Disruptive Innovation: Risk-Shifting and Precarity in the Age of Uber

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Introduction

Over the past 30 years, economic restructuring and advancements in technological innovation have allowed for the emergence of new business models that disrupt many long-standing industries. Much of the industry disruption that we see today stems from tech companies and startups that have developed a better cost-model by utilizing smart phone-enabled apps to offer simpler and less expensive products and services than those offered by competing incumbents. Uber Technologies Inc., an on-demand ridesharing service that connects passengers to local drivers in real time using smartphone technology, is one of the most disruptive, successful tech start-ups yet. Uber’s success, which can be attributed to a low fixed-cost model that provides ride-seekers a faster and more reliable alternative to the traditional taxi and promises drivers a higher hourly earning through the avoidance of costly regulations, has severely disrupted the taxi service industry. In cities around the world, taxi companies are losing their customers and their drivers to Uber and similar “transportation network companies” (TNCs), such as Lyft, Sidecar, and Hailo.

While many Silicon Valley entrepreneurs are quick to praise the success derived from such “disruptive innovation” (Gil, 2014), it is important to critically analyze the underlying conditions that allow for Uber’s unprecedented success, and what this success means for all actors involved. A simple review of Uber’s business model reveals that much of the success Uber has generated so quickly relies on three key conditions: 1) its ability to classify itself as a “technology company” instead of a transportation company, exempting Uber from expensive taxi laws and regulations, 2) the ability to classify their drivers as independent contractors instead of employees, which allows Uber to evade the costly protections and benefits guaranteed to workers in a standard employer-employee relationship, and 3) a depressed labor market in which workers
are willing to assume the burden of risks and costs associated with driving for the company. By nesting themselves in a “legal void” protected from industry regulation and employer responsibilities, Uber and other TNCs have dismantled taxi monopolies, shifted risks and costs onto workers, and capitalized on the precarious employment arrangements that characterize work in the 21st century and contribute to the degradation of America’s social safety net.

In this paper I attempt to understand what accounts for and who is affected by Uber’s industry disruption and success through an analysis of the company’s business strategies of regulatory avoidance, risk-shifting, and precarious work arrangements, ultimately tracing these strategies back to the ideological changes, economic restructuring, and technological innovations that began the mid-1970s.

The Rise of Uber

In cities around the world, getting a taxi is complex and often unreliable. Uber has transformed that experience by using app-based, smartphone technology to link riders with community drivers. From the Uber app on their smartphones, passengers request a ride from a private passenger car typically driven by a non-commercially licensed driver. The mobile app communicates the passenger’s location to drivers using GPS technology, during which time the customer can see where the driver is in real-time in relation to the pick-up location. The customer also is sent a picture of the driver and the driver’s car, making it easy for the passenger to safely identify the vehicle upon its arrival. Once the ride has begun, the passenger is charged a distance-variable fare, which is automatically charged to the passenger’s credit card on file. (Quirk, 2014)

This innovate business model has been incredibly successful for Uber. Since the company’s founding in 2009, Uber has experienced nearly vertical growth. As of December
2014, Uber is valued at $40 billion, a valuation that is double what it was six months prior, and, according to some estimates, is appreciating by $19,839 per minute (Gongloff 2014). According to the company, it is doubling revenue every six months (Guidero, 2014). The New York Times reports that if Uber were to take just half of the taxi market, it would generate more than $1 billion a year (Sorkin, 2014). Moreover, Fortune magazine reports that the company was recently authorized to sell up to $1.8 billion in stock (Primack 2014). As far as geospatial success, Uber currently operates in 51 countries and more than 254 cities, and the company claims its services are available to nearly 64% of the U.S. population (Uber Technologies Inc., 2014). As of November 2014, Uber is growing at a rate of one new city per day (Huet, 2014). In terms of its drivers network, Uber’s co-founder and CEO Travis Kalanick claims that Uber is adding upwards of 30,000 new drivers per month (Cushing, 2014); although the company will not reveal the exact number of drivers actively working for Uber, one can safely estimate it to be in the hundreds of thousands.

Despite Uber’s rapid and unprecedented success, many people are skeptical of the company’s staggering valuation of $40 billion: How could the taxi industry, which represents just $11 billion in annual revenue for US, possibly accommodate such a strikingly high valuation? According to Maxwell Wessel of the Harvard Business Review, while Uber’s valuation may be massive relative to the market it plays in, investors are more concerned with how big the service could become in the scope of global transportation. Uber has made a historically expensive and inaccessible service cheaper and more accessible, which makes it possible for consumers to consume more. According to Wessel, in order for a new entrant in a market to be truly disruptive, it must do more than just steal shares from industry incumbents—it must dramatically grow the market for its goods and services.
The effects of Uber on the taxi industry are already playing out in significant ways. The city of San Francisco is a case example of how Uber and its competitors have disrupted, if not usurped, the taxi service industry. For example, the San Francisco Cab Drivers Association reported that in 2013 one-third of the 8,500 or so taxi drivers in San Francisco left their job driving for a registered cab company, instead opting to drive for a private transportation startup like Uber (Essif, 2014). Likewise, the San Francisco Municipal Transportation Agency released a report indicating that, as of July 2014, the average taxi in San Francisco is only making about 504 trips per month, whereas, in March 2012, the average taxi driver was making 1,424 trips per month (Hara Associate Inc., 2014). Kate Toran, the Taxis and Accessible Services director for SFMTA, says that this 65-percent drop in taxi trips can be linked to the rapid emergence of TNCs in the taxicab industry. This is not surprising—uberX rates are now 45% cheaper than taxicab rates in San Francisco (Constine, 2014).

Moreover, Ross Hyman, a researcher from the American Federation of Labor and Congress of Industrial Organizations, says that taxi cab drivers have reported a 30 to 50 percent income reduction since 2013 (Kwong, 2014). Donna Blythe-Shaw, a representative for the United Steelworkers and the Boston Taxi Drivers Association, also estimates that business for cab drivers is down about 35 to 40 percent (Powers, 2014). While there is no positive way of knowing that the emergence of Uber has directly caused these trends, it is certain that Uber and its competitors are rapidly acquiring large portions of the market for taxi services. As of December 2013, Uber was doing more than 100,000 trips per week in each of its largest cities, where it has hundreds of thousands of active users. For example, San Francisco had about 70,000 active users per week in December 2013, with several thousand active drivers (Shontell, 2014). Ehsan Ghoreshi, a Chicago taxi driver, explains how Uber’s emergence into the market has
impacted his own personal business: “As of now, I make tangibly less money working weekends than in the past. When I’m waiting in front of bars…people are just standing there waiting for private cars. I’m right there, and they’re staring at their phones” (Stuart, 2014).

**Technological Innovation**

Much of the reason why Uber has been so threatening to the traditional taxi industry lies in its efficient and innovative utilization of modern technology. In an increasingly competitive marketplace, firms are challenged to develop strategically flexible organizations (Townsend, DeMarie, & Hendrickson, 1998 p. 18). Companies like Uber are successfully overcoming this challenge by utilizing the tools of a new generation of information and telecommunications technology to outcompete industry incumbents. By harnessing these new technologies, Uber offers consumers a superior product, leverages detailed information on demand patterns, and can respond to customer needs with increased expediency. Moreover, internet-enabled technologies such as the ones utilized by Uber have allowed for the emergence of “distributed labor technologies” that enable new forms of contract labor, reduce risk for companies, and increase their control and flexibility over nearly all aspects of business operations (Kneese et al 2014).

For example, Uber uses advanced information technology to adjust its fares in real-time based on fluctuations in demand. The company uses a “dynamic pricing model” that employs “surge pricing” during high-demand times, such as on weekends, holidays, and late at night. The company analyzes block-by-block demand so it can dispatch an appropriate number of cars. It also deploys very flexible peak pricing, ranging from 1.5 to 7x regular prices (Quirk, 2014). Using this technology to gauge high-demand times and areas and adjust its fares accordingly, Uber achieves what Stephen Wood (1989) calls ‘pay flexibility’—a term referring to “a firm’s ability to adjust labor costs, particularly pay, to changing market conditions.” This feature allows
the company to out-compete the traditional taxi business, whose fares are capped and driver-supply is often stifled by conditions outside of their control, such as drivers’ inclination to work and supply restrictions such as the medallion system, which puts limits the number of taxis allowed in a single city (Schaller, 207, p. 496).

Additionally, Uber uses a bidirectional rating system to regulate the market and flush out bad drivers. After a trip is completed, the passenger and the driver rate each other out of five stars. Drivers who average a rating below 4.7 stars are automatically “deactivated” and banned from driving for Uber. This feature ensures quality control by giving the company the flexibility to “fire” unsatisfactory drivers and regulate the market. This system also increases transparency and accountability, incentivizing both drivers and customers to act appropriately or risk being shut out of the app, which in turn makes the entire market more efficient and reliable.

**Preconditions for Success**

It goes without saying that without smartphone and GPS information technology, Uber would not exist. But, its important to understand that technology alone does not account for the emergence of Uber into the vehicle-for-hire market. There are three major preconditions outside the realm of technology that fundamentally underlie and enable Uber’s success: 1) regulatory inter-inconsistency that puts Uber in a legal void and exempt the company from regulations, 2) its ability to classify its drivers as independent contractors, and 3) a depressed labor market in which workers are willing to assume large amounts of risks and cost burdens. Without these external conditions made possible by legal institutions and current economic trends, Uber and similar companies would lack the flexibility and supply of labor and that are fundamental to its competitively low prices and subsequent industry disruption. These three preconditions, each detailed in the following sections, are what allow the company to increase its flexibility and
profit margins while simultaneously distancing itself from liability and shifting risks and costs onto its drivers. They embody the macro structural changes of the mid-1970s, that “were accompanied by a decline in protections for workers through labor market institutions, such as unions, minimum wages laws, and protective legislation,” which Arne Kalleberg (2000) describes as the shift from the ‘age of security’ to the ‘age of flexibility.’ Consequently, the balance of power shifted to employers, who were able to restructure employment systems to achieve greater flexibility for themselves (Kalleberg, 2000, 343).

**I. Legal Void**

Uber tries to master the art of flexibility by circumventing the costly taxi regulations that would constrict control over many aspects of the company’s business operations, such as pricing and labor supply controls. Uber can accomplish this by classifying itself as “technology company,” instead of a taxi business. Instead of owning a fleet of cabs and hiring an army of cab drivers as employees or leasing out to independent contractors as a taxi business would, Uber plays the role of the ‘digital matchmaker’ by providing a free market-platform for drivers and ride-seeking customers to connect, and taking a slice of the fare for providing the service (usually about 20-27%) (Damodaran, 2014). Since the rise of Uber, dozens of copycat startups have adopted this model of “evasive entrepreneurship,” which is aimed at circumventing existing institutional framework (Elert & Henrekson, 2014, p. 5). Jaron Lanier, author of *Who Owns the Future?* explains the appeal this “evasive entrepreneurial” model has to investors and why it has proliferated throughout the Silicon Valley:

The perfect investment presides at an arm’s length from real events in the world, so that it barely takes on liability. It ideally doesn’t do or make anything. The plan is simply to
channel the information of those who do act in the world. It is the actors who take risks, not the perfect investment. (2013, p. 59)

This distinction between “tech company” and taxi business is incredibly important to Uber because it is what allows them to operate in a sort of “legal void” in which they provide all the services of a taxi but are exempt from the extensive and costly taxi regulations that have insulated the industry from competition since the mid-1930s (Schaller, 2007).

Taxicabs are among the most extensively regulated transportations modes. The Federal Trade Commission identifies five areas of regulation: entry restrictions; minimum and maximum fare controls; restrictions on the types of services offered, such as ride sharing; requirements to provide certain amounts of service; and quality regulations, which concern vehicle safety, driver qualifications, and liability insurance coverage. For example, entry control, which is at the core of taxi regulatory systems (Schaller, 2007), has been strictly imposed in many major cities across the country such as New York, Chicago, and Boston. These cities operate under the medallion system, which sets strict numerical limits so that taxi licenses can be obtained only through transfers from an existing license holder, often for a substantial payment (Schaller, 2007, p. 490). This regulatory system has put a limit on supply and allowed taxi monopolies to take large shares of the market (p. 497). These taxi monopolies are determined to keep Uber out because, according to Cervero (1985), “a competitive marketplace would force operators to restructure their services and price them more rationally” (p. 221).

While existing in this legal void has led to major payoffs for Uber, it has enraged the taxi industry, cab drivers and unions, city and state regulators, and Uber drivers themselves who feel unprotected and easily exploited. The company faces many legal threats from taxi lobbyists, cab
drivers’ unions, and local and state governments who want to shut Uber down, claiming that Uber acts as an illegal taxi service and is operating outside the boundaries of traditional taxi laws (Essif, 2014). Since its inception, the company has had dozens of lawsuits brought against it in cities all over the world, and is facing a new legal battle every week. For example, on December 9, 2014, Los Angeles and San Francisco district attorneys filed a consumer protection lawsuit against Uber, claiming that the “company misleads consumers about the service’s safety, overcharges them and thumbs its nose at the law” (Lien & Mitchell 2014). Moreover, Uber has been banned altogether in Germany, the Philippines, Spain, and Thailand.

In defense of ridesharing, the company and its proponents argue that Uber has stepped into the vacuum of the taxi service industry that, guarded by entry controls and sheltered from competition, has been unresponsive to consumer demands and unwilling to innovate. One proponent, Naval Ravikant, an early investor of Uber, says, “Uber is going to have a bigger impact [on the industry] than almost anyone realizes…it’s almost the perfect tech company, insofar as it allocates resources in the physical world and corrects some real inefficiencies” (qtd. in Cushing 2014). The inefficiencies Ravikant points to are the outdated business models, archaic regulatory structures, and entrenched business interests that have insulated the taxicab industry from competition and capitalistic innovation over the past 75 years. In debates over the legality of Uber, proponents have often point to this obsolete, “wasteful mass of ancient taxi regulations” (Sununu 2014) as evidence of the need for regulatory reforms that would accommodate on-demand ridesharing services and promote healthy competition and innovation.

To many, Uber is the poster-child for free market, anti-regulation ideology. Today’s proponents of the free market argue that, in a digitally connected age, public carriage laws are unnecessary because the market will drive out bad actors. In the case of Uber, its online,
bidirectional rating system expedites this process and exemplifies the modern free market. In fact, the Republican National Committee released an online petition commending Uber for its “entrepreneurial spirit” and warning supporters against “taxi unions and liberal government bureaucrats setting up roadblocks, issuing strangling regulations and implementing unnecessary red tape to block Uber from doing business in their cities” (GOP). This rhetoric is indicative of the neoliberal principles that originated in the mid-1970s alongside trends of economic restructuring and technological innovation. As Arne Kalleberg outlines in his book, the forces of economic restructuring and technological change during this time “weakened unions and the collective power of workers while strengthening the control of employers, who consequently had relatively free rein to restructure employment relations” (2000, p. 21).

II. Independent Contracting

But perhaps the most neoliberal feature of Uber’s business model is its classification of drivers as “independent contractors.” Over the past 30 years, industries across the spectrum have shifted away from standard employment and are moving toward more flexible work arrangements in order to compete in the “new economy” (Kalleberg, 2000). Global economic changes and restructuring beginning in the mid-1970s, such as the rise of the service sector and deregulation of the market, “increased competition and uncertainty among firms and put greater pressure on them to push for greater profits and to be more flexible in contracting with the employees and responding to consumers” (Kalleberg, 2000, p. 342). During this time, many firms and employers moved toward flexible employment arrangements, such as independent contracting, and away from standard, permanent employment (Hill, 1998, p. 681). Subsequently, between 1982 and 1992 U.S. employment in the contingent sector increased 250 percent, compared to a 20 percent increase in overall employment (Morrow, 1993). Jost (2011) contends
that this shift to independent contractor status in many cases consists, at the most basic level, of allowing workers to pay for the opportunity to work rather than paying them wages (p. 314).

Along the lines of operating in a “legal void,” Uber and similar companies classify their drivers as “independent contractors” rather than employees, which exempts them from having to provide their workers the protections and benefits associated with a standard employment arrangement (Benner, 2014). Concerning a worker’s legal rights and protections, the difference between employees and independent contractors in American labor and employment law is monumental (Jost, 2011 p. 313). Independent contractors are excluded from numerous statutes that exist to protect workers, including workers’ compensation laws, the Fair Labor Standards Act, Internal Revenue Code, the National Labor Relations Act, and the Civil Rights Act of 1964, among others (Rubinstein, 2006, p. 159). For Uber executives, this means large gains in profit margins facilitated by low labor costs (Nayar and Willinger, 2007). But for Uber drivers, this means (a) bearing responsibility for the cost of gas and maintenance, (b) working for an unstable, precarious income without benefits, protections, or bargaining power, and (c) assuming personal liability for the fees associated with automotive accidents, insurance fraud, arrests and/or tickets for operating without a proper permit, and vehicle impoundment.

A. The Cost of Gas & Maintenance: As independent contractors, Uber drivers must cover all of their own expenses, including gas and maintenance. Naturally, working full-time as a driver can rapidly put wear-and-tear on a vehicle and amount to significant costs in maintenance and depreciation. The IRS estimates that the cost of gas and repairs for the average vehicle amounts to 56¢ per mile. However, with variations between cars and gas prices, there is no one-way to calculate what this cost amounts to for drivers, and Uber drivers often have different methods of calculation. Jesus Garay, a full-time UberX driver in New York City, broke down his profit
margin calculations to Slate journalist Alison Griswold in her recent article on Uber driver salaries. According to Garay, he made $1,163.30 in fares for 40 hours of work in one week, but was ultimately left with about $480 after factoring in Uber’s 20% commission fee and the cost of gas, car cleanings, insurance, maintenance, and parking costs, which totals to about $350. In a standard employment arrangement, these are costs that the employer would cover, not the employee. For example, employed taxi drivers (some taxi companies also classify their drivers as independent contractors) do not have to pay for gas or maintenance, as the taxi company covers this cost.

B. Instability & Income Uncertainty: Although Uber executives call drivers their “partners” and often liken them to “micro-entrepreneurs,” Uber drivers have no real control over pricing, which the company can lower at any moment. Therefore, a defining characteristic of working for Uber is facing vulnerabilities in terms of maintaining a stable income. While union taxi drivers have the power to negotiate fares and rates (Cervero, 1985), as independent contractors, Uber drivers are vulnerable to steep price reductions in fares at the hands of Uber executives, who, knowingly or not, are cutting into their drivers’ incomes. In fact, since faced with new competition, Uber has involved itself in a “race to the bottom,” dramatically cutting its rates every few months. For example, In May 2013 in Los Angeles, Uber charged UberX customers a far of $2.75 per mile, plus an additional 60¢ per minute under eleven mph, allowing full-time drivers to make between $15 and $20 per hour (Asher-Schapiro, 2014). Since then, Uber has cut fares nearly in half: customers are now charged $1.10 per mile, plus an additional 21¢ per minute—a fare that often times does not allow drivers to make even minimum wage. One of the more recent Uber scandals that ignited protests from drivers across the country arose when UberBLACK drivers were forced by the company to accept uberX fares, which are significantly lower. But again, because
these drivers are independent contractors, the company is technically operating within the law and can adjust its fares without discretion for its workers.

Moreover, Uber drivers face vulnerabilities insofar as their accounts can be “deactivated” upon receiving a rating below 4.7 from customers, justifiably or otherwise. The thought of suddenly being shut out of the application troubles many drivers who have personally invested their time and resources into the job. As independent contractors, Uber drivers are not protected by anti-discrimination laws and could effectively be “fired” for reasons related to race, gender, ethnicity, or religion.

**C. Liabilities & The Law:** By and far, the biggest risk workers assume when driving for Uber is accident liability. While UberBLACK and UberSUV are covered by a commercial insurance policy, UberX drivers, using their personal, non-commercial vehicles, are only covered by their personal insurance. While the company does provide $1 million of commercial insurance per incident, this only covers drivers’ liability when a customer is physically in the car. In other words, if a driver causes an accident while en-route to a customer, she cannot access the company’s $1 million coverage and must use her own personal insurance policy, which, depending on the severity of the accident, may or may not extend far enough to cover the claim. What’s worse, if her insurance company discovers that she was driving for Uber at the time of the accident, it will deny the claim and cancel her insurance policy altogether because she was using the vehicle for commercial purposes without paying the premium for commercial insurance (Brooks, 2014). The risk is even larger when considering the legal costs of an accident in which someone is seriously or fatally injured, which could involve millions of dollars in claims (Wood, 2014). As such, Uber drivers run the risk of losing everything—their bank accounts, homes, personal assets—raising the question: Why would anyone drive for Uber?
III. Economic and Social Conditions

As Kevin Roose (2014) argues in *New York Magazine*, a huge precondition for the rise of on-demand ridesharing has been “a depressed labor market, in which lots of people are trying to fill holes in their income by monetizing their stuff and their labor in creative ways.” In other words, in tough economic times, people are desperate and willing to take on jobs that they would not have considered otherwise. Former taxi drivers are certainly not the only people who have decided to start driving for Uber—in many cases, if not most, workers join Uber because they’ve recently lost a full-time job “and are piecing together income from several part-time gigs to replace it” (Roose, 2014). Since the recession of 2008, full-time jobs have been replaced by part-time jobs for hundreds of thousands of people, real wages have fallen for middle- and low-income people, and 3.7 million Americans are long-term unemployed (Lowrey, 2014).

In such a depressed economy, workers have little options and are forced to work for less, assume more risks and costs of their own employment, and concede the social contract and protections that were guaranteed in traditional, standard employment arrangements.

Today’s work arrangements of contingency and insecurity, such as the ones utilized by Uber, are enabled by this depressed labor market and are symptomatic of neoliberal economic restructuring that has contributed to the weakening of the permanent employment model (Smith, 2010). Herod and Aguiar (2006) explain how these neoliberal ideologies regarding work have, in the name of entrepreneurialism, exacerbated inequality through economic deregulation.

According to the authors, this economic restructuring has resulted in:

A return to a 19th-century laissez-faire capitalism of rapidly growing economic polarization…in which citizens are redefined as consumers and in which the economic and social risks of employment are more and more assumed by the individual worker,
who is increasingly treated as an independent contractor responsible for his/her own healthcare and pension than an employee for whom an employer has some social or economic responsibility. (2006, p. 436)

**Conclusion**

Although many people praise the emergence of Uber into the market for creating jobs and helping people all over the world to become “micro-entrepreneurs,” there is clearly a darker side to TNCs and similar companies that act as ‘digital middlemen’ and effectively shift risk from corporations to workers, weaken labor protections, and drive down wages. These companies perpetuate the degradation of the traditional social contract between employers and employees in which protections and income security were guaranteed to workers who could then contribute to and stabilize the economy. However, in these contingent, precarious work arrangements, corporations and the owners of capital have free reign to exploit workers, resulting in large profit margins at the expense of workers’ rights. This arrangement is enabled by the “legal void” and regulatory inconsistencies of state and local institutions, which offers a space for possible regulatory reforms that can accommodate on-demand ridesharing, while also establishing protections for its workers who, under current conditions, are left entirely vulnerable to economic insecurity and uncertainty.

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