior by founders. These findings are consistent with other research on non-digital time banks, which finds ideological enthusiasm but a lack of practical value (Bellotti et al. 2015; Suhonen et al. 2010). These studies find that the social composition of users can generate class or ethno-racial homophily and divisions based on generation or lifestyle, limiting trust in ways that are consistent with prior research on communes and cooperatives which found that egalitarian outcomes were more easily achieved in the context of homogeneity among members (Rothschild-Whitt 1979; Meyers and Vallas 2016). However, where new sharing practices have institutional support or are established in communities with high need, they appear to function more successfully (Light and Miskelly 2014; Seyfang 2004).

There is still much to be learned about how sharing entities affect social trust and ties. However after a decade, it seems clear that the promises of the early discourse have not been fulfilled. While a few platforms had initial success in helping people make connections, and some still do, processes of routinization and rationalization have also set in. On Airbnb, the most promising large platform for hopes of relationship building, the expansion of commercial hosts reduces interactions. With the exception of BlaBlaCar, transportation apps seem ill-suited to fostering ties. And co-working, time banks, neighborhood loaning sites and non-profits have mostly fallen short of their founders' aspirations. "Disenchantment," as Parigi and State found, may be a persistent feature of bureaucratization in sharing spaces. Investor pressures to increase transactions and revenue may also be contributing to normalized a-sociality on sharing platforms.

3.2 Sharing Inequalities

There is a robust literature on how social and economic inequalities find expression in various features of the sharing economy, a perspective that is increasingly important as digital transactions expand. Economists argued that the low barriers to entry on platforms would disproportionately aid low-income households (Fraiberger and Sundararajan 2017) and facilitate small businesses but there is little empirical evidence of this effect. A related argument is that the high proportions of highly-educated supplemental (versus full-time) earners on these platforms advantages better-off workers at the expense of those without college degrees, who had previously dominated in areas such as cleaning and driving. This suggests that platforms are redistributing opportunity and income upward within the bottom 80% of the wage distribution (Schor 2017) although this hypothesis has not been adequately studied. On-demand labor platforms are also facilitating a "servant" economy, in which privileged consumers access services such as errands, delivery and dog walking in small increments and at prices below what was previously available (Schor 2020). All of these dynamics exacerbate income and status inequalities.

The housing market is experiencing related inequality-promoting tendencies. Airbnb and other short-term rental platforms have reduced the supply of rental housing and increased rents in urban areas, They have also raised housing prices, thereby advantaging homeowners over renters. In major cities, while most hosts are individuals, the bulk of the activity is generated by commercial

entities. In New York City from Sept 2014 to August 2017 two-thirds of revenue was generated by illegal (entire home) listings and the top 10% of hosts earned 48% of that total. Airbnb activity led to the removal of 13,500 units of rental housing and a \$380 annual increase in rental costs (Wachsmuth 2018). Studies of other cities show similar trends, with commercialization, reductions in the supply of long-term rental units and increased rents (Slee 2015; Barron, Kung, and Proserpio 2017). The platforms are also propelling a process of racialized gentrification. Analysis of New York City data by Murray Cox and Tom Slee (<http://insideairbnb.com/face-of-airbnb-nyc/>) found that in Black neighborhoods hosts are five times more likely to be white than their prevalence in the population, and Black residents are far more likely to be displaced. Some of the fastest growing Airbnb concentrations in the city have been in Black neighborhoods such as Harlem and Crown Heights.

Research has also uncovered discriminatory activity on Airbnb. A widely-publicized audit study found that prospective guests with distinctively African American sounding names were 16% less likely to be accepted than those with white names (Edelman, Luca, and Svirsky 2017)—a finding that reveals the power of anti-discrimination accommodation laws. This study and the emergence of the hashtag #AirbnbWhileBlack led to a highly public discussion about racism on Airbnb. Observational U.S. studies have found significant racial disparities in earnings between Black and non-Black hosts (Edelman and Luca 2014; Cansoy and Schor 2019) and a European study found discrimination against Blacks and Muslims (Laouenan and Rathelot 2016). Hosts in non-white areas are also less likely to receive ratings, and those they do receive are lower than in whiter areas, although controls for housing quality are partial (Cansoy 2019). An important issue for addressing racism on platforms is the use of photos, which are a strong racial signal. Research on digital transactions finds that the skin color of a transactor affects prices and willingness to purchase (Ayres, Banaji, and Jolls 2015). These findings have led rights advocates to address the design choices employed by platforms.

Racism is also present on other platforms. TaskRabbit studies in Chicago found that the algorithm is less likely to promote Black taskers (Hannák et al. 2017) and that residents of predominantly non-white neighborhoods were under-represented as taskers (Thebault-Spieker, Terveen, and Hecht 2015). The latter study also found that taskers were less willing to travel to the predominantly Black South Side to provide services and required higher prices to do so. Experimental studies of ride-hail apps also find racist refusal. In one study, Black riders experienced longer wait times and twice as many cancellations as non-Blacks, and women were taken on longer, more expensive rides than men (Ge et al. 2016). In Los Angeles, Black riders were 73% more likely to have a ride cancelled than whites, and waited from 6-15 minutes longer (Brown 2018). That drivers so frequently opt to cancel rides for African American passengers is especially noteworthy as they incur penalties for canceling or rejecting rides. There is also growing evidence of discriminatory algorithmic pricing. In Chicago, trips are more expensive to or from neighborhoods with more non-whites, lower housing prices, lower educational status and elderly residents (Pandey and Caliskan 2020). There has been much less research on discrimination by gender, age, and disability in the sharing economy. Women Uber drivers are estimated to earn 7% less than men (Cook et al. 2018). A field experiment on Airbnb found that hosts were less likely to approve guests with a variety of conditions (blindness, dwarfism, spinal cord injuries) (Ameri et al. 2019).

While these studies have identified racism and discrimination on sharing platforms, few have made systematic comparisons to conventional businesses. There is some evidence that discrimination in car purchasing is reduced when transactions are conducted on-line rather than in person (Ayres and Siegelman 1995). Uber has capitalized on the longstanding racist refusal of taxi drivers to serve Black riders, arguing its service is less discriminatory, a finding supported by Brown's work on Los Angeles (2018). But in lodging, because private hosts who list on Airbnb are not subject to the Fair Housing or Americans with Disabilities Acts, platforms are likely regressive with respect to person-to-person discrimination. The expectation that sharing platforms will be less discriminatory because they have low barriers to entry is at least partially supported by the higher propensity to list properties found in non-white neighborhoods (Cansoy and Schor 2019), but those listings receive fewer bookings and lower prices. Research also finds that the use of ratings and reputation can reduce discriminatory behavior (Cui, Li, and Zhang 2016; Laouenan and Rathelot 2016) but other studies find evidence of ratings biases (Cansoy 2019).

Taken together, the evidence on inequality and the sharing economy provides a mixed picture. Lodging platforms appear to be increasing racist and ableist outcomes via personal and price discrimination while ride-hail is expanding availability for non-whites. There are also class dynamics at play which belie the happy story of opportunity and inclusion. Inequality among earners is systemic, as platforms accommodate a range of situations from the relatively privileged to the desperate. It seems likely that the presence of relatively well-off casual earners who compete with those trying to earn a living on the platforms has created a kind of inverted "industrial reserve army," in which those with higher economic status are undermining those who are less well-off. Surveying the growing literature on inequality in the sharing sector, we see three tendencies—some mitigation of discrimination, considerable migration of existing inequalities onto platforms, and the emergence of new forms of inequality which have yet to be fully explored.

3.3 Ecological impacts

The claim that sharing platforms would reduce ecological and carbon footprints was suspect from the beginning. The largest segments of the sector are two highly carbon-intensive activities, transport and travel, and the biggest impact of Uber, Lyft and Airbnb was to dramatically reduce prices and expand these markets. But the discourse focused on first-round effects, rather than "rebounds" such as induced travel, or high-carbon expenditure with money saved or earned from sharing platforms (Verboven and Vanherck 2016). The negative impact of the shift from public transit to ride-hailing is also a large first-round impact. However, due in part to the difficulty of accessing platform data, this literature remains small.

We know most about ride-hail. Barrios, Hochberg, and Yi (2018), exploiting the natural experiment created when ride-hail rolled out at different times in different cities, find that ride-hail apps led to more vehicle registrations and a 3% increase in Vehicle Miles Travelled, thereby contradicting the claims of reduced vehicle ownership and lower carbon footprints. Ride-hailing has contributed to the decline in public transport ridership (Graehler, Mucci, and Erhardt 2019). One survey found that up to 61% of rides were not replacing driving, but were a substitute for public transport, walking, cycling, or not making a trip (Clewlow and Mishra 2017). Uber admitted in its IPO that it was competing with public transportation, although it later retracted that claim.

Though Zipcar.com began its operations by promoting its environmental benefits, it quietly retired that claim in the face of internal contrary evidence (Schor 2020).

For accommodation platforms, Airbnb's estimates of first round benefits—less hotel construction and lower impact per room (Cleantech Group 2104) are likely outweighed by the carbon footprint of induced travel, i.e., more trips due to lower prices. A survey of Finnish and U.S. users, found that 41% reported P2P accommodation increased their travel frequency (Tussyadiah and Pesonen 2016). An analysis of U.S. data found that 42-63% of urban Airbnb bookings would not have been made at hotels in the absence of the platform (Farronato and Fradkin 2018), pp 29-30). The additional airline trips associated with this extra travel likely dwarf other impacts.

Reducing carbon and eco-footprints has been an important motive on second-hand exchanges. A study of Olio, a for-profit food donation app, found significant carbon savings among London users, who mostly re-directed surplus prepared food from retail establishments via low carbon transport (Makov et al. 2020). However that study did not measure rebounds—what people did with the money they saved from receiving free food. In her research on gifting groups, Bargain-Darrigues (2020) found that aversion to waste motivated many of her respondents, who participated with fairly high frequency. However, the impact of these platforms is contested. A French study (Parguel, Lunardo, and Benoit-Moreau 2017) found that they “stimulate indulgent consumption.” Aptekar's (2016) research on U.S. Freecycleers found that while they enjoyed giving to others, a dominant motive was “green-washed convenience”—the desire to declutter and dispose of possessions free of environmental guilt. A final form to consider is community “libraries,” for tools, apparel and other household items. Apparel libraries attract members who want variety in upscale fashion (Pedersen and Netter 2015). Although some note they prefer this to frequent purchase and discard, the ecological impact is unclear. Companies such as Rent-the-Runway and furniture rental apps similarly likely stimulate consumption, and require transport and frequent commercial cleaning of items.

Overall, it seems that the sharing sector has raised carbon footprints on account of the expansion of demand in ride-hail and lodging. The existence of ride hailing platforms (which enable passengers to exit from mass transit systems) may undermine public investment in environmentally sustainable public options. Sharing practices with higher potential for reducing environmental impacts, such as goods-exchange, have remained limited in scale. If sharing is to realize its ecological promises, regulations, company commitments, technological advances, and data transparency will be necessary.

4. SHARING AND CAPITALISM

A persistent theme in the literature has been the relationship between the sharing economy and the capitalist economy. At the end of its first decade, the sharing economy has failed on most of its aspirations, and in some cases badly so. For critics, this is vindication that it represents an intensification of neo-liberalism, or a kind of “hyper-capitalism.” In contrast those who envisioned a utopian alternative to global capitalism have been arguing that a kind of “reboot” via structural changes in regulation, ownership and governance can create a truly solidaristic sharing sector.

4.1 Deeper into neo-liberalism?

A recurrent theme in discussions of the sharing economy is that it has accelerated the incursion of market relations into previously non-monetized domains of social life (Ravenelle 2017, 2019; Scholz 2016). Use values (driving one's personal vehicle, maintaining a home) are transformed into exchange values, or mechanisms for the generation of revenue. Building on earlier arguments by Hochschild (2012), this line of criticism argues that for-profit sharing platforms implicitly inscribe a commercial logic ever more deeply within everyday life (Laurell and Sandström 2017; Richardson 2015). In this telling, sharing platforms compel providers to engage in competitive marketing practices, to invoke brand management techniques previously used only by corporations, and to embrace ratings technologies that blur the line between private or non-market life and the public world of commercial activity. Taken to its extreme, sharing platforms encourage even adherents of non-profits platforms to view themselves as micro-entrepreneurs, gradually adjusting their subjectivities to align with the marketization trend. A case in point is the subtle transformation of hackathons, an important ritual among programmers that has lost its communal attributes and now furnishes corporations with sponsoring opportunities that invite users to compete for attention and monetary rewards (Zukin and Papadantonakis 2017). de Peuter et al. (2017) find a similar trajectory has gripped co-working. Martin, Upham, and Budd (2015) find that even with grassroots community sites there is pressure for commercialization.

This critical view is contradicted, however, by research focusing on the views of participants themselves. Fitzmaurice et al.'s respondents (2018) viewed their activities as an alternative to the corporate marketplace, not an extension of it. They harbor a "domestic" imaginary, rather than commercializing aspirations. A small study of Airbnb and Couchsurfing hosts finds that even when initially motivated by the pursuit of income, they come to strongly value sociability (Lampinen and Cheshire 2016). Similarly Cansoy et al (2020) find a substantial group of earners with strong social, rather than commercial orientations. However, these studies of sharing platforms that emphasize sociability might be tapping misrecognition, or what Bourdieu has called the "sincere fiction of disinterested exchange" (Bourdieu 1977:171). Furthermore, it is unclear whether these alternative orientations can persist in face of the growing power and prominence of the leading platforms.

A second theme focuses on the consequences of the sharing economy for the organization of work and employment. Here the argument is that sharing platforms are part of a broader trend that invites the casualization, precarization, and degradation of work, by classifying workers as independent contractors and transferring risk from firms and governments to individuals (Kalleberg 2013; Dubal 2017). Some believe platforms are triggering a race to the bottom as they erode worker protections and drive down wages. Scholz's (2016) dystopian vision of workers as "uberworked and underpaid," which included not just in-person sharing services but digital labor more broadly, sounded an early warning on "click factories," and increasing subservience of labor to rapacious corporate interests. These accounts emphasize the power of platforms over workers, perhaps best exemplified in Kenney and Zysman's frequently quoted assertion that "we are in the midst of a reorganization of our economy in which platform owners are seemingly developing power that may be even more formidable than was that of the factory owners in the early industrial revolution" (Kenney and Zysman 2016). While this perspective may have seemed alarmist in the early days of the sector, when wages were high relative to conventional alternatives, in recent years there has

been a clear downward trajectory, most pronounced in ride-hail and delivery. Drivers' earnings have been squeezed via lower payments and increased competition for customers (Farrell, Greig, and Hamoudi 2018; Wells, Attoh, and Cullen 2019). Declining conditions for delivery workers (Shapiro 2018) and shoppers (Griesbach et al. 2019) has also been reported. Our research-in-process with these groups in the post-COVID period finds a sharp reduction in earners' ability to secure work, as platforms over-hired to meet rising demand. Union and regulatory activism has increased since 2018, particularly in California, where a fight over classification is being waged. And since the pandemic began, there have been numerous flash strikes. While the deterioration of conditions for workers is partly due to labor market conditions that are adverse to workers, it also reflects the enormous power of platforms, both in the sharing sector and in the wider platform economy. At the same time, and perhaps ironically, the economic viability of powerhouses Uber and Lyft is in question, having gone public without profitability. They are now being propped up by shareholders, whose willingness to conform to the role of "patient capital" may carry an expiration date (Kenney and Zysman 2019; Vallas 2019). A major uncertainty is whether the momentum to regulate platforms that began in 2018 will survive the challenges of 2020.

The rhetoric of "sharing" thus serves to mask the nature of pivotal institutional shifts underway that reconfigure the social and economic landscape along more neoliberal lines—a trend overseen by firms that use platforms to concentrate economic power over growing sectors of contemporary capitalist society. Viewed in this light, continued reference to the sharing economy may obscure as much as it reveals about the structure of economic institutions, which allow firms like Google, Uber, Facebook, and Amazon to dominate not only internet-based markets, but much of the conventional economy as well.

4.3 Platform Cooperativism

While there's ample evidence to support the foregoing pessimistic view on the sharing economy, recent developments may be creating new openings for change. As the world faces pandemic and economic catastrophe, post-capitalist discourses are increasingly compelling. In the U.S., the epicenter of the sector a rising tide of activism and protest on racial, climate and economic justice is shifting the policy conversation to the left. These movements align in important ways with the aspirations of early sharing economy advocates, who aimed to transcend conventional market principles and create an egalitarian, communal and sustainable alternative to capitalism (Scholz and Schneider 2016; Schneider 2018). The increasingly predatory and anti-social actions of the large platforms has led to renewed efforts to chart a new direction in which sharing technologies are retained, but the social and economic models of the corporate apps are transformed. These alternate structures include worker-owned platforms, cashless for-profits, and the many types of community sharing entities that have developed in the last ten years.

The idea which has attracted the most attention is probably the platform cooperative, which retains the digital features of sharing platforms, but is owned by earners. Early advocates such as Trebor Scholz, Nathan Schneider, and Janelle Orsi have been developing infrastructure and networks to support the formation of these entities (Scholz and Schneider 2016; Schneider 2018). One of the earliest, Stocksy United, a stock photography coop, achieved financial success early and has developed an admirable record of high remuneration and satisfaction for its artists (Sulakshana, Eddy, and Schor 2018). SMart, a European freelancers' cooperative has more than 35,000

members and continues to expand. An alternative to Airbnb called Fairbnb plans to donate revenue to the communities it operates in, but the pandemic has hampered its expansion (Foramitti, Varvarousis, and Kallis 2020). Smaller coops offering local services include a ride-hail coop in Colorado and UpandGlo, a NYC cleaning coop for immigrant women. Platform cooperatives have unique challenges, such as the fact that work performed is typically individualized, which leads to unequal earnings distributions (Schor 2020) or in some cases, a globally dispersed workforce. Furthermore, successful offline cooperatives are often buoyed by pre-existing forms of occupational community, as those formed among bicycle couriers, artists, photographers, programmers, and other creative class workers; or in some cases immigration status. It remains unclear whether cooperatives can be sustainable in the absence of such bonds (Attwood-Charles 2019). The Fairbnb study reveals that managing loci of governance and control is complex and the ecological impacts of its model are also a challenge. A study of Freegle, a U.K. breakaway from the donation platform Freecycle, which has instituted democratic governance, found that it has been successful although there are tensions between funders and participants. However, the authors note the relevance of their case for smaller groups of breakaways from large platforms. Martin, Upham, and Klapper (2017). van Doorn (2017) cautions that this movement can lapse into “technological solutionism,” paying insufficient attention to issues of racism and sexism, as well as to the state, which is a necessary actor to achieve the aims of a true sharing economy. While cooperatives are a promising alternative to predatory platforms, they have also failed to scale in comparison to the well-funded corporate entities.

5. CONCLUSION

When it launched, many believed the sharing economy prefigured an alternative form of economic practice to neoliberal capitalism. But the power of that system has all but overwhelmed it. The growth of giant “sharing” firms has cast doubt on the status of its utopian rhetoric. Its claims of generating greater inclusivity and an ethos steeped in mutuality have been contradicted by evidence demonstrating its tendency to re-inscribe social inequalities through digital means. Its ability to generate trust among strangers has been revealed to be complex. And expectations of environmental sustainability are belied by increasing evidence of its contributions to carbon emissions and other pollutants. These considerations challenge the aspirations that have driven the sharing economy from its very start. Yet arguably, the most pronounced challenge to a genuine sharing economy may be an exogenous one: the COVID-19 pandemic that has swept across most of the globe. This is not to say that the large, for-profit firms cannot adjust. They are nothing if not flexible, consisting of technology, rather than physical capital. They can shift their focus nimbly, as Uber has re-directed its efforts from ride-hail to food delivery, and will likely fare well. But the threats to smaller sites specializing in face-to-face community are different. These progenitors of the sharing economy envisioned a form of consumption that transcends capitalism’s longstanding emphasis on property ownership and individual ownership of goods. That vision has been seriously challenged by the advent of a pandemic that has transformed sharing goods and services into a source of fear and dread rather than mutuality and reciprocity. As social contact has become perilous, and strangers become sources of potential infection to each other, people may well shun the kinds of physical connections that are the foundation of the sharing economy. But if societies are to survive the existential threats posed not only by the pandemic, but also the climate and financial crises, they will need to reclaim the fundamental values of true sharing economies—

ensuring the safety and security of all in a spirit of reciprocity and generosity. For surely in the other way lies Barbarism.

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