

The Rise and Fall of the Sharing Economy

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Introduction

It is now ten years since some of the best known Sharing Economy companies were founded, and about six years since the name “Sharing Economy” became used to identify this wave of internet companies. In that time we have seen claims that this is a new model of employment, even that it is the future of work, and that it is fundamentally changing the cities in which we live. But in recent years we’ve also seen signs of a bubble. A few years ago the story of the Sharing Economy would have been simple: here is a new model, and some people like it and some do not, but it works. Now there is more scepticism, and the phrase itself may be fading from public discourse.

This essay gives a quick tour of the sharing economy, from its beginnings after the 2008 financial crash to today. I will walk through some of the business models and some of the economics of this sector, and sketch some of the controversies. There is another theme to the essay, which is “who makes the future?” Is the world of work, for example, built by technology companies in Silicon Valley, or can the rest of the world have a say as well.

2008: Beginnings

Let’s look at three companies which each started just about ten years ago and which had a similar business model in common, even though the people involved did not know

each other at all. There was no name for it at the time, but there was something in the air...

Let's start with Airbnb, which you will probably know is the controversial short-term rental or holiday accommodation company, where people rent out residential homes for use by tourists and other visitors.

In 2007, newly graduated design students Brian Chesky and Joe Gebbia were looking for ways to make their end-of-month rental payments in San Francisco when an industry conference came to town. They bought some inflatable airbeds and offered accommodations to attendees looking for a cheap place to stay. They were inundated with requests and realized there may be a market for this kind of thing, and so "Airbed & Breakfast" was born.¹

Since then, the story has been one of hard work and growth. Running up the limit on multiple credit cards to finance the very beginnings, they got an early investment from Paul Graham's *Y-Combinator* fund. Struggling to get the site to take off, they went out to their biggest city (New York) and got the hosts to have professional photos taken of their rooms to make them more appealing; the bookings increased, and professional photography continues to be the most effective way for a host to attract guests. Other maneuvers included a breakfast-cereal pitch around the Democratic convention in Chicago and a widely criticized email campaign via Craigslist.

After the early tribulations, the now-trio of Chesky, Gebbia, and Nathan Blecharczyk found themselves at the head of a phenomenon. In 2011 Airbnb had 50,000 listings; in 2012 that number more than doubled to 120,000; by the end of 2013 it was 550,000; in

¹ Rachel Botsman and Roo Rogers, *What's Mine Is Yours: The Rise of Collaborative Consumption* (Harper Business, 2010).

2018 it is nearly 5 million listings. ² For comparison, the largest hotel company in the world by number of rooms is the InterContinental Group with 775,000 rooms. ³

Just as Airbnb was getting started, two entrepreneurs were attending a conference in Paris, and had a hard time finding a cab. These two were Travis Kalanick, who was to go on to be the controversial CEO of Uber, and Garrett Camp. They didn't need to worry about paying rent, as both were already rich from earlier technology ventures. Wouldn't it be great, they thought, if you could get a cab just by pressing a button on the newly released iPhone.

In its early days, Uber worked with limo companies to provide drivers, but then they realized that a competitor named Lyft was using amateur drivers rather than professionals, and Uber did not want to be left out. So they set up Uber X, which is Uber Pop in most of Europe, and opened up their business to independent drivers.

Uber's growth has been even more dramatic than that of Airbnb. The company has raised investment money like no other, raising tens of billions of dollars in investment.

Our third example is less well known now, but it was often talked about as another archetype of the Sharing Economy. Here is how the company's web site described the founding story.

It was a cold night in Boston in February of 2008 when Leah Busque realized she was out of dog food for her 100-lb yellow lab, Kobe. Leah thought to herself,

² Airbnb, 'Fast Facts', *Airbnb Press Room*, 2018 <<https://press.airbnb.com/en-uk/fast-facts/>> [accessed 27 November 2018].

³ 'InterContinental Hotels Group', *Wikipedia*, 2018 <https://en.wikipedia.org/w/index.php?title=InterContinental_Hotels_Group&oldid=869295066> [accessed 27 November 2018].

“Wouldn’t it be nice if there was a place online I could go to connect with my neighbors—maybe one who was already at the store at that very moment—who could help me out?”

From this experience, TaskRabbit (formerly RUNmyERRAND), an online and mobile marketplace that connects neighbors to get things done, was born . . .

Neighbors helping neighbors—it’s an old school concept reimagined for today.⁴

One of the typical tasks that people helped with was assembling Ikea furniture. TaskRabbit had early successes and attracted a lot of attention, but in the end it did not become the kind of global company that Airbnb and Uber have become. Instead, after several years as an independent company, it sold itself to Ikea.

Most people’s problems don’t turn into multi-billion dollar companies. Timing --- whether by luck or by skill – was essential to their success. Here is a set of things that had been put in place in the few years before 2008, each of which was needed for Airbnb and Uber to take off:

- Broad-band internet. Many homes had computers, and many people were increasingly comfortable with the Internet as a part of their daily lives.
- Online payments. People were also getting used to using credit cards on the Internet to pay for their purchases at Amazon, eBay, Expedia and other early successes.
- Mobile computing. Beyond that, we were entering the era of the smartphone. The iPhone was released in 2007 and Uber, for one, could not have been invented before the iPhone.

⁴ Crunchbase, ‘TaskRabbit’, *CrunchBase* <<https://www.crunchbase.com/organization/taskrabbit>> [accessed 19 June 2015].

- Social media. In the early years, pseudonyms and anonymity were the norm on the Internet. As the famous cartoon caption went: “On the Internet, nobody knows you’re a dog”. But starting with Facebook in 2006, many people were getting used to the idea of using real names. TaskRabbit and Uber’s competitor Lyft both hooked into Facebook’s user identification system as a part of their business model, and Airbnb and others used Facebook accounts as proof of identity.
- Rating systems. The use of ratings, particularly for Netflix movies and Amazon books, but also through sites such as Yelp and Travelocity, had spread and the five-star rating that is now ubiquitous was becoming common.
- Cloud computing. Starting in 2006 Amazon started renting out computer usage from its own massive data centres at bargain prices, starting the era of cloud computing. This meant that new companies could start up without buying expensive hardware: they could use Amazon for their computing needs and get started much more cheaply.
- Crowdsourcing. The basic computing architecture of the Sharing Economy is the “platform” where the company itself runs the software, but those who provide the content come from outside. The success of Wikipedia showed this could be done, and eBay showed you could build a valuable company that way. YouTube was and continues to be a remarkable example of this crowdsourced structure.

Even though these were all present, the Sharing Economy brought with it the shock of the new --- pressing a button on your phone and seeing a car appear seemed like magic, and booking to stay in somebody’s house half way around the world opened up new possibilities for travel. The novelty of the experiences gave the new services an aura of cool, and many people immediately thought: this is the future.

2010 – 2015: Rise

Airbnb and Uber were not founded as Sharing Economy companies, because the name did not exist. In the years 2010 to 2012 a set of other companies were founded using a similar business model and commentators looked for names to describe this trend. “Collaborative economy”¹, “circular economy”,⁵ and “the mesh”⁶ were all put forward, but in the end the Sharing Economy won.

If there is a one-sentence description of the Sharing Economy, it may be *Internet platforms for real-world services*. The first few years of the century had seen internet platforms for retail (Amazon and eBay), for social media exchanges and advertising (Google and Facebook), and for media (Netflix, Apple, YouTube). Of particular interest were eBay and YouTube: crowdsourced platforms where the content seemed to appear by magic. The Sharing Economy takes this model, but instead of uploading videos the platform is used for people who provide real-world services.

How far can crowdsourced Internet platforms go? Can their economic benefits be applied to the service economy too? That’s what the Sharing Economy phenomenon asks us.

⁵ Ellen MacArthur Foundation, ‘What Is a Circular Economy? | Ellen MacArthur Foundation’, 2017 <<https://www.ellenmacarthurfoundation.org/circular-economy/concept>> [accessed 27 November 2018].

⁶ Lisa Gansky, *The Mesh: Why the Future of Business Is Sharing* (Portfolio / Penguin, 2010).

A 2017 report for the World Economic Forum gives a three-point definition.⁷ First is “The use of digital technologies to match buyers and sellers,” which is similar to the point above. But they add two other components. One is “Capitalizing on idle capacity”: the service providers are generally offering something they already own, but which they are not using right now. So the service providers are not employees of the platform owners, they are independent actors who are making use of their own assets. To go back to our three stories: perhaps they have a car, and can drive for Uber; perhaps they have some spare time and can run some errands for TaskRabbit; perhaps they have a spare room and can put it on Airbnb. The other additional point is “trust verification”, to which I’ll return.

With this framework, let’s look at some examples of companies that started up in those years of 2010 to 2012. This was the era when seemingly a million start-up plans were pitched as the “Uber for this” or the “Airbnb for that”. But I want to start with something that is the opposite. The Toronto Tool Library⁸ is a non-profit organization that lets people rent tools for home projects. The organization is geographically limited and community focused: it has no plans to drive major stores out of business or to become a global behemoth. But it matters to the story of the Sharing Economy because it draws on one of the early images that promoted the idea, which is the story of the power

⁷ World Economic Forum, ‘Collaboration in Cities: From Sharing to “Sharing Economy”’, *World Economic Forum*, 2017 <<https://www.weforum.org/whitepapers/collaboration-in-cities-from-sharing-to-sharing-economy/>> [accessed 27 November 2018].

⁸ Toronto Tool Library, ‘Toronto Tool Library – Access | Share | Innovate’ <<https://torontotoollibrary.com/>> [accessed 27 November 2018].

drill.⁹ Many of us have a hand drill that sits on a shelf and is hardly ever used and Rachel Botsman, who was one of the early promoters of the Sharing Economy and helped to articulate it as a new development, says: we don't really want a drill, what we want is the hole it makes. So why not share a drill instead of owning it? Sharing is sustainable, it helps us get off the consumerist track of ownership, weighed down by our goods. The drill was the embodiment of using "idle capacity". It has an appealing sustainability angle to it and also hints to a concept called "access over ownership": we don't have to buy in to the bourgeois and consumerist culture of ownership, we can tread more lightly on the earth by dipping in and out of these sharing arrangements instead. It was a catchy and attractive image.

In 2013 Airbnb was already taking off, and a natural extension of that idea was to share meals. Airbnb said "you don't need hotels, you just need a platform where you can connect with other people." Cookening, Feastly and other sites applied the same logic to restaurants. If you are travelling to a new city, why not eat like a local in their own house? Again, the appeal here is to authenticity, to personal connection rather than institutions and companies, and to the unusual combination of small and big that crowdsourcing requires: many small individual exchanges building a global platform.

Tools and meals are fairly low risk, banged thumbs and food poisoning aside, but finance is surely something different. Remember that we are talking about a period right after the financial crisis, when personal finances were stretched and banks were viewed with suspicion. So companies like Lending Club took a lead from charities such as Kiva, which focused on direct person-to-person donations, as well as from initiatives like the

⁹ Rachel Botsman, 'The Case for Collaborative Consumption (TED Talk)', 2010 <https://www.ted.com/talks/rachel_botsman_the_case_for_collaborative_consumption?language=en> [accessed 27 November 2018].

Grameen bank, which used social lending to pioneer the idea of microfinance, and whose founder Mohammed Yunus won the Nobel Peace Prize in 2006. The idea behind peer-to-peer lending was that individuals could lend to each other, combining social purpose and sound investment.

Here the question of trust is at its most severe. What happens if I take a loan from you and don't pay it back? How do you assess credit? The early players in this industry like Lending Club and Prosper were experimenting with a variety of approaches, and we'll see how that worked out later on.

And to finish, let's go back to household services like TaskRabbit. A lot of companies started in this area. One is Homejoy, which was Google's venture into housecleaning – an eyebrow-raising idea in itself. Another was Handy, which looked to broaden from cleaning to other services like plumbing and carpentry.

And there were lots of others. A short list would include DogVacay, which was often written about to show the quirky and personal aspect of the market. Instacart and Deliveroo highlighted the food delivery area, which is still going strong. BlaBlaCar is a French service for taking rides from city to city. ZipCar was important as one of the first carsharing companies, and it preceded most of the others here.

In 2013 to 2015 various lists of Sharing Economy companies were published, and they often had hundreds of examples. But for some analysts, this was just the beginning. PwC is one of the most consistently upbeat forecasting agencies around the Sharing Economy, and have forecast markets sizes well into the hundreds of billions of dollars in a few years time. It looks like the Sharing Economy is taking off.

With those specific examples in mind, let's take one more look at a definition.

First, we have the platform, and that's the Sharing Economy company. Perhaps it is Homejoy, or DogVacay, or Lending Club. It matches service providers to consumers. It doesn't take on providing the service itself, but it does handle payments, identity verification, and ratings. Rating systems were often called out as one of the main innovations of the Sharing Economy. *New York Times* columnist Thomas Friedman lauds "Airbnb's real innovation—a platform of 'trust'—where everyone could not only see everyone else's identity but also rate them as good, bad or indifferent hosts or guests. This meant everyone using the system would pretty quickly develop a relevant 'reputation' visible to everyone else in the system."¹⁰ Friedman was writing just a couple of weeks after his *New York Times* stablemate David Brooks described "*How Airbnb and Lyft Finally Got Americans to Trust Each Other*": "Companies like Airbnb establish trust through ratings mechanisms . . . People in the Airbnb economy don't have the option of trusting each other on the basis of institutional affiliations, so they do it on the basis of online signaling and peer evaluations."¹¹

On the consumer side we have seen that the Sharing Economy fits into and help to shape a trend of particularly young people as valuing experiences over ownership, and choosing access over ownership. Your books and music may already be on devices: why buy a car when you can take an Uber? Everything you need is on your phone or your computer.

¹⁰ Thomas L. Friedman, 'And Now for a Bit of Good News . . .', *The New York Times*, 19 July 2014 <<http://www.nytimes.com/2014/07/20/opinion/sunday/thomas-l-friedman-and-now-for-a-bit-of-good-news.html>> [accessed 29 June 2015].

¹¹ David Brooks, 'The Evolution of Trust', *The New York Times*, 30 June 2014 <<http://www.nytimes.com/2014/07/01/opinion/david-brooks-the-evolution-of-trust.html>> [accessed 29 June 2015].

And then there are the service providers, who are presented as partners rather than employees. The word that used early on was “micro-entrepreneurs”: not really companies, not really private individuals, but somewhere in between. And by making the most of their unused assets they were being green, building community, and making a little money.

Business models and strategy

Not all sharing economy business models are novel, or successful, but when it comes to strategy there are some distinctive features for this sector.

The appeal of platforms to investors lies in the idea of increasing returns to scale. There is a popular phrase that you may have seen. The biggest hotel company -- Airbnb -- owns no property. The biggest taxi company -- Uber -- owns no cars. This mimics the way that Facebook and YouTube own no content. Each is as big as the biggest company in their market. The value, it seems, is in the platform.

One of the benefits of this model is that if a company sees demand, it can grow very quickly and globally. Just as other Internet companies have spread around the world, so can Airbnb and Uber. If a hotel chain wants to add another 100 rooms it has to build a hotel, but for Airbnb it's just another row in a database. So on the supply side there are benefits here, sometimes labelled as a “zero marginal cost” business structure.

There are increasing returns on the demand side as well as on the supply side, and they go under the name network effects. Renters want to be where travellers are, and travellers want to be where renters are. So just like social media, every person who takes a trip on Airbnb, and every person who adds a listing, makes it more attractive for everyone else.

One of the things about increasing returns to scale is that it makes it difficult for new companies to enter the market: it favours a natural monopoly, or at least oligopoly. Facebook, Amazon, Netflix have few real competitors. And this industrial organization makes profits possible.

Zero marginal costs and network effects: put the two together and you can see why investors are enthusiastic. Can Airbnb and Uber do for services what Amazon has done for retail, what Wikipedia did for the encyclopedia, and Apple and Spotify have done for music? Is the market in these services a winner-take-all? The large scale of venture capital investment shows that a lot of people are prepared to bet that it is.

There is a real pressure among startups to grow quickly, and one of the strategies that gained prominence early was a piece of advice given to Airbnb by their early investor Y Combinator: do things that don't scale.¹²

When a company starts, it doesn't have the benefit of network effects so it can't rely on them. Instead it needs something different to set itself apart and get growth started. For Airbnb that was visiting hosts in its first significant market, and helping them present their listings in an attractive way on the site. Paying for a photographer was a big step forward: it made a big difference to those early listings and got the idea of homesharing started.

But of course in business everyone wants a winning formula, and applying it blindly is rarely successful. Another Sharing Economy company, Washio, set out to do the same

¹² Paul Graham, 'Do Things That Don't Scale' <<http://paulgraham.com/ds.html>> [accessed 27 November 2018].

as Airbnb but for laundry: the company was going to “demolish laundry”.¹³ They gave each customer cookies, and packaged the laundry with sleek black bags. But it turned out that the ideas of the Sharing Economy don’t really work for laundry. To start with the cost side: most of the cost is involved in actually doing the laundry and digital technology doesn’t help with that. On the demand side: just because other people are doing their laundry through Washio doesn’t make a big difference to me, so network effects were limited. And because of that, the strategy was just losing money on every sale. Washio ceased operations in 2016.

There is another aspect of business strategy that was central to the growth of the Sharing Economy. I’ve touched on it a couple of times. Many of these companies did not just see themselves as businesses, they were also a movement: brands with a purpose.

The companies fostered a community of so-called micro-entrepreneurs and leaned heavily on ideas of democratization. Instead of relying on faceless corporations we can now provide services to each other, in a “peer to peer” fashion. You don’t need a bank to get a loan, you don’t need a hotel to take a holiday, you don’t need a taxi to get across town, you just go to the Internet and click or tap. The idea appeals to those already invested in new technologies: the old rules don’t apply, we have a better way now. Airbnb CEO Brian Chesky said that most of the reasons for regulation in the

¹³ Jessica Pressler, “Let’s, Like, Demolish Laundry”, *New York Magazine*, 21 May 2014 <<https://nymag.com/news/features/laundry-apps-2014-5/>> [accessed 27 November 2018].

accommodation and transport spaces were consumer protection, and reputation systems could carry out that task better than cities.¹⁴

So the Sharing Economy shared a moment with the growth of Wikipedia, with the Arab Spring uprisings in 2011 and the idea of Facebook revolutions and social media as a democratizing force in politics. The internet was no longer this place you went to when you sat at a desk, it was moving into the real world, and taking its values with it.

But from the beginning there were tensions built into the Sharing Economy, and the name captures the problem. Is this about a community or a business?

On the one hand it's about sharing: it's social, it's community-focused, and personal. On the other hand, it's an economy: it's about market transactions and prices, where scale is the key to profit and perhaps to monopoly rents.

The tensions were captured in an organization set up in 2013 called Peers. It called itself a grassroots movement set up to clear out old-fashioned regulations and clear a path for the new sharing economy companies. But it was founded by Airbnb, whose goal was to make money.

In the same way, the companies were touted as democratizing, but were set up with the goal of making money for investors, including some of the richest people on the planet.

¹⁴ Brian Chesky, 'Interviewed by Sara Lacy, Reported in Skift', *Skift*, 11 January 2013 <<http://skift.com/2013/01/11/airbnb-responds-to-illegal-rentals-story-first-of-all-its-not-illegal-everywhere/>>.

It's an attitude that has been called the Californian Ideology,¹⁵ which is that you can have both. You can be rebellious, anti-establishment, and against hierarchy; but you can also make a big pile of money while doing it. You can be ethical, and live a life of purpose, and you can be rich beyond your wildest dreams.

But some early examples showed that you cannot have everything, and when it comes to choosing between community and profit, commercial enterprises will choose profit.

Fall?

I hope that gives an idea of the ideas behind the Sharing Economy. It's been ten years now, and there has been a perhaps-inevitable shakeout.

For many of the "Uber for X" companies, like Washio, the promise of new efficiencies has proved hard to achieve. The unpleasant surprise was perhaps told best by Sarah Kessler, who went back to look at the story of the drill.¹⁶ She showed that many of those companies who were looking to follow the Sharing Economy template were not growing fast. Going across town to get a drill from someone you don't know when you can buy one for \$50 was too much of a problem.

We have already seen that Washio went bust because its business model did not reflect reality. Laundry, it turns out, is laundry. In the same way, the cleaning company Homejoy was set up with \$30 million from Google Ventures, but any efficiency it gained came at

¹⁵ Richard Barbrook and Andy Cameron, 'The Californian Ideology', *Mute*, August 1995 <<http://www.imaginaryfutures.net/2007/04/17/the-californian-ideology-2/>> [accessed 3 July 2015].

¹⁶ Sarah Kessler, 'The "Sharing Economy" Is Dead, And We Killed It', *Fast Company*, 14 September 2015 <<https://www.fastcompany.com/3050775/the-sharing-economy-is-dead-and-we-killed-it>> [accessed 27 November 2018].

the cost of its cleaners, who were reported in one revealing article as living under bridges.¹⁷ The cost of cleaning is what you pay the cleaners. The Internet only helps with that if you can push costs, like the time to travel, onto the cleaners. And obviously they did not want to bear that cost, so Homejoy had a hard time keeping staff.

Adding to the problem is that once a homeowner has found a good cleaner, they probably want the same one again, so the matching problem is not a huge benefit, and if the cleaner is really a micro-entrepreneur, then the homeowner can just make a deal with them directly and cut out Homejoy's portion of the cost. Homejoy went out of business a few years to.

Other companies had to carry out what technology companies call a "pivot": change their business model to something different. TaskRabbit has sold itself to Ikea, and Instacart has partnered with grocery chains, so both are now a source of cheap labour for orthodox businesses rather than a peer-to-peer alternative. Perhaps the biggest pivot was in the "peer-to-peer lending" market. The companies struggled with high rates of default, and ended up changing the name to what they call "marketplace lending". Most of the loans for these companies now come from regular financial institutions, rather than individuals. The role of the platforms has changed to be that of an automated loan officer: algorithmically assessing the credit-worthiness of applicants, and supplying those assessments to the financial institutions who can decide whether or not to make the loan.

¹⁷ Kevin Roose, 'Does Silicon Valley Have a Contract-Worker Problem?', *New York Magazine*, 2014 <<http://nymag.com/daily/intelligencer/2014/09/silicon-valleys-contract-worker-problem.html>> [accessed 19 June 2015].

What does this tell us? For many companies, the Internet has not been the game changer they thought. For others, the Internet has worked, but they have had to move from the Sharing Economy model. And that leaves us focusing again on the survivors.

2018: Full circle?

In 2018 it seems like we are nearly back to where we started: left with two successful industries—ridesharing and short-term rentals. There is Airbnb and there is Uber.

But while the overall phenomenon of the Sharing Economy may be fading, these two are still growing rapidly. A look at their success is still valuable because of their size and impact, and also because some of the aspects of their business is a first look at the next wave of innovation, in which the service providers themselves are algorithms instead of people. The world of autonomous vehicles and AI services will be platform-based businesses that face many of the same challenges as the Sharing Economy.

It seems like Airbnb and Uber are two cases where the Sharing Economy model worked: zero marginal costs and network effects combining to give runaway success. But for Uber at least, it may be too early to say that.

Uber is often described as a company like Amazon, or Google, or Apple: one that has changed the nature of the world in which we live. It is easy to forget that Uber is still not a profitable company, and as financial quarter after quarter goes by with large losses

(over \$1 Billion in 2018 Q3 ¹⁸), it is becoming increasingly doubtful whether its business model is sustainable. ¹⁹

Uber's challenge is to keep both drivers and riders happy. If it raises prices it loses riders and if it keeps them low then driver retention becomes a challenge. Much of the early enthusiasm for the company assumed that this balancing act was solvable because of the huge efficiency increases that Uber was bringing to the industry, helping riders and drivers find each other and eliminating idle time for drivers. The enthusiasm peaked with a 2014 report in the Washington Post suggesting that some Uber drivers were earning \$90,000 a year, ²⁰ but that story quickly vanished and now the stories are far more often about drivers earning less than minimum wage, or facing financial difficulties because they are unable to keep up payments on a leased car. ²¹

¹⁸ Paayal Zaveri and Deirdre Bosa, 'Uber Earnings Q3 2018 (Self-Reported)', *CNBC*, 2018 <<https://www.cnbc.com/2018/11/14/uber-earnings-q3-2018-self-reported.html>> [accessed 27 November 2018].

¹⁹ Hubert Horan, *Will the Growth of Uber Increase Economic Welfare?* (Rochester, NY: Social Science Research Network, 14 September 2017) <<https://papers.ssrn.com/abstract=2933177>> [accessed 20 September 2018].

²⁰ Matt McFarland, 'Uber's Remarkable Growth Could End the Era of Poorly Paid Cab Drivers', *The Washington Post*, 27 May 2014 <<http://www.washingtonpost.com/blogs/innovations/wp/2014/05/27/ubers-remarkable-growth-could-end-the-era-of-poorly-paid-cab-drivers/>> [accessed 23 May 2015].

²¹ Caroline O'Donovan and Jeremy Singer-Vine, 'How Much Uber Drivers Actually Make Per Hour', *Buzzfeed News*, 22 June 2016 <<https://www.buzzfeednews.com/article/carolineodonovan/internal-uber-driver-pay-numbers>> [accessed 27 November 2018].

So far Uber has solved its problem by throwing money at it. Uber subsidises rides by providing enticements to the drivers, burning through billions of dollars of capital while looking with increasing desperation for a profitable business model.

Recent reports from New York City suggest that Uber and Lyft cars are empty for at least as much of the time as the traditional “yellow cabs”.²² This is not the case everywhere, but it suggests that efficiency in its current market is not likely to drive profitability. Maybe squeezing more out of drivers will be a way to do it? Uber is investing in dynamic pricing, driver incentives, and a myriad of other techniques for taking more out of every rider’s dollar²³, but we should not be too quick to assume they will succeed. It remains possible that Uber is a blip.

Meanwhile, Airbnb is profitable, but that is a low bar to reach for a company valued at \$31 Billion, whose repeated attempts to break into “whole trip” planning and business travel have been unsuccessful.

Still, both these companies have shown that rapid and global growth is possible. They have done so at the cost of continual controversy in cities around the world where they have become popular. There are many different controversies, but many have a common origin. We highlighted the need for Sharing Economy companies to have a “zero marginal cost” model, but that model relies on the company itself not having

²² Bruce Schaller, *The New Automobility: Lyft, Uber and the Future of American Cities*, 25 July 2018 <<http://www.schallerconsult.com/rideservices/automobility.htm>> [accessed 20 September 2018].

²³ Alex Rosenblat, *Uberland: How Algorithms Are Rewriting the Rules of Work* (University of California Press, 2018) <<https://www.ucpress.edu/book/9780520298576/uberland>> [accessed 27 November 2018].

significant new expenses for each service provider or each transaction. And it has become clear that “zero marginal cost” is not a feature of the technology alone, it also depends on the laws that govern the company’s actions.

Sharing Economy companies present themselves in their terms and conditions as a marketplace. Uber’s user agreement, for example, says “Your ability to obtain transportation... through the use of The Services does not establish Uber as a provider of transportation, logistics or delivery services or as a transportation carrier”. The assertion is that the exchange itself, and anything that may go wrong with it, is between the consumer and the service provider, not the consumer and Uber. Other sharing economy companies present themselves in the same way. Financially, this gets them off the hook for liability and other problems, and they have relied on a particular American law to sustain this position. Section 230 of the “Communications Decency Act” includes this phrase:

No provider... of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content provider.

These sentences were written with web sites like YouTube in mind. The hosting platform itself was protected from liability for the actions of the users on the site. If someone uploads illegal videos to YouTube, YouTube is at least partially protected from responsibility.

Whether Section 230 to the Sharing Economy is still in dispute. The European Court of Justice recently ruled that Uber may not qualify for this kind of protection:

The service provided by Uber is more than an intermediation service... The ride-booking company must be classified as 'a service in the field of transport.'²⁴

In 2016 a London tribunal judge was even more direct:

The notion that Uber in London is a mosaic of 30,000 small businesses linked by a common 'platform' is to our minds faintly ridiculous.²⁵

The end result will not be a simple outcome, as it depends on laws in different jurisdictions and will vary from company to company. But the impacts are huge: all kinds of disputes surrounding these companies focus on their responsibility for some aspects of their business that they are trying to avoid. Here is a brief list:

- Are Uber drivers employees? Their flexibility suggests not, but that is not the only criterion for employment: many jurisdictions also weigh independence while on the job as a criterion, and Uber drivers do not set their own prices, do not get to select riders, and have many small controls over how they do their job. Many would say that full-time Uber drivers, which is a large part of the overall business, should qualify for many of the benefits that employees get. This would add significantly to Uber's costs, and present them with even more financial problems.²⁶

²⁴ Mark Scott, 'Uber Is a Transportation Company, Europe's Highest Court Rules', *Politico*, 2017 <<https://www.politico.eu/article/uber-ecj-ruling/>> [accessed 27 November 2018].

²⁵ Arjun Kharpal, 'Uber UK Employment Tribunal on Drivers' Rights: All You Need to Know', *CNBC*, 2017 <<https://www.cnbc.com/2017/09/27/uber-uk-employment-tribunal-drivers-rights-all-you-need-to-know.html>> [accessed 27 November 2018].

²⁶ Jeremias Prassl, *Humans as a Service: The Promise and Perils of Work in the Gig Economy* (Oxford University Press, 2018)

- In the same way, Airbnb maintains that it is not responsible if its hosts break the law or break their tenancy agreements in offering their space for rent, but the company also makes it very difficult for cities to go after hosts because Airbnb does not, in general, share host information with the cities where it operates.²⁷ Again, the outcome of this dispute will have a real effect on Airbnb's cost structure.
- While Brian Chesky was confident that his rating systems could solve consumer protection problems, it has turned out that there are many that ratings cannot address.²⁸ Whether it is providing a usable complaint system, ensuring vehicle safety, ensuring the safety of Airbnb apartments, so far the Sharing Economy companies have avoided many of the costs that other providers of commercial services have to undertake. To the extent that they have to take on the cost of things going wrong for consumers, the zero-marginal cost model will vanish.
- As all the transactions on the platform go through the Internet, both companies have set up shell structures so that they are routed through subsidiaries in tax-

<<https://global.oup.com/academic/product/humans-as-a-service-9780198797012?cc=gb&lang=en>> [accessed 27 November 2018].

²⁷ Benjamin G. Edelman and Abbey Stemler, *From the Digital to the Physical: Federal Limitations on Regulating Online Marketplaces* (Rochester, NY: Social Science Research Network, 31 January 2018) <<https://papers.ssrn.com/abstract=3106383>> [accessed 27 November 2018].

²⁸ Abbey Stemler, *Feedback Loop Failure: Implications for the Self-Regulation of the Sharing Economy* (Rochester, NY: Social Science Research Network, 1 April 2016) <<https://papers.ssrn.com/abstract=2754768>> [accessed 27 November 2018].

friendly jurisdictions.²⁹ By not paying into the tax base of the cities where they operate, the companies are essentially parasitic on cities.

- There are also many aspects of running cities that governments care about, from road congestion to housing affordability, where there have been continual disputes about the responsibility of the platform companies. Airbnb has long promoted a vision of openness and authenticity, promising that you could “live like a local”, but in some of their biggest markets the locals have not been so happy about it: Paris neighbourhoods have been losing population, Barcelona has said “bring refugees, keep out tourists”. Managing tourism effectively is a matter of balance, and cities are becoming increasingly assertive in their dealings with Airbnb.

The lesson from all these disputes is that the business model of new technology companies is not dictated solely by the technology itself, it also reflects the responsibilities we expect companies – particularly large global companies – to accept in order to operate.

It has been interesting to watch cities become more assertive over time. When Airbnb and Uber appeared on the scene full of brash promises, they were intimidated by the challenge to get on board with the future or be left behind, especially when the platforms could mobilize thousands of happy customers and service providers to lobby on their behalf. But now cities are realizing that some problems are shared, and that they have choices beyond “take it or leave it”. Major tourist cities are now regularly talking to each other about their successes and failures when dealing with Airbnb, for

²⁹ Brian O’Keefe and Marty Jones, ‘How Uber Plays the Tax Shell Game’, *Fortune*, 22 October 2015 <<http://fortune.com/2015/10/22/uber-tax-shell/>> [accessed 29 November 2015].

example, and out of this is growing a new set of rules that balance the interests of tourists with those of the citizens in the places they visit.

If the “zero marginal cost” model is shaped by laws as much as by technology, it raises the question of who builds the future? The debates around the Sharing Economy mirror earlier debates that have grown around technological innovation, from the industrial revolution on. Changes are one part technological, and one part social, and getting the social arrangements right is just as important for a healthy future as getting the technology right. Those in the 19th century who fought for child labour protections or the forty hour working week or the vote were just as much a part of building the future as the new industrialists and inventors.

It’s the same today. Technology will be a part of the changes that shape the lives of our children, but so too will the legal and social changes that surround them. So an understanding of history, of economics, of society and what a good society needs is just as important as developing a new twist on an artificial intelligence algorithm when it comes to shaping the future. Educators in particular play an important role in ensuring the next generation has the critical faculties and understanding of society that is going to be needed to ensure they have a healthy planet and a healthy relationship with our computational future.

The future of transport and travel is not being made only by the technology companies, it is being made in city government offices around the world. It will be made not just by today’s computer science students, but by our economics students and business students as well.