

Self-Regulation and Innovation in the Peer-to-Peer Sharing Economy

Molly Cohen[†] & Arun Sundararajan^{††}

INTRODUCTION

A growing fraction of the world’s economy involves digitally enabled peer-to-peer exchange. This form of exchange has expanded dramatically in recent years, moving beyond simple retailing and free file exchange to personal, human-intensive services such as hosted accommodation, urban and city-to-city transportation, neighborhood logistics, peer-to-peer lending, equity crowdfunding, and decentralized manufacturing. Such exchange, while mediated by digital platforms like Uber, Airbnb, Lyft, Etsy, Funding Circle, and AngelList, frequently involves the peer-to-peer provision of familiar real-world services that are the traditional subjects of regulation. It blurs the line between personal and professional in the provision of commercial services. Further, it often involves semianonymous transactions. Each of these factors creates a variety of regulatory challenges that could impede innovation, especially the grassroots innovation made possible by new opportunities for peer-to-peer exchange. Additionally, these regulatory barriers may slow the growth of employment that involves individuals providing goods, services, labor, and capital through peer-to-peer platforms—a form of work that will in future years constitute a larger fraction of the economy than it does today.

We argue that the resolution of these challenges must include self-regulatory approaches. *Self-regulation* is not the same as deregulation or no regulation. Rather, it is the reallocation of regulatory responsibility to parties other than the government. We explain why platforms should not be viewed as entities to be regulated but rather as actors that are a key part of the regulatory

[†] National Center on Philanthropy and the Law Fellow, Office of the General Counsel, New York University.

^{††} Professor and NEC Faculty Fellow, Leonard N. Stern School of Business, New York University.

Jonah Blumstein, Valeriya Greene, and Eric Jacobson provided excellent research assistance.

framework in this arena. For nonintermediated peer-to-peer exchange in the past, the primary solution to market failure was intervention by a government agency. But today, the existence of third-party platforms that mediate exchange fundamentally alters what the market is capable of providing on its own, and it creates a new institution capable of affecting what Michel Foucault referred to as the “conduct of conduct.”¹ Nevertheless, because the interests of digital, third-party platforms are not always perfectly aligned with the broader interests of society, some governmental involvement or oversight is likely to remain useful.

In this Essay, we describe different factors that may induce market failure and highlight the extent to which these are mitigated by the existence of new digital platforms. We outline how self-regulation can form part of a broader innovation-enhancing solution, providing guidelines for sharing-economy regulation that draw from self-regulatory experiences in industries ranging from nuclear power and financial intermediation to chemical production and cotton supply. Demonstrated enforcement capabilities along with a clear perception of independence and legitimacy are essential. Leveraging reputational concerns can complement traditional regulation. We distinguish between those entities that, in a self-regulatory solution, are well suited to correct information asymmetries, and those that are well suited to address market failure from externalities. We conclude by noting some of the opportunities presented by delegated regulation through data—a form of regulation that has the potential to be superior to mandated marketplace transparency. We frequently use the peer-to-peer marketplace Airbnb and the context of short-term, hosted accommodation to illustrate our arguments.

I. BACKGROUND

At the end of 2014, Airbnb’s CEO, Brian Chesky, announced that the company’s peer-to-peer marketplace listed over one million homes and was adding three thousand new listings per

¹ Colin Gordon, *Governmental Rationality: An Introduction*, in Graham Burchell, Colin Gordon, and Peter Miller, eds, *The Foucault Effect: Studies in Governmentality* 1, 2–3 (Chicago 1991) (describing Foucault’s term “conduct of conduct” as a perspective of the self toward the structures of government, specifically vis-à-vis the conformance of personal conduct to broader social institutions).

day.² Airbnb is one of a number of new digital platforms that facilitates widespread, peer-to-peer commerce. Uber, Lyft, and Sidecar allow drivers in hundreds of cities to offer taxicab-like point-to-point urban transportation that is requested through a mobile application. Paris-based BlaBlaCar and Munich-based Carpooling.com have each built city-to-city transportation networks using online peer-to-peer marketplaces that connect individual drivers with potential passengers. Etsy, an online marketplace centered on handmade and vintage items, has over one million sellers that power a decentralized, open-industrial-production-and-distribution system. Peer-to-peer lending platforms Lending Club and Funding Circle have mediated billions of dollars in loans among their members. These peer-to-peer, collaborative, sharing-economy platforms³ are new market-firm hybrids that centralize certain activities associated with the provision of commercial services (like branding, trust, and payments) while decentralizing others (like pricing, supply infrastructure, and service provision).

Early forms of peer-to-peer accommodation, transportation, venture financing, lending, and labor provision may have emerged as a grassroots response to deficiencies in existing corporate alternatives.⁴ Today, however, platforms owned by shareholder corporations and funded by significant venture capital drive the growth of the sharing economy.⁵ These platforms are

² See Brian Chesky, Tweet by @bchesky (Twitter Dec 7, 2014, 12:09 PM), online at <http://twitter.com/bchesky/status/541655860271783937> (visited Feb 22, 2015).

³ There is considerable debate in the popular press about what constitutes the sharing economy. For an overview of different kinds of peer-to-peer businesses, the technological and economic drivers of their emergence, and their possible economic impacts, see Arun Sundararajan, *Peer-to-Peer Businesses and the Sharing (Collaborative) Economy: Overview, Economic Effects and Regulatory Issues*, in *The Power of Connection: Peer-to-Peer Businesses, Hearing before the House Committee on Small Business*, 213th Cong., 2d Sess 20–28 (2014). See also Christopher Koopman, Matthew Mitchell, and Adam Thierer, *The Sharing Economy and Consumer Protection Regulation: The Case for Policy Change* *3–5 (Mercatus Research Dec 2014), online at <http://mercatus.org/sites/default/files/Koopman-Sharing-Economy.pdf> (visited Feb 22, 2014).

⁴ For example, loans from relatives or friends are common alternatives to bank loans. Lending Club launched initially as a Facebook application aimed at using the trust created by social networks to attract young borrowers with credit histories that restricted these borrowers' traditional financing alternatives. See Ming Kwan and Deepak Ramachandran, *Trust and Online Reputation Systems*, in Jennifer Golbeck, ed, *Computing with Social Trust* 287, 301 (Springer 2009); Victoria Barret, *Bank of Americans*, *Forbes* 44, 44 (Dec 20, 2010).

⁵ As of January 31, 2014, Uber had received close to \$5 billion in pre-IPO funding, Airbnb had received over \$790 million, and Lyft had received over \$330 million. Mike Isaac and Michael J. De La Merced, *Ride-Hailing Service Lyft Is Said to Be in Talks to*

frequently cast as the protagonists in conflicts between existing regulations and the commercial activity that the platforms enable.⁶ Since the eventual commercial success of a platform depends on its participants' ability to engage in exchange, the platforms have invested significant resources in addressing the misfit between existing regulation and the exchange that they facilitate.⁷ This leads to confusion between regulating the platforms themselves and regulating the exchange that their marketplaces facilitate.

We argue in this Essay that platforms should be viewed as part of the solution, rather than part of the problem, and they should be included as key actors in a self-regulatory regime. In order to guide the discovery of a new division of regulatory responsibility among the government, these new market owners, and other societal stakeholders, we outline some sources of market failure commonly associated with the activities now conducted as part of the sharing economy, examine what self-regulatory organizations are and what factors make them effective, and apply these insights to envision the shape that successful self-regulation in the sharing economy might take.

II. THE SHARING ECONOMY: REGULATORY ISSUES

Generally, "regulation" refers to the use of legal instruments to implement social and economic policy objectives. Judge Richard Posner defines economic regulation as follows: "Properly defined, the term refers to taxes and subsidies of all sorts as well as to explicit legislative and administrative controls over rates,

Raise \$250 Million, Dealbook (NY Times Feb 12, 2015), online at <http://dealbook.nytimes.com/2015/02/12/ride-hailing-service-lyft-is-said-to-be-in-talks-to-raise-250-million> (visited Feb 22, 2015) (noting pre-IPO funding amounts for Uber and Lyft); Scott Austin, *Airbnb's Official Funding Haul: \$475 Million*, Digits Blog (Wall St J Aug 1, 2014), online at <http://blogs.wsj.com/digits/2014/08/01/airbnbs-official-funding-haul-475-million> (visited Feb 22, 2015) (discussing Airbnb's funding totals).

⁶ For example, a summary of Airbnb's operation in New York City provided by the New York State Office of the Attorney General ("NYAG") states that, "[i]n late 2013, the [NYAG] launched an investigation of users of web platforms like Airbnb who run large-scale enterprises in violation of fire safety, zoning, tax, and other applicable laws." New York State Office of the Attorney General, *Airbnb in the City* *4 (Oct 2014), online at <http://www.ag.ny.gov/pdfs/Airbnb%20report.pdf> (visited Feb 22, 2015).

⁷ See, for example, Rosalind S. Helderman, *Uber Pressures Regulators by Mobilizing Riders and Hiring Vast Lobbying Network* (Wash Post Dec 13, 2014), online at http://www.washingtonpost.com/politics/uber-pressures-regulators-by-mobilizing-riders-and-hiring-vast-lobbying-network/2014/12/13/3f4395c6-7f2a-11e4-9f38-95a187e4c1f7_story.html (visited Feb 22, 2015) (noting that as of December 2014, Uber had hired more than 161 lobbyists in at least 50 US cities and states to lobby on its behalf).

entry, and other facets of economic activity.”⁸ When market practices lead to inefficient or inequitable outcomes (a situation often referred to as a “market failure”)—for example, due to asymmetric information, the problem of public goods, the threat of monopoly, or the existence of externalities that are not naturally internalized by market participants—regulation may be supplied as a corrective measure.⁹ In the absence of technological, self-regulatory, or governmental intervention, peer-to-peer exchange is susceptible to a variety of forms of market failure. We discuss three such species of market failure here.¹⁰

A. Information Asymmetry

Most forms of peer-to-peer exchange are characterized by asymmetric information. For example, a passenger who enters a taxicab may not know the qualifications (or intentions) of its driver. A host knows more about the quality of her short-term accommodation than a potential guest does, and in turn, a guest knows more about her own reliability and level of cleanliness. A borrower knows more about her creditworthiness than a lender does. These and other forms of information asymmetry can lead to fewer transactions than are socially optimal—due to uncertainty about quality—in addition to a situation termed “adverse selection,” which occurs when the information asymmetry makes higher-quality traders less likely to participate.¹¹ This asymmetry can also lead to moral hazard: because parties’ imperfect information limits their ability to contract, one trading partner might display behavior that is less careful (for example, reckless

⁸ Richard A. Posner, *Theories of Economic Regulation*, 5 *Bell J Econ* 335, 335 (1974).

⁹ The “public interest theory” of regulation posits that regulation emerges in situations of market failure as a response to public demand. The “capture theory” of regulation posits that, over time, governmental regulation is supplied to serve the interests of the regulated industries. See *id.* at 335–36. See also George J. Stigler, *The Theory of Economic Regulation*, 2 *Bell J Econ* 3, 3 (1971) (outlining theories of regulation and arguing that regulation functions primarily for the benefit of the regulated industry).

¹⁰ Aside from these three types of market failure, there are a variety of other important industry-specific and geography-specific regulatory issues. Such issues include commercial taxation, hospitality taxes, equal access, disaster preparedness and fire safety, affordable housing and rent control, and policies to combat discrimination. Analyzing the economic, legal, and social aspects of each of these regulatory issues is beyond the scope of this Essay.

¹¹ See George A. Akerlof, *The Market for “Lemons”: Quality Uncertainty and the Market Mechanism*, 84 *Q J Econ* 488, 493–94 (1970).

driving), of lower effort (for example, lower levels of cleanliness), or somehow riskier than otherwise would have been chosen.¹²

Prior to the emergence of sharing-economy platforms, governmental intervention was a natural solution to market failure in traditional peer-to-peer businesses. For example, safety concerns about drivers and information asymmetries about the distance or cost of a ride were alleviated in part through driver screening and metered fares by taxicab regulatory agencies.¹³ Safety and quality concerns could have led to inefficiently low levels of peer-to-peer exchange in other markets—for example, in the market for very short-term rentals of residential housing units.

Third-party intermediaries like Airbnb, Uber, and Lyft now offer alternative solutions to this form of market failure, including the use of digital technologies that reduce information asymmetries.¹⁴ For example, Airbnb offers an online feedback system that allows guests to learn about the quality of hosts from prior guests and provides evidence of “social capital”¹⁵ via links to user profiles on platforms like Facebook and LinkedIn. It also uses technology to digitally verify the government IDs of its providers.¹⁶ But more important than the details of a specific implementation is that the mere existence of large, third-party intermediaries expands the set of alternatives available to mitigate market failure. As noted before,¹⁷ the eventual commercial success of platforms is affected by the ability of their participants to engage in exchange. Thus, platforms have a natural incentive to alleviate exchange-detering forms of information failure using all manner of resources that go well beyond providing digital solutions. For example, Lyft, independent of any

¹² See Bengt Holmström, *Moral Hazard and Observability*, 10 *Bell J Econ* 74, 74 (1979).

¹³ For a discussion of the emergence of average-price fares and the subsequent need for entry restrictions using a medallion system, see generally Edward C. Gallick and David E. Sisk, *A Reconsideration of Taxi Regulation*, 3 *J L, Econ & Org* 117 (1987).

¹⁴ For a broad discussion of the impact of Internet technologies on information asymmetry, see generally John C. Moorhouse, *Consumer Protection Regulation and Information on the Internet*, in Fred E. Foldvary and Daniel B Klein, eds, *The Half-Life of Policy Rationales: How New Technology Affects Old Policy Issues* 125 (NYU 2003).

¹⁵ A sociological term of art, “social capital” refers to “social connections and the attendant norms and trust.” Robert D. Putnam, *Tuning In, Tuning Out: The Strange Disappearance of Social Capital in America*, 28 *PS: Polit Sci & Polit* 664, 665 (1995).

¹⁶ See Airbnb, *Trust at Airbnb*, online at <http://www.airbnb.com/trust> (visited Feb 22, 2015).

¹⁷ See text accompanying note 7.

regulatory requirements, conducts in-person driver screenings that also include criminal background checks and an assessment of driving history.¹⁸ Similarly, as of July 2013, Airbnb employed three hundred people in its customer-service unit, fifty of whom were dedicated to promoting trust and safety.¹⁹

B. Externalities

The choices of a buyer or provider in a peer-to-peer transaction may impose costs on (or result in benefits to) others, and these externalities often may not be naturally taken into account (or internalized) when trading peers make choices. Sometimes these externalities are negative. For example, an additional taxicab on the road creates congestion and lengthens travel times for other drivers. A noisy Airbnb guest in an apartment building might impose costs on the other residents with his or her disturbing behavior. In other cases, externalities might be positive. For example, an increase in out-of-town visitors to a neighborhood induced by a high concentration of Airbnb hosts could benefit local restaurants. An increase in tourism caused by greater affordability and range of short-term accommodation could benefit a variety of stakeholders in the hospitality and travel industries.

Negative externalities lead to an oversupply of certain services; failure to internalize positive externalities could, correspondingly, lead to inefficiently low levels of market exchange. Some form of third-party regulatory intervention seems necessary in these situations, a point that we return to later in this Essay.²⁰

C. Blurring of Boundaries between the Personal and the Professional

A distinguishing feature of commercial activity in the sharing economy is the way in which the provision of services often blurs lines between the personal and the professional. For example, most Airbnb hosts are not professional hoteliers.²¹ A large fraction of Lyft and Uber drivers are active on the platform

¹⁸ See Lyft, *Safety*, online at <http://www.lyft.com/safety> (visited Feb 22, 2015).

¹⁹ See Liz Gannes, *After Home-Trashing Incident, Airbnb Builds an In-House Enforcer Team* (All Things D July 16, 2013), online at <http://allthingsd.com/20130716/after-home-trashing-incident-airbnb-builds-an-in-house-enforcer-team/> (visited Feb 22, 2015).

²⁰ See Part IV.

²¹ In 2014, the NYAG classified a mere 6 percent of more than 25,000 Airbnb hosts assessed in New York as “commercial users.” NYAG, *Airbnb in the City* at *10 (cited in note 6).

fewer than fifteen hours per week.²² Only one in five sellers on Etsy considers their Etsy business a full-time job.²³ Applying a regulatory regime developed for full-time or large-scale professional providers to smaller, semiprofessional providers could create barriers to entry, stifling peer-to-peer exchange as well as the grassroots innovation that the sharing economy facilitates.²⁴ Absent appropriate safeguards, there may also be new forms of market failure that occur as a consequence of the nonprofessional nature of supply and induce the emergence of new associations or guilds that are part of a self-regulatory solution.

III. MAKING SELF-REGULATORY SOLUTIONS WORK

We argue that the regulatory issues discussed in Part II may be best addressed by a self-regulatory approach that actively involves sharing-economy platforms as well as existing nongovernmental stakeholders in both design and enforcement.

A. What Are SROs and Why Do They Emerge?

Given its history and diversity, it is unsurprising that self-regulation (and self-regulatory organizations, or “SROs”) defies simple definition or categorization. Self-regulatory systems vary widely based on their levels of voluntariness, accountability, enforcement, and governmental intervention. For instance, Professor Julia Black distinguishes among four types of self-regulation.²⁵ “*Voluntary* self-regulation” involves no direct governmental involvement or mandates.²⁶ “*Coerced* self-regulation”

²² See Dan Levine and Sarah McBride, *Uber, Lyft Face Crucial Courtroom Test over Driver Benefits* (Reuters Jan 28, 2015), online at <http://www.reuters.com/article/2015/01/28/us-uber-lyft-workers-idUSKBN0L11BN20150128> (visited Feb 22, 2015).

²³ See Etsy, *Redefining Entrepreneurship: Etsy Sellers’ Economic Impact* *8 (Nov 7, 2013), online at http://extfiles.etsy.com/Press/reports/Etsy_RedefiningEntrepreneurship_Report_2013.pdf (visited Feb 22, 2015).

²⁴ For entities that facilitate grassroots innovation—often by nonprofessionals—the alternative paths to innovation are challenged by the fact that their approaches differ from traditional science, technology, and innovation. Thus, integration with mainstream institutions is a critical challenge. For further discussion of the interaction between grassroots innovators and established scientific and technological institutions, see generally Mariano Fressoli, et al, *When Grassroots Innovation Movements Encounter Mainstream Institutions: Implications for Models of Inclusive Innovation*, 4 *Innov & Dev* 277 (2014).

²⁵ See Julia Black, *Decentering Regulation: Understanding the Role of Regulation and Self-Regulation in a ‘Post-Regulatory’ World*, 54 *Current L Probs* 103, 118 (2001). See also Saule T. Omarova, *Wall Street as Community of Fate: Toward Financial Industry Self-Regulation*, 159 *U Pa L Rev* 411, 424 (2011) (characterizing Black’s taxonomy as the framework “generally” adopted in the literature).

²⁶ Black, 52 *Current L Probs* at 118 (cited in note 25).

occurs when an industry formulates and imposes rules due to the threat of governmental regulation.²⁷ Under a “*sanctioned* self-regulation” regime, the industry formulates rules subject to governmental approval.²⁸ And, lastly, “*mandated* self-regulation” occurs when the government requires the industry to establish a self-regulatory framework.²⁹ The overarching category of self-regulation may also include those situations in which the government delegates to a third party the implementation of preexisting federal law or regulation.³⁰ Furthermore, self-regulatory regimes vary both by their methods and rigorousness of accountability and by their levels of formality.³¹ On the one hand, “partial self-regulation refers to situations in which private parties are responsible only for rulemaking, while enforcement is the domain of either public bodies or the market.³² On the other hand, “full self-regulation” occurs when the industry engages in both rulemaking and enforcement.³³

Generally, SROs are privately run, typically with limited governmental involvement. Unlike trade organizations, which promote the well-being of an industry, SROs are meant to police an industry by formulating regimes of collective rulemaking in which entities come together to develop, monitor, and, at times, enforce standards to govern the behavior of members.³⁴

Self-regulation is a naturally occurring phenomenon that has emerged repeatedly throughout the history of economic activity. For example, American Indian groups and the Maasai in Kenya both self-regulated access to and use of limited communal

²⁷ *Id.*

²⁸ *Id.*

²⁹ *Id.*

³⁰ See Douglas C. Michael, *Federal Agency Use of Audited Self-Regulation as a Regulatory Technique*, 47 *Admin L Rev* 171, 175–76 (1995).

³¹ Outside accountability may come from stakeholders, including consumer or community representatives, in “stakeholder self-regulation.” Black, 52 *Current L Probs* at 119 (cited in note 25) (quotation marks omitted). It may also come from third parties, such as NGOs, in “verified-self-regulation.” *Id.* (quotation marks omitted). Or it could come as a close variant, such as “accredited self-regulation,” in which compliance is audited by a nongovernmental body like a standards council. *Id.* (quotation marks omitted). See also Ian Bartle and Peter Vass, *Self-Regulation within the Regulatory State: Towards a New Regulatory Paradigm?*, 85 *Pub Admin* 885, 898–901 (2007) (discussing the intersection of self-regulation and accountability for the regulatory state).

³² Omarova, 159 *U Pa L Rev* at 424 (cited in note 25); Abraham L. Newman and David Bach, *Self-Regulatory Trajectories in the Shadow of Public Power: Resolving Digital Dilemmas in Europe and the U.S.*, 17 *Governance* 387, 390 (2004).

³³ Omarova, 159 *U Pa L Rev* at 424 (cited in note 25); Newman and Bach, 17 *Governance* at 390 (cited in note 32).

³⁴ See Omarova, 159 *U Pa L Rev* at 421 (cited in note 25).

goods like fish stock, prey, and grazing lands.³⁵ Villages in Europe self-regulated access to and use of the commons, publishing communal farming-and-grazing regulations as early as the thirteenth century.³⁶ Agreements among neighbors and groups of cultivators were formalized via bylaws that were quite comprehensive in governing agricultural practices.³⁷ More-formal merchant and craft guilds—early SROs—emerged in medieval times, imposing strict rules about their members' wages, tools, technology, quality, and prices.³⁸ These early examples of communal self-regulation of public goods are encouraging because they suggest that self-regulation is a natural part of economic development, and they challenge Professor Garrett Hardin's thesis about the inevitable collapse of the commons.³⁹ However, medieval occupational guilds may have also suffered from many of the issues of capture that Professor George Stigler argues are largely endemic across various forms of regulation⁴⁰—for instance, the guilds may have enriched their members at society's expense.⁴¹

B. Lessons from Contemporary SROs

SROs continue to be widely prevalent in the modern world. They exist in many industries in which peer-to-peer transactions are common relative to firm-to-consumer transactions—for example, in medicine (the American Medical Association), real estate (the National Association of Realtors), and law (bar associations). Often, modern SROs have significant enforcement and compliance capabilities, perhaps even quasi-judicial authority due to their ability to audit and penalize. We use examples of

³⁵ See Donald Leal, *Community-Run Fisheries: Avoiding the 'Tragedy of the Commons'* (Property and Environment Research Center Sept 1996), online at <http://perc.org/articles/community-run-fisheries-0#sthash.64mLFFBf.dpuf> (visited Feb 22, 2015); Robert A. Blewett, *Property Rights as a Cause of the Tragedy of the Commons: Institutional Change and the Pastoral Maasai of Kenya*, 21 *Eastern Econ J* 477, 479 (1995).

³⁶ See Susan Jane Buck Cox, *No Tragedy on the Commons*, 7 *Envir Ethics* 49, 55 (1985).

³⁷ See *id.* at 56.

³⁸ See Alfred Kieser, *Organizational, Institutional, and Societal Evolution: Medieval Craft Guilds and the Genesis of Formal Organizations*, 34 *Admin Sci Q* 540, 553 (1989).

³⁹ See Cox, 7 *Envir Ethics* at 49 (cited in note 36).

⁴⁰ See Stigler, 2 *Bell J Econ* at 3 (cited in note 9).

⁴¹ See Sheilagh Ogilvie, *The Economics of Guilds*, 28 *J Econ Persp* 169, 170 (2014) (arguing that the behavior of guilds can best be understood as being aimed at securing rents for guild members and legal privileges for the guild).

contemporary SROs to highlight three factors that might lead to successful self-regulatory approaches for the sharing economy: credible enforcement mechanisms, a perception of legitimacy, and an emphasis on reputation.

1. Credible enforcement mechanisms.

A primary factor that leads to a successful self-regulatory apparatus is the ability of an SRO to enforce its rules and regulations. Consider the example of the Institute of Nuclear Power Operations (INPO), an SRO that was established in 1979 following the nuclear accident at Three Mile Island,⁴² which has since successfully regulated nuclear-power operations in the United States.⁴³ Its breadth of responsibility includes creating safety-risk-management standards, monitoring compliance, conducting routine evaluations of individual plants, investigating accidents, and providing technical assistance.⁴⁴

The INPO did not gain instant respect; rather, it earned its reputation for fairness and gained credibility within the industry over time. In the 1980s, INPO inspectors found severe deficiencies at a Philadelphia nuclear plant. The INPO and the Nuclear Regulatory Commission (NRC) worked closely together to rectify the flaws, and the ensuing regulatory criticism that they provided was so harsh that several top executives at the plant lost their jobs.⁴⁵ This event established the INPO's mettle and became a symbol of its power.⁴⁶

The case of the INPO contrasts with the relative failure of Responsible Care, a set of self-regulatory principles promulgated by the International Council of Chemistry Associations, a chemical-industry SRO, in the late 1980s in the wake of the Bhopal Chemical Disaster.⁴⁷ In the United States, the American Chemistry Council, a chemical-industry trade group, requires

⁴² See Institute of Nuclear Power Operations, *About Us*, online at <http://www.inpo.info/AboutUs.htm> (visited Feb 22, 2015).

⁴³ The fact that nuclear power is subject to self-regulation should give pause to any critic who worries that public-safety stakes in the sharing economy are too high for a self-regulatory solution.

⁴⁴ See INPO, *About Us* (cited in note 42); Omarova, 159 U Pa L Rev at 447–48 (cited in note 25).

⁴⁵ See Joseph V. Rees, *Hostages of Each Other: The Transformation of Nuclear Safety since Three Mile Island* 110–18 (Chicago 1994).

⁴⁶ See *id.*

⁴⁷ See Andrew A. King and Michael J. Lennox, *Industry Self-Regulation without Sanctions: The Chemical Industry's Responsible Care Program*, 43 Acad Mgmt J 698, 699 (2000).

that all its members adopt Responsible Care, but critics suggest that, since membership in the trade group is voluntary, this threat has little bite.⁴⁸ An empirical study evaluating the effectiveness of this self-regulatory regime found no evidence that membership in Responsible Care influenced the rate of environmental improvement among members.⁴⁹ In fact, members improved more slowly than nonmembers.⁵⁰ The authors of the study concluded that this chemical-industry SRO has failed due to its inability to impose explicit sanctions.⁵¹

2. Perception of legitimacy.

In addition to leading to effective policing of its members, the INPO's enforcement mechanisms and early successes were valuable because they legitimized the SRO both inside and outside the nuclear-power industry. In contrast, the Finance Industry Regulatory Authority (FINRA), a member-owned organization that regulates the activities of securities firms that transact with the public,⁵² suffers from a legitimacy problem. As a consequence, despite over eighty years of SRO oversight that have yielded tremendous financial innovation in the United States, the financial-services industry is rarely cited as a model for self-regulatory success.

Part of FINRA's difficulties may lie in its limited enforcement capabilities.⁵³ However, the more serious challenge is that it is simply not perceived as being independent and sufficiently serious in its oversight of its members.⁵⁴ As Professor Lawrence Lessig argues in regard to Congress in his recent book, the mere

⁴⁸ See, for example, Aseem Prakash, *Responsible Care: An Assessment*, 39 *Bus & Society* 183, 197 (2000).

⁴⁹ See King and Lennox, 43 *Acad Mgmt J* at 709 (cited in note 47).

⁵⁰ See *id.*

⁵¹ See *id.* at 713–14.

⁵² FINRA has oversight of trading in equities, corporate bonds, securities futures, and options, and it governs more than 4,000 securities firms with over 600,000 brokers. It is funded primarily through fees from member firms. See FINRA, *FINRA: Our Story*, online at <http://www.finra.org/AboutFINRA> (visited Feb 22, 2015).

⁵³ For example, in the summer of 2014, Kara Stein, an SEC commissioner, explained in a speech that FINRA's enforcement actions were "too often financially insignificant for the wrongdoers." Jean Eaglesham, *Finra Weighs Tougher Stance* (*Wall St J* June 19, 2014), online at <http://www.wsj.com/articles/wall-street-watchdog-finra-under-pressure-to-toughen-sanctions-1403219509> (visited Feb 22, 2015).

⁵⁴ See Jonathan Macey and Caroline Novogrod, *Enforcing Self-Regulatory Organization's Penalties and the Nature of Self-Regulation*, 40 *Hofstra L Rev* 963, 983 (2012).

appearance of conflicts may be as harmful as conflicts themselves.⁵⁵ Likewise, if an SRO appears untrustworthy or ineffective, government agencies, citizens, and other stakeholders are likely to take steps that lower its relevance. A key lesson for the sharing economy is that, with self-regulation, perception and legitimacy go hand-in-hand, and it is essential that a clear image of objectivity and enforcement be created early, perhaps through some visible examples of enforcement and governmental partnering.

3. The power of reputation.

Although the potential for digital reputation-and-monitoring systems to facilitate self-policing in the sharing economy is widely recognized,⁵⁶ it has also become common for observers to question whether these reputation-based systems have significant regulatory power.⁵⁷ However, many self-regulatory efforts that pre-date the digital economy rely extensively on the power of reputation to bolster compliance with industry rules. For example, the cotton industry, though not organized as an SRO, self-regulates via private law, with reputation playing a critical role. Merchant-to-mill and mill-to-mill cotton transactions are governed by rules adopted by various regional and national trade associations and exchanges,⁵⁸ and these rules provide default contract provisions that cover issues such as performance, quality, payment, and damages.⁵⁹ The associations also govern disputes—requiring arbitration and providing arbitration services—in which monetary sanctions may be imposed for noncompliance.⁶⁰ New merchants attend a summer course at the Cotton Institute, learning trade rules and getting acculturated with the norms of the cotton industry.⁶¹

⁵⁵ See Lawrence Lessig, *Republic Lost: How Money Corrupts Congress—and a Plan to Stop It* 226–48 (Twelve 2011).

⁵⁶ See, for example, Arun Sundararajan, *Why the Government Doesn't Need To Regulate the Sharing Economy* (Wired Oct 22, 2012), online at <http://www.wired.com/2012/10/from-airbnb-to-coursera-why-the-government-shouldnt-regulate-the-sharing-economy> (visited Feb 22, 2015).

⁵⁷ See, for example, Tom Slee, *Sharing Is Caring* (Jacobin Mag Jan 24, 2014), online at <https://www.jacobinmag.com/2014/01/sharing-and-caring> (visited Feb 22, 2015).

⁵⁸ See Lisa Bernstein, *Private Commercial Law in the Cotton Industry: Creating Cooperation through Rules, Norms and Institutions*, 99 Mich L Rev 1724, 1726–27 (2001).

⁵⁹ See *id.* at 1731–32.

⁶⁰ See *id.* at 1727–28.

⁶¹ See *id.* at 1771–72.

Reputation is critical in the cotton industry because cotton grading is subjective, cotton prices are volatile, profit margins are low, and, as one person put it, “millions of dollars of business will be done on the basis of a thirty-second call.”⁶² The cotton industry is thus able to enforce private law without significant noncompliance. Aside from deterring misconduct in the first place, reputational consequences can also reinforce the monetary sanctions available via arbitration: trading parties are less likely to unnecessarily challenge an industry arbitrator’s decision in court.⁶³

IV. SELF-REGULATORY SOLUTIONS FOR THE SHARING ECONOMY

Peer-to-peer business facilitated by sharing-economy platforms has tremendous potential to expand grassroots entrepreneurship and innovation by allowing society to tap into individual abilities and aspirations that would otherwise not have been realized. Recent research results suggest that the economic activity on these platforms may benefit below-median-income consumers more than above-median-income consumers.⁶⁴ Since the digital reach of sharing-economy platforms and the blurring of the personal and the professional dramatically increases the scale of peer-to-peer exchange, people may well conclude that anything other than delegated regulation imposes prohibitive governing costs on society. At the same time, new self-regulatory bodies need to be credible while being inclusive, policing misbehavior without stifling experimentation and innovation.

The preceding discussion highlights a number of key characteristics that could lead to successful self-regulation in the sharing economy. One characteristic of success that emerges quite clearly is the importance of being able to exert sufficient control to ensure compliance with whatever rules are developed. Put differently, for self-regulatory bodies to control their members, sanctions—including the ultimate punishment of expulsion—must be costlier than the benefits of misbehavior.⁶⁵ In some ways, this underscores the value of including the platforms themselves as enforcers of the self-regulatory solution. For

⁶² Bernstein, 99 Mich L Rev at 1746 (cited in note 58).

⁶³ See id at 1740–41.

⁶⁴ See generally Samuel P. Fraiberger and Arun Sundararajan, *Peer-to-Peer Rental Markets in the Sharing Economy* (NYU Stern School of Business Research Paper, Mar 6, 2015), online at <http://ssrn.com/abstract=2574337> (visited Mar 24, 2015).

⁶⁵ See Macey and Novogrod, 40 Hofstra L Rev at 976 (cited in note 54).

example, Uber and Lyft have tremendous potential enforcement capabilities as regulatory entities: they control the channels for demand for their drivers, and as digital platforms, disconnecting a driver involves minimal transaction costs for the companies.

The case of short-term accommodation is subtler. Granted, digital platforms like Airbnb are a primary channel for demand, and thus, are able to enforce trading limits and threaten platform expulsion with essentially no costs. However, since a majority of Airbnb hosts rent out their primary residences only occasionally, the threat of expulsion from the platform may not be as significant a consequence.

One might thus also involve a different set of entities in the self-regulatory solution for this sector: the increasingly ubiquitous co-op associations, condominium boards, and homeowners associations.⁶⁶ These entities—which, for the sake of brevity, will all be referred to as “HOAs”—are entitled to regulate and collect dues from members, and they can control numerous aspects of the upkeep, maintenance, and living standards of the community.⁶⁷ Given their broad-ranging authority, these organizations are quite likely to regulate short-term rentals. Courts have upheld bans on unit rentals, even if onerous and applied retroactively.⁶⁸ Some HOAs do not ban but instead regulate unit rentals, for instance by limiting the frequency or duration of rentals,⁶⁹ or by requiring that owners pay a rental fee; provide names, ages, and license plates of the tenants; and perform background checks on tenants.⁷⁰

The existence of these entities in the potential regulatory mix suggests an interesting potential division of regulatory responsibility—delegate regulatory responsibility relating to information asymmetry to platforms like Airbnb (whose interests are naturally aligned with the global aggregation of information

⁶⁶ In 2002, the Community Association of America estimated that 50 percent of all new homes in major cities were a part of a community association. Renaud Le Goix and Chris J. Webster, *Gated Communities*, 2 *Geography Compass* 1189, 1190 (2008).

⁶⁷ See Donna S. Bennett, *Condominium Homeownership in the United States: A Selected Annotated Bibliography of Legal Sources*, 103 *L Library J* 249, 268 (2011).

⁶⁸ See, for example, *Woodside Village Condominium Association, Inc v Jahren*, 806 S2d 452, 460–62 (Fla 2002); *Four Brothers Homes at Heartland Condominium II v Gerbino*, 691 NY2d 114, 114 (NY App 1999).

⁶⁹ See *Apple II Condominium Association v Worth Bank and Trust Co*, 659 NE2d 93, 99 (Ill App 1995).

⁷⁰ See Veronica Sanchez, *Homeowner Fights HOA Rules* (AZCentral.com July 21, 2009), online at <http://archive.azcentral.com/12news/news/articles/2009/07/21/20090721HOAbattle.07212009-CR.html> (visited Feb 22, 2015).

and the mitigation of adverse selection and moral hazard), and let HOAs play a key role in the regulation of local externalities, as the guest-noise and strangers-in-the-building externalities are typically local and primarily affect HOAs' membership. Homeowners and renters have a continuous, high-bandwidth relationship with their HOA; these organizations are credible, can monitor compliance, and possess robust enforcement capabilities. Buildings and communities may then naturally differentiate into "Airbnb-friendly" and "Airbnb-free," allowing future buyers and renters to self-select.

We see reason to proceed cautiously with this division of responsibility—after all, a growing fraction of residents supplement their income or cover their mortgage payments with short-term rental earnings, and switching residences involves significant transaction costs. Additionally, restricting economic activity is one way to force individuals to internalize their negative externalities, but it is not the only one. Further, excessive restrictions imposed by HOAs eliminate the individual benefits and positive spillovers associated with the economic activities that generate these negative externalities to begin with. The fragmented nature of HOAs is further cause for concern: if some uniformity in policy is desirable, their role may be better suited to enforcement rather than rule setting.

A second insight from the modern-day SRO experience is that self-regulatory decisions may suffer from a lack of transparency or reviewability. This kind of opacity could limit the ability of public-interest groups to participate in the decision-making process or challenge the eventual outcome via the judicial system.⁷¹ Furthermore, without accountability to any outside groups, there is no promise that organizations will protect or even consider the public interest in their decisionmaking.⁷² A self-regulatory solution for the sharing economy must therefore have some form of transparency and governmental oversight. One possible regime could involve a tripartite model in which third-party watchdogs evaluate SROs, and the level of governmental oversight and regulation is determined by a firm's history of compliance.

We do not recommend mandating blanket marketplace transparency in the interest of promoting the self-regulatory

⁷¹ See Prakash, 39 *Bus & Society* at 184–85 (cited in note 48).

⁷² See Anthony Ogus, *Rethinking Self-Regulation*, 15 *Oxford J Legal Stud* 97, 98–99 (1995).

equivalent of “open government” because there are important consumer-privacy issues and trade secret costs that must be taken into account. Consider, instead, the fact that publicly traded corporations are, in some sense, “self-regulatory.” That is, they provide audited evidence (through their filings with the SEC), rather than being asked to provide raw operational data for a regulator to use in confirming compliance.⁷³ Correspondingly, we might design a self-regulatory system for hospitality tax collection, for example. In such a system, rather than having each provider register with a government regulator, a platform like Airbnb would register as an SRO, use the data gathered from its operations to facilitate the collection and payment of taxes, and provide audited evidence of compliance without having to publish the detailed and sensitive underlying operational data that was used.

CONCLUSION

The sharing economy promises tremendous decentralized innovation but needs a new regulatory framework in order to realize its potential. The approach that we propose is to utilize digital platforms as partners in the regulation of exchange, rather than view these platforms as adversaries or entities that require governmental regulation. This provides an attractive alternative to the cost of simply extending existing regulatory approaches to the immense scale of digitally mediated peer-to-peer exchange.

Self-regulation often emerges as a natural byproduct of economic exchange and has a long history of success. The experience of self-regulation in a variety of modern industries reveals four factors essential to SRO success. First, an SRO must establish credibility early on through its performance. Second, self-regulatory actors must demonstrate strong enforcement capabilities. Third, SROs must be perceived as legitimate and independent. And finally, an SRO must take advantage of participants’ reputational concerns and social capital. Different market inefficiencies for peer-to-peer transactions will require different entities to act as partners in the self-regulatory solution. Furthermore,

⁷³ See Miriam M. Weismann, *Corporate Transparency or Congressional Window-Dressing? The Case against Sarbanes-Oxley as a Means to Avoid Another Corporate Debacle: The Failed Attempt to Revive Meaningful Regulatory Oversight*, 10 *Stan J L Bus & Fin* 98, 101–02 (2004).

governmental oversight and judiciously chosen transparency will increase the likelihood of SRO success.

Making judicious choices about data transparency is truly critical. A progressive approach can have significant long-term benefits. For example, as the sharing-economy SROs (whether platforms themselves or third-party associations that emerge) establish a track record of credibility and enforcement and gain legitimacy as partners in regulation, they can then be called on to help invent self-regulatory solutions to societal issues that are especially difficult to address by centralized governmental intervention. One might imagine a variety of societal goals being achieved in part by the platforms applying machine-learning techniques to their data to detect patterns corresponding to, say, discriminatory practices, much like credit card issuers use automated systems to detect criminal fraud. This approach of regulatory delegation can yield far more expansive regulating-through-data alternatives than are feasible with complete transparency, and it suggests promising opportunities for self-regulation—ones that are appropriately reflective of the interesting meld of a decentralized marketplace and a centralized institution that sharing-economy platforms represent.