Public Platforms: Beyond the Cycle of Shocks and Exceptions

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Too deep to fail

Social media platforms increasingly look like infrastructures: embedded, largely invisible, often taken-for-granted, highly standardized systems for circulating information (Star & Ruhleder, 1996; Plantin et al, 2016). The largest among them have enormous user bases, are ubiquitous parts of everyday life, and are increasingly intertwined with other media systems omnipresent (Gerlitz & Helmond, 2013; Thorson & Wells, 2016; Clark et al, 2014). Their breakdowns are quickly noticed, they are relied upon in moments of crisis, and they help to shape large-scale conversations and social formations (Gillespie, 2010). Social media platforms persist because of the sociotechnical investments people make *through* them: profiles and identities that have been tended to for years; networks and relationships that exist nowhere else and would be nearly impossible to recreate; media and metadata embedded within particular platforms and difficult to extract.

The largest of these platforms aspire to an "infrastructural ideal" in which "diverse, local systems set up by initial entrepreneurs gradually merged into the standardised, national, widely accessible large technical systems that became central" to the conduct of modern life." (Graham & Marvin, 2001, p. 180) Online platforms and networked infrastructures are locked in mutually sustaining rhythms: traditional infrastructures undergo "platformization" as entrepreneurs create "lower cost, more dynamic, and more competitive alternatives to governmental or quasi-governmental monopoly infrastructures, in exchange for a transfer of wealth and responsibility to private enterprises," (Plantin et al, 2016, p. 14) while social media platforms experience "infrastructuralization" as "Google, Facebook, and a handful of other corporate giants have learned to exploit the power of platforms... to gain footholds as the modern-day equivalents of the railroad, telephone, and electric utility monopolies of the late 19th and the 20th centuries." (Plantin et al, 2016, p. 14-

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15) At the same time, these platforms also hope to remain private actors—monopolists perhaps, but clear of the kinds of regulations and standards-setting that accompany infrastructures.

Despite their scale and prominence, governance of these social media platforms has remained minimal, especially in the United States. As private, commercial actors they can invoke free market principles to defend against critique; the continued growth and profitability of Silicon Valley technology companies makes U.S. regulators reluctant to meddle; and, platforms are protected by a long-standing legal doctrine granting them, as network intermediaries, safe harbor from liability for what users do with them, a policy intended to foster innovation and protect the expression of their users (Gillespie forthcoming; Mackinnon et al, 2014; Mueller 2015). In much the same way that the major U.S. banks appeared "too big to fail" (Sorkin, 2000), justifying softer regulation that supported their continued market existence rather than penalizing them for their exploits, some social media platforms may now appear "exceptional" in scale, market footprint, and societal entanglement.

For these reasons, the United States has only begun to grapple with the consequences of social media platforms' ubiquity and centrality. The Federal Trade Commission is beginning to explore questions of platform governance through algorithmic accountability (Brill, 2015), but there is insufficient political will to address the broader implications platforms have for social and political discourse – the way social media platforms structure not just the circulation of discourse, but the exchange of goods, the shape of collaboration, and the organization of labor. Policy concerns around the power and profit of social media platforms have emerged more vocally in Europe, and more restrictive speech, trade, and political laws in other parts of the world circumscribed from the beginning how these platforms could even function (Gillespie, forthcoming).

It is beyond the scope of this paper to create a complete typology of the forms of platform governance. Instead, we want to examine one specific, recurring dynamic that has driven calls for platform accountability, especially in the United States: public shocks and platform exceptions. The shocks are public moments that interrupt the functioning and governance of these ostensibly private platforms, by suddenly highlighting a platform's infrastructural qualities and call it to account for its public implications. These

shocks sometimes give rise to a cycle of public indignation and regulatory pushback that produces critical—but often unsatisfying and insufficient—exceptions made by the platform. This aspect of platform governance is distinct from ongoing product innovation, company policy development, or government regulation (Ananny, 2015; Colyvas and Maroulis, 2015).

In the remainder of this paper, we examine one such shock in detail—Uber's surge pricing during emergencies—and use it to explicate this cycle of shocks and exceptions. We then explore the power and limitations of shock as a governance mechanism. We see such shocks and exceptions not just as strategic reactions to exogenous events, but as diagnostics: opportunities to see the forces at play in defining which shocks matter, why, and over what timescales. They are insufficient as a form of platform governance, by themselves, but we believe they could be extended; we close by borrowing a policy from urban planning policy, that might help move the regulation of platforms beyond this cycle of shock and exception.

Governance by shock

Platforms have, from time to time, faced strong criticisms about their public impact, from individual users, the press, and the public more generally. Such criticism range in scope, from strongly-worded user complaints all the way to public outcries that dominate news cycles. Some of these we would call "public shocks," cases in which an incident provoked criticism of a platform sufficient to reach distinct public visibility, challenged the fundamental workings or effects of a platform, and challenged platform owners to behave differently. These moments can provide object lessons for how platforms—especially those with inordinately large public presences—navigate between consumer expectations and civic imperatives. While recent years are littered with examples of the public taking exception with platforms for an incident, business decision, misstep, or flat-footed response, we focus on one example that traces the arc that such shocks often follow.

Uber and surge pricing during emergencies

On October 29th, 2012, in anticipation of the approaching Hurricane Sandy, New York City shut down its subway system. The storm receded by the 31st, but the damage to the city was extensive, and many of the

subway tunnels were flooded and remained closed. Consequently, Uber cars were in high demand. This fact led Uber to trigger its surge pricing algorithm – an algorithm they had previously used on holidays when user demand had spiked (Hall et al, 2015). The surge pricing algorithm applies a multiplier to the base fare, reportedly more than doubling in many cases. Users began to complain directly to Uber and on Twitter, and news coverage picked up the criticism. Some called it price gouging, which is prohibited in New York and New Jersey. Critics cried foul that Uber was using the storm to take advantage of passengers; Uber initially responded that the surge was intended encourage more drivers to venture out, but then quickly backtracked. On November 1st, Uber halted the surge pricing, and promised to pay drivers twice their normal fee and forego their own 20% cut, a gesture that cost them a reported \$100,000 by the time the offer ended a day later¹.

New York's Attorney General Eric Schneiderman opened an investigation into Uber's pricing techniques following Sandy, as well as a smaller storm that December, when prices reportedly surged to eight times the normal fare, again drawing complaints from users. In July 2014 the AG announced an agreement reached with Uber, in which Uber promised that any surge in pricing during an emergency or other "abnormal disruptions of the market" would be capped. The cap would keep Uber's prices during an emergency below the three highest-priced days of the two months previous.

Uber announced that this policy would apply not just in New York but nationwide -- but it did not extend it globally. In December 2014, a gunman took hostages in a shop in Sydney, Australia. Police evacuated nearby buildings, including the Sydney Opera House. As some fleeing the scene called for Uber cars, Uber again initiated its surge pricing algorithm, and fares quickly rose to as much as 4x the typical fare. After more criticism on social media and in the press, Uber removed the surge pricing, temporarily offered

¹ https://pando.com/2012/10/31/assholes-shrug/; http://bits.blogs.nytimes.com/2012/10/31/uber-struggles-to-get-cars-onto-new-yorks-streets/? r=0; http://www.businessinsider.com/how-sandy-related-pr-nightmare-cost-startup-uber-100000-in-a-day-2012-11; https://newsroom.uber.com/us-new-york/hurricane-sandy-pricing-update/; http://connectingthecircles.blogspot.com/2012/11/the-surge-that-caused-surge.html; http://business.time.com/2012/11/02/post-sandy-price-gouging-economically-sound-ethically-dubious/; http://gothamist.com/2012/11/04/uber.php; https://pando.com/2012/11/02/a-final-word-on-uber-and-their-ghastly-attempt-to-spin-their-way-to-sainthood/; http://www.thefiscaltimes.com/Columns/2012/11/06/Hurricane-Sandys-Lesson-on-Preserving-Capitalism#page1; http://fortune.com/2012/11/02/uber-nyc-and-the-sandy-surge/

free rides out of Sydney's central business district, offered to refund rides taken during the surge, and later issued an apology².

The cycle of shock, indignation, and exception

While this example is useful in understanding the repercussions that sometimes follow shocks, we could point to many other examples of public outcries at social media platforms that follow similar contours. Online news sites that charge for articles have been challenged by users during crises, leading some to temporarily suspend their paywalls or drop them for news about a specific situation (Ananny & Bighash, 2016). Facebook endured criticism when it was revealed that its "trending topics" were not chosen solely by an algorithm, but by a team of human news curators who allegedly had a political slant to their choices (Gillespie, 2016). A public outcry followed the publication of research conducted by Facebook and academic collaborators on the emotional effects of positive and negative news feeds, in which the researchers altered the news feeds of users unaware of their participation in the study (Meyer, 2014). Google was challenged for its introduction of Google Buzz, primarily because it had mined users' Gmail contact lists to pre-fill the Buzz user's list of friends. Before that, Facebook faced criticism for its Beacon advertising program, for turning likes into ads that incorporated users' images. And social media platforms have been criticized publicly at different moments for allowing egregious content to circulate: the cellphone video of Saddam Hussein's execution that made it to YouTube, the racist Photoshopped image of Michelle Obama that topped Google's Image search, the pro-anorexia collections on Pinterest and Instagram, the endless threats and harassment of outspoken women on Twitter, and the videos of brutal political beheadings by ISIS terrorists (Gillespie, 2012). These public expressions of indignation are genuine and meaningful, and for that reason alone it is worth exploring how and why they emerge, and what platforms typically do in response.

http://gawker.com/uber-turned-on-surge-pricing-for-people-fleeing-sydney-1671193132; https://www.washingtonpost.com/news/morning-mix/wp/2014/12/15/uber-backtracks-after-jacking-up-prices-during-syndey-hostage-crisis/; https://newrepublic.com/article/120564/during-terrorist-attack-sydney-uber-imposing-surge-pricing; http://www.bbc.com/news/technology-30595406; https://newsroom.uber.com/australia/an-apology/; http://www.slate.com/blogs/moneybox/2014/12/15/uber sydney hostage crisis it s time for uber to re evaluate how it prices.html; https://gigaom.com/2014/07/08/uber-will-end-surge-pricing-in-emergencies-after-deal-with-new-york-ag/

In nearly all cases, some incident provides a shock to which the public responses. Some shocks are exogenous to the platform: an act of violence or natural disaster. In others, it is something that happens or appears on the platform that is particularly egregious: a beheading video or pro-anorexia posts. It may be a single piece of content or a whole genre, a single threat or a wave of harassment. Or, a press exposé can reveal something about the workings of the platform unknown to users: human involvement in what appeared to be decision made by software, research manipulations made without user consent, a design decision with deleterious effects. In each, the shock is not only an incident around which public indignation can coalesce, it is in some way an inversion of "how things work," at least as most users understand them. The shock gives lie to the promises made, or renders visible something unacceptable about the current workings of the platform.

Some shocks are followed by a public outcry, which often takes the form of some general expression of outrage and criticism. Public outcry is in some cases articulated by the press first, on behalf of users presumably harmed or exploited in some way. In other cases, the expression of indignation comes first from an aggrieved community, who then may engage in some of the tactics traditionally involved in social movements: seeking more visible venues for the expression of that outrage, expressing it in terms that implicate users beyond the aggrieved group, and delivering that outrage to the platform itself.

To the extent that the concern is noticed and taken to be relevant to more than just the aggrieved parties, this expression of indignation may be picked up by the tech press, and sometimes by the broader news outlets. Commentators may quickly jump in with "hot takes" on the issue, using the specific incident to level a broader critique at the platform itself, the company behind it, or social media as a whole. (Often these hot takes are less a response to the incident at, as much as a broad point someone was already eager to make, readied in wait for an incident to hang it on.)

These public outcries may include calls for change, in either specific or general terms. Sometimes such outcries stop there: there is often no organized response, or what does emerge the platform can defuse with a quick public apology. Some of these incidents were followed by substantive changes in design or

policy. If critics press on the platform hard enough, and publicly enough, they may call forth from the platform some kind of reversal or exception to business-as-usual.

Expressions of a moral economy

Following E.P. Thompson's (1971) guidance, it is important to note that these public outcries, while limited in some ways, are not merely unbridled outrage or mindless expressions of the crowd. They are expressions of a moral economy, if not always fully formed, in which the mundane workings of market actors are challenged on terms other than that of the market. Critics will grasp for justifications and frameworks that can hold platforms to a standard other than service and profit. To the extent that the shock provides an inversion of the mundane, this can support this reach for moral categories. Emergencies are traditional justifications for a break in the status quo; concerns about discrimination and equity can stand against the unfettered working of the market; terrorism justifies concern and intervention even if it curtails the choices of corporations or individuals to some degree; concerns for children introduce a protectionist framework that can supersede the quest for the bottom line. Such moral language is meant to counter the compelling ideologies that so often support business-as-usual: the importance of unfettered innovation, the impartiality of platforms and their computational inner workings; the ethos and ambition of Silicon Valley.

What was at issue in this case was a platform continuing to charge for or profit from its service, under extraordinary conditions where users felt it was ethically reprehensible to do so. In crises, the danger of the emergency or the human need in its wake appeared to users to call for the suspension of normal workings of commerce. When users express outrage that Uber's pricing algorithm automatically and dramatically surged in response to the sudden demand during the bombing in Sydney, their concern amounted to a "yes, under normal circumstances you can set prices based on demand, but during a life threatening emergency, a very different standard of behavior applies." Platforms are not immune to the expectation that, at certain moments of great human need or inequity, the moral economy outweighs the commercial one. A for-pay transportation service is, in that moment, something else: part of a public infrastructure that should privilege getting people to safety over profit.

In this sense, these public outcries about social media platforms are not so different than traditional forms of consumer criticism and activism against other service providers, brands, and media outlets. But traditional consumer boycotts have generally challenged product manufacturers and broadcasters (Friedman, 1999; Gabriel & Yang, 2015, p. 170-192); these tactics may be badly mismatched when it comes to platforms, to the extent that they are infrastructural.

Whether or not such expressions of dismay are effective or not, they do function as a diagnostic: they reveal both the nature of the compact between platform and users (market efficiency, a fair price; a bounty of relevant information or social opportunity, provided by a neutral channel or conduit); and the limits to those compacts (the outrage of taking advantage of customers while they're down; the bounds of morality and taste around what platforms can and cannot circulate).

The limits of governance by shock

Public outcries, by themselves, are structurally limited in ways that make them unfit as mechanisms of sustained governance. They tend to be platform specific, even if the concern might be easily identified elsewhere. They tend to be focused on a specific incident, when the same kind of incident might happen at other times and in other guises. They tend to be vaguely defined, and often "stand in for more generalized complaints about the state of the world" (Levy, 2016). And they tend to be momentary, growing quickly with attention and ire but subsiding just as quickly, after the platform responds or the attention of critics or the press are drawn elsewhere. For all of these reasons, it is difficult to sustain the indignation, difficult to sustain the memory of it as foundation for the next shock. In fact, it is possible that these public expressions of indignation serve as a kind of release valve for frustration, puncturing and deflating simmering concerns and making it harder to garner public support for more sustained kinds of interventions.

This may be true of public outcries about all manner of consumer goods or services. But platforms, by their nature, add additional limitations. Because users' experiences with platforms can be personalized, tailored, and specific to their social network, it can be extremely difficult to get a sense of the scope of the problem or generate a palpable sense of solidarity. For distributed networks, it can be difficult to assess how

unfair a practice is, how widespread a violation is, and what norm to compare it to. This may be why attention from the press or an outspoken critic can be effective here, where public outrage can coalesce around a single incident that stands in for a broader violation. Platforms are opaque in a number of ways - through veils of corporate secrecy and the obscurity of algorithmic systems to non-experts - making it difficult to investigate a practice or validate a complaint.

Public indignation can be countered

Further, commercial stakeholders, especially the more established and seasoned, have a wide array of tools for responding to and mitigating public outcry. The entire strategic repertoire offered by the field of 'crisis communication' can be brought to bear – or companies can hire crisis consultants directly. Managing public indignation can include playing down the incident in order to dissipate the shock; reframing the situation in terms that downplay the harm or shift the responsibility; making public apologies and taking responsibility for the problem; making charitable donations or other contributions to a relevant cause; promising to better anticipate similar circumstances in the future; partnering with respected third party organizations to demonstrate a commitment to addressing the issue; and making symbolic gestures to help curry public favor.

In other cases, platforms will respond with self-styled, voluntary changes. Take AirBnB's moves in the wake of Hurricane Sandy. In the aftermath of the storm, some AirBnB users began offering up their properties through the platform at no cost, in order to accommodate those displaced by the storm. Over 1400 users made their properties available for free, and prodded AirBnB to forego their automatically imposed fees on free "rentals," which they quickly did. Not long after Hurricane Sandy, AirBnB partnered with the Red Cross and introduced a disaster response feature that would identify cities facing similar crises, and help the displaced find AirBnB users willing to offer up their homes and apartments. Facebook iterates on its content moderation process and publicly promises to align with state calls for limiting radicalizing speech.

In these responses, platform owners try to ameliorate shocks by disavowing and distancing themselves from a shock's source (terrorist attacks, natural disasters, and radicalizing cultures are exogenous

factors) acknowledging that some people *see* their products and services as public goods during shocks, promising to do iterate and do better, and self-initiating platform design changes and policy updates mean to both acknowledge and bracket the platform's responsibility for a shock.

When such responses fall flat, it is often because people reject the boundaries platforms have drawn between what is inside or outside of their domain of responsibility. In some cases the shock reveals a contested understanding of public goods: the more Uber's infrastructure becomes intertwined with public transportation systems (e.g., several cities are beginning to contract parts of their services with Uber³, and Uber recently recommended that its Los Angeles customers take public transit to bypass a traffic jam before ordering a car through its service, a recommendation that Los Angeles Metro shared with its riders⁴) the harder it is to tease apart when it adds to or alleviates pressure on public transit systems. Finally, self-styled voluntary responses may be seen as insufficient because they may be seen as misunderstandings of a shock's public significance or duration. After the Orlando shooting, Uber offered free rides to LGBT neighborhoods, but in the wake of the Dallas shootings, Uber instituted a "virtual moment of silence" (not free rides to neighborhoods with high incidences of gun violence) – why were the responses to these shocks different, and what do such differences say about Uber's understanding not only of their role in urban transportation, but their relationship to these shocks' larger attendant issues of police brutality, urban safety and security, and racial injustice? During the floods in Louisiana, AirBnB indeed followed its own disaster response program⁵ and offered fee-free bookings – but, as of September 1st, 2016, it only did so between August 14th and September 11th, 20166. Why this time period and this anticipated end date? What do such time brackets reveal about how AirBnB's defines a housing disaster and understands its role as a quasi-public housing provider? The claim here is not a normative one—that Uber should drop its surge pricing at other times or that AirBnB should extend its no-fee period—but an empirical one: what do Uber's and AirBnB's

³ http://www.citylab.com/commute/2016/08/centennial-lyft-transit-partnership/495080/

⁴ https://twitter.com/metrolosangeles/status/769693167234850818/photo/1

⁵ http://blog.airbnb.com/a-new-helping-hand-for-our-disaster-response-program/? ga=1.260365257.575389448.1471967943

⁶ https://www.airbnb.com/disaster/louisianaflooding?af=14383374&c=tw_ie_ahlp_cxs

responses to different shocks reveal about *how* they understand public issues, and their platforms' relationships to them?⁷

(In additional to these more traditional responses, there is another, emerging one that is particularly available to algorithmic platforms. Take, for example, the controversy when Google's new facial recognition tool incorrectly labelled black faces as gorillas. In addition to the mea culpas, Google noted that after a week, the problem had been fixed – not because they had corrected the specific problem, but because the machine learning algorithm was improving. In fact, they treated the criticism as input. Platforms that provide ongoing, algorithmic services may attempt to train users to treat their services as works-in-progress – "permanently beta," in Neff and Stark's (2004) terms – not only as a way to entice users with the promise of improvements, but as a way to defuse public criticism when they go awry.)

Soft governance is soft

In the cases of Uber's pricing surge, public outcry was followed by a regulatory response. On the surface, this is heartening, suggesting that regulatory agencies are (sometimes) responsive to concerns emerging first from consumers. Still, especially in the U.S., regulatory imposition over platforms and other information intermediaries shies away from legal restriction or obligation, preferring instead these kinds of softer forms of governance. New York's Attorney General, in his announcement about Uber's surge pricing, called it "cooperation":

Just because a company has an app instead of a storefront doesn't mean consumer protection laws don't apply. The cold shoulder that regulators like me get from self-proclaimed cyberlibertarians deprives us of powerful partners in protecting the public interest online. While this may shield companies in the short run, authorities will ultimately be forced to use the blunt tools of traditional law enforcement. Cooperation is a better path.⁸

But another way to put it is that such forms of governance are soft: often voluntary, typically unfunded, and usually without clear consequences if they are violated or ignored. With soft governance, there are often few

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⁷ See Rogers (2015) for a discussion of the "social costs of Uber" and Rosenblat & Stark (2015) for a study of Uber driver labor in relation to the platform's algorithmic controls.

⁸ NY AG Eric Schneiderman, "Taming the Digital Wild West" NY Times, April 22, 2014

mechanisms in place to ensure that such efforts will persist and improve over time. Sometimes such interventions are more symbolic than anything else: symbolic in terms of its effect on the platforms, calling them out publicly and asserting their general sense of obligation, and/or symbolic in terms of the regulatory agency, scoring political points in the process. In the case of Uber's surge pricing, Schneiderman's efforts seemed to elicit not only a real cap on surge pricing in New York, but spurred Uber to extend the policy across the U.S. But it is based on an arcane logic, and one that does not echo the laws in place about price gouging, which suggests that it was produced in "collaboration" with Uber – and might very well be the outcome of some careful analysis on Uber's part, to be as minimally invasive to their bottom line. (For example, they almost certainly analyzed the fluctuations of surge prices in the past, to pinpoint a cap that would in fact allow most surges to continue to occur, while getting to demonstrate its concern / penance by agreeing to a limit that would rarely come into play.)

Exceptions don't change much

In many cases, the end result of this cycle of public indignation and soft governance is for the platform to make an exception, something that breaks from business-as-usual under specific, extenuating circumstances, driven by a competing principle that is not directly financial – more ethical, legal, or altruistic, though perhaps doing so can be seen as financially savvy in the longer term. Such exceptions may have beneficial consequences, and can help highlight where a moral imperative supersedes business-as-usual.

It is worth noting, however, that exceptions are very different than changing the terms of the compact itself. They are limited to specific conditions or circumstances, they are often built on the platform's terms, and they can be quietly undone in the future. Moreover, while "the exception proves the rule" is a familiar bromide, there may be truth to the idea that exceptions end up legitimating the very rule they are attenuating. The argument that Uber should cap its surge pricing in moments of crisis takes for granted, even asserts, that surge pricing is acceptable under more "normal" circumstances. Narrowing the debate to whether this pricing algorithm is a form of exploitation of those in desperate need closes any discussion of whether it is exploitation in and of itself.

In fact, it may be naïve or misleading to think about social media platforms, or any major commercial interest, as if they had a singular and consistent "business-as-usual" mode and then made "exception" in response to specific shocks and criticisms. This may in fact be the way corporations perform themselves to the public. The apparent stability and progress of a platform are important myths to preserve, both for users who expect the same service today as they used yesterday, and for investors and financial partners who want a safe bet going forward. In fact, a social media platform is constantly in flux: its user base is changing, and users are changing what they're doing with the platform; the platform is being redesigned and tweaked, both in the interface and in the back end; the company's business aims and financial pressures regularly shift; they face multiple fronts of legal obligation and risk, all of which are being managed and fought over simultaneously, or anticipated and prepared for. Even the investments, partnerships, even the population of employees change – just as the human body changes its entire population of cells in the course of a few years, the platform is not the same, given enough time. And like the human body, it nevertheless seems to appear the same and functions the same, despite this constant change.

Part of this change is a homeostatic interplay with their users, the public more broadly, and the press and regulators as organs of the public. Social media platforms of a certain scale and popularity endure a low hum of outrage all the time from irritated users. As platforms navigate this fluctuating space of expectations, responses from users are sought and avoided, reactions are anticipated and weathered, indignation is listened for and addressed. So what appears as an external shock or a public outcry of indignation is in fact only the one that was too dramatic or too unexpected to have been anticipated in advance. Exceptions are only the visible tip of a deep iceberg of ongoing interventions and adjustments platforms must make.

The kind of exceptions and concessions that platforms make in response to public outcry and soft governance efforts such as these also create a new set of challenges for the platform. Once an exception is introduced, when does it apply? Which circumstances are sufficient to warrant switching from business-as-usual to crisis mode where the regular rules of business do not apply? If Uber's pricing limit only applies during "abnormal disruptions," who determines when those pertain? How abnormal must a disruption be? This problem of when exceptions apply can become a further public liability for platforms. Exceptions can

have a fractal quality, where identifying exceptional circumstances creates a cascade of smaller decisions, each one of which can be mismanaged.

In cases like these, there is a strong impulse for platforms to seek a third party to make the determination for them. Uber faced this question not long after the surge pricing cap was put into place, when a blizzard threatened New York. Did the blizzard qualify as an "abnormal disruption"? Uber's answer was that they would only trigger the pricing cap if New York declared a state of emergency. In this case, this was a strategically savvy way to offload the determination, though this would not apply to all kinds of disruptions. And it is possible that, as public criticism moves its way down the fractal, it may dissipate and defuse the indignation that fueled the exception in the first place.

Public constraints on private providers

While public outcries can help shine a light back on platforms and the implicit assumptions on which they are based, they are hardly a sufficient mechanism of governance, especially for platforms that have become so 'infrastructural.' Particularly in the United States, public outcries seem instead fill the void left by our lack of systemic analysis or oversight of social media platforms, and may inadvertently help this lack of governance to persist.

To be sure, the questions of how to hold market-driven private entities publicly accountable is not new (Stone, 1982). As Gasser and Schulz (2015) note, such interventions generally represent one of three aims: enabling, levelling, and constraining. Most U.S. regulation of private entities is enabling, motivated by a desire to ensure that markets themselves are efficient and fair, or that a fledgling industry can prosper, advancing a liberal notion of autonomy in which individuals are free to pursue interests and take actions (McMillan, 2002; Satz, 2010, p. 26-31). Some is levelling, when lawmakers must balance the rights of competing private interests. Only some represent the third aim, constraining, to protect the public from economic harm or exploitation, to account for extreme circumstances in which the regular practices of market actors turn problematic, or to protect an important public interest beyond the market itself. These include the imposition of minimum standards across a set of private actors, such as ADA requirements about

access to commercial services, or requirements of food inspection; and penalties for the secondary effects of private actors, such as consequences for toxic dumping or air pollution. And some address those moments when private actors must be regulated or restructured because they have become, by scale or circumstances, akin to quasi-public or quasi-essential services.

In her book *Why Some Things Should Not Be For Sale*, Satz (2010) argues that some markets are not simply failures but fundamentally immoral, or "noxious." Distinct from concerns about property, information asymmetry, trust, or monopoly, she finds that some markets—*e.g.*, child labor, human organs, some forms of sex work—are ethically unacceptable, either because the participants lack the information they need to participate or are vulnerable to exploitation, or because the market produces outcomes that are harmful to the individuals involved or to society more generally (p. 9). For Satz, the public interest in private regulation is motivated not by market inefficiencies, private monopolies of public goods, the appearance of private places as public spaces, but by a finding that "many—if not all—noxious markets threaten democracy" because they fundamentally limit "who we are, what we care about, what we can do and the kind of society that we can achieve." (p. 10)

For example, many U.S. urban fire departments in the 19th and early 20th-century were actually privately owned, and responded only to incidents involving dues-paying members; recognizing fire's ignorance of property rights, these private fire departments were eventually regulated as, or replaced with, public fire departments responsible for entire districts (Tebeau, 2012). Even though conEdison is the dominant privately owned, publicly traded utility company in Massachusetts, the Commonwealth protects people's access to gas and electricity by legislating that "No gas or electric company shall between November 15th and March 15th shut off gas or electric service to any residential customer who cannot pay an overdue charge because of financial hardship." And a Texas court recently ruled that even though Corrections Corporation of America (CCA) is a privately owned company, journalists working for the Prison Legal News had a right to access its internal documents because, as an administrator of prisons, CCA "is a governmental

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⁹ https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXXII/Chapter164/Section124f

body for purposes of the Texas Public Information Act."¹⁰ Sparking an ongoing debate about the legality of eminent domain and public taking of private land, in *Berman v Parker* (1954), the Supreme Court of the United States (SCOTUS) upheld the District of Columbia Redevelopment Land Agency's seizure of private property it defined as "blighted" and planned to redevelop in the public interest.

These kinds of public considerations can apply not only to essential services but also the availability of information and the right to free expression and association, even in private spaces: In *Marsh v Alabama* (1946), the SCOTUS found that, even though a single company owned an *entire* town, residents still had a right to free expression because privately owned sidewalks acted as public spaces and there were no effective alternatives (cf. *Lloyd Corp v Tanner* [1972]). In *Pruneyard Shopping Center v Robins* (1980), the SCOTUS ruled that California residents' right to free expression in shopping malls was not considered a "taking" of private property (Cohen, 1996; Epstein, 1997). Both cases found that the appearance, usage, and the availability of alternative spaces were the primacy concerns, not simply private ownership.

For some, the way to justify regulation that hold platforms publicly accountable is to see them as akin to the infrastructures creating the conditions under which public discourse circulates (Balkin, 2013; boyd, 2010). Critics of algorithmically personalized platforms stress the damage such narrowing can do to the equality and diversity often expected from public systems (Pariser, 2011), the danger of proprietary algorithms sequestering audiences and preventing them from seeing public issues (Napoli, 2015; Tufekci, 2014), and call for algorithmic transparency as a mechanism for public accountability (Diakopoulos, 2016). Others argue for an entirely new "public service media sector that addresses the forms of public failure that have led to reliance on Google" and other technological platforms (Andrejevic, 2013, p. 131). Although many social media platforms counter that they are simply market actors, and that dissatisfied platform users can always opt out and choose not to use their service, the increasingly infrastructural nature of social media platforms makes it difficult for people to leave them (Baumer et al, 2013; Portwood-Stacer, 2013).

But as infrastructural as platforms can be, they are not infrastructures, at least not in the traditional sense, or in regulatory terms. Platform users are simultaneously commodified customers, captive audiences,

10 http://www.courthousenews.com/2014/03/20/PLNvCCA.pdf

and workers essential to maintaining the product. This curious puzzle—a private product sustained only by customers-as-products who find it costly to leave and whose presence the product depends upon—suggests the need for a new repertoire of governance strategies that sees platforms as something other than simply market actors, privately owned public utilities, failed exchanges, or noxious markets.

Identifying the "Platform Nexus"

Urban public policy offers a way to think about platform shocks that does not yet seem to be part of the discourse on platform governance: seeing shocks and responses to them in terms of a "nexus" between platforms' private actions and their public responsibilities. Instead of telling people to opt-out, accepting companies' self-styled framing of public issues, or waiting for shocks to accumulate into legislation, the concept of "nexus"—a technical term and set of methodologies developed by urban planners—can attend to shocks as subtle and specific indications of platforms' public relevance.

Urban planning in the United States has a history of developing such methods. In the face of a constitutional principle—the 5th Amendment's "takings" clause that prohibits "private property be taken for public use, without just compensation"—urban planners, activists, and landowners gradually collaborated to develop the concept of "blight": a specific, technical term affirmed by SCOTUS in 1952 and designed to describe scarce, privately owned, economically depressed, physically dilapidated urban areas whose continued neglect was "dangerous to the future of the city." This danger required the "condemnation of blighted properties and the transfer of this real estate to developers who would use it more productively." (Pritchett, 2003, p. 3)

While the concept's history is deeply problematic and serves as evidence of how urban environmental policies can encode structural racism—the concept was often "used to justify the removal of blacks and other minorities from certain parts of the city" (Pritchett, 2003, p. 6)—our interest is in its origins as an interdisciplinary concept. The *field* of urban planning—an interdisciplinary domain spanning professional technicians, private landowners, community activists, government regulators—has created, applied, critiqued, resisted, and refined the *idea* of blight across multiple eras and contexts. It does not have

to reinvent anew with every urban shock the concepts and methodologies used to identify the public significance of private land governance.

A related and more recent concept from urban policy concerns arguments for taxing private actors in the public good and the emergence of the "nexus study" as a policy instrument. In the wake of a California state proposition limiting local government property taxation, the State began experimenting with charging private real estate actors "impact fees" whenever a project was seen to have an impact on a public good. In Nollan v. California Coastal Commission (1987) the SCOTUS ruled that the state had not proven an "essential nexus" between the permit (and fees) it charged the landowner and the project's impact on the public domain. In response, the state legislature passed the "Mitigation Fee Act" specifying that development fees "must substantially advance the same government interest that would furnish a valid ground for denial of the permit" and be "roughly proportional' both in nature and extent to the impact of the proposed development." The State cannot impose a fee on an industry or actor simply because there is public outrage against them, or perceptions of unfairness – fees are only legal if a "nexus study" shows the connection between the government interest, the private action, and the fee's proportionality (Falik & Shimko, 1988; Lillydahl et al, 1988).

Among the historical examples and more recent digital contexts, two patterns emerge in thinking about how and why to hold private actors publicly accountable. The first are procedural and definitional: how to identify blight, what the meaningful, discernible differences are between private and public sidewalks, which private companies can be retroactively redefined as governmental bodies. Each definition emerges from debates about the thresholds and tests that must be met to recast seemingly private contexts as public concerns. The second are closely related normative and ethical concerns: what values guide the creation and maintenance of these tests? Separate from due process and formal thresholds, which unanticipated events trigger visceral rejections of private market logics and calls for public accountability¹³? Do these rejections

¹¹ http://www.leginfo.ca.gov/cgi-bin/displaycode?section=gov&group=65001-66000&file=66000-66008

¹² http://www.lexology.com/library/detail.aspx?g=c02f5fd8-c9f9-4178-84d5-cbe2a4f2994e . See also http://www.leginfo.ca.gov/cgi-bin/displaycode?section=gov&group=65001-66000&file=66000-66008

¹³ See Guston (2013) for a discussion of "anticipatory governance" as an idea spanning technical knowledge and public accountability.

emerge from latent, non-specific, but widely shared assumptions about what is ethically "noxious," or do they only exist because networked technologies and practices are creating entirely new forms of outrage and public consciousness – or a mix of the two?

Platform governance is professionally nascent enough that, akin to urban planning's focus on blight, interdisciplinary actors—data scientists, algorithm designers, user guilds, state regulators, technology entrepreneurs—might come together to define the *concepts* required to identify public interests in private platforms. And, akin to the nexus study, those with a stake in platform governance may collaborate to create a methodology for legitimately imposing obligations on platform owners proportional to their impositions on public domains. New understandings would be required of concepts like scarcity, impact, and public domain so such obligations would not be indefensible takings that unfairly targeted one platform or industry over another.

For example, The Commonwealth of Massachusetts recently instituted a "20-cent per-trip fee on ride-hailing apps such as Uber and Lyft" with 5 cents of this fee subsidizing local private taxi industries; a proposed New York City bill would give "25 percent of the sales tax passengers pay on ride-hailing services to the Metropolitan Transportation Authority"; and several jurisdictions are passing laws that allow Uber and Lyft drivers to form unions and guilds¹⁴. Shocks can play an *accumulative* role in such official regulatory responses: they develop over months and years; span discourses of law, labor, and innovation; emerge from perceived patterns *among* shocks, and debates about when private industries resemble public utilities and how the sociotechnical dynamics of digital, networked platforms change the calculus of resemblance.

Developing a concept of "platform nexus" may offer a way to make sense of shocks and their responses. By learning from urban planning's development of a concrete language at the intersection of public interest, private responsibility, and proportional response, social media platform governance may mature into a sophisticated field able to recast public shocks into precise moments of reform.

Conclusion

¹⁴ http://www.citylab.com/commute/2016/08/uber-massachusetts-tax-regulation/497036/

To the extent that platforms are infrastructural, they are difficult to regulate as private actors. And to the extent that they are private actors, they are difficult to regulate as infrastructures. In lieu of a more interventionist regulatory environment, in the U.S. we allow platforms to be free market actors, grant them limited liability for their users, and impose little consequence for the broader public impact. All that is left, it appears, is this cycle of shock and exception: public outcry, usually around extreme circumstances, that express indignation at what would otherwise appear to be business-as-usual. Platforms can weather the public anger and introduce exceptions to their normal practices, in ways that defuse the public outcry and keep it from extending into a more involved consideration of ongoing harm to the public or regulatory intervention. Shocks become things that platforms might anticipate, plan for, and remember. These sometimes spur the actions of regulators, though their interventions are often 'soft' in the sense that they are voluntary, unfunded, and unenforced.

We are not dismissing the importance of shock and public outcry. It is a powerful expression of dissatisfaction, and can have an impact. And it can be a diagnostic that can help us, and regulators, better understand the implicit compact between platform and public, as well as its limits. But too often this cycle of shock and exception, by itself, proves insufficient, especially for an industry that is proudly "moving fast and breaking things" (in the words of Facebook). Instead, shock and outcry can serve as the foundation and the fuse for public regulation of private entities, justified by and on the terms of an assessment of 'information blight' and a nexus study that can assess both the descriptive facts of the platforms impact the normative assignment of accountability, and the practical regulatory intervention that should follow.

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