A Taximeter by Another Name

Christopher Markou, PhD student, Faculty of Law, University of Cambridge

It has not been an easy ride for Uber in Europe. Despite being bolstered by copious amounts of venture captial the company has faced stiff opposition from government regulators and taxi companies across the continent. Last month Uber's Amsterdam headquarters was raided for the third time in 2015 by Dutch authorities who continue a criminal investigation into the companies offshoot UberPop ride-sharing service that relies upon nonprofessional drivers.[1] In Belgium UberPop was suspended after the Commercial Court ordered its shutdown and threatened a €10 000 fine for each pickup attempted by the company.[2] In France disgruntled taxi drivers burned tires, overturned cars, and gridlocked traffic across the country in protest of the company they claim undermines their livelihood and creates unfair competition. French authorities arrested two Uber executives, who are due to stand trial in February, for operating illegally and withholding documents from investigators.[3] In an attempt to diffuse tensions, Uber agreed to suspend UberPop but French authorities have pressed ahead with their threat to 'systematically seize' UberPop vehicles. Uber's 'growing pains' extend far beyond Europe. The company is locked in similar battles in Australia, India, Indonesia and South Korea, the latter of which became the first country to introduce a nationwide ban on private-hire taxis with others looking to follow their lead.[4]

Uber is also beleaguered by controversy over its 'surge pricing' model, whereby the cost of rides can triple or quadruple in times of high demand.[5] The policy received particular criticism in the aftermath of the Sydney hostage crisis last December when citizens attempting to flee the chaos were faced with minimum $100AUD charges (approx. £47). Uber defended the policy on the basis that its surge pricing was automated by analytics data that adjusted prices on the basis of demand, but that has not stopped some from denouncing the company for its hyper-capitalist business practices[6] and shoddy privacy protection.[7] Given the disruptive influence Uber is having on the transportation industry it is perhaps a badge of honour amongst Silicon Valley startups that they have a Wikipedia page dedicated to the litigation they are embroiled in worldwide.[8]

The situation for Uber in the UK is, however, comparatively rosy. In a major victory for the ride-sharing company the Hight Court has handed down a long awaited ruling that Uber's smartphone app does not function as a taximeter, contrary to the legal submission of Transport for London (TfL) who brought the case on behalf of the City's highly regulated taxi operators despite their own assertion that the Uber app did not function as a taximeter.[9] The case turned on a specific technical point of the Private Hire Vehicles (London) Act 1998: whether the Uber app functioned as a taximeter, a device outlawed in private-hire cars

---

[1] E Van Groningen, 'Uber Offices in Amsterdam Raided for Third Time This Year' (*Bloomberg Business,* 29 September 2015) <http://www.bloomberg.com/news/articles/2015-09-29/uber-offices-in-amsterdam-raided-for-third-time-this-year>.

[2] F Lenoir, 'Uber to suspend unlicensed UberPop ride sharing service' (*Reuters*, 13 October 2015) <http://www.reuters.com/article/2015/10/13/us-uber-tech-belgium-idUSKCN0S71VQ20151013>.

[3] K Kokalitcheva, 'French Uber executives trial delayed until February' (*Fortune*, 30 September 2015) <http://fortune.com/2015/09/30/uber-france-trial-delayed/>.

[4] K McSpadden, 'Setback for Uber as South Korea Bans Private Taxis' (*Time,* 28 May 2015) <http://time.com/3901066/uber-ban-south-korea-taxi-uberblack-uberx/>.

[5] MR Dickey, 'Uber's Latest Justification for Surge Pricing' (*TechCrunch*, 17 September 2015) <http://techcrunch.com/2015/09/17/ubers-latest-justification-for-surge-pricing/>.

[6] I Lapowsky, 'What Uber's Sydney Surge Pricing Debacle Says About Its Public Image' (*Wired,* 15 December 2014) <http://www.wired.com/2014/12/uber-surge-sydney/>

[7] K Muefelmann, 'Uber's Privacy Woes Should Serve as a Cautionary Tale for All Companies' (*Wired,* January 2015) <http://www.wired.com/insights/2015/01/uber-privacy-woes-cautionary-tale/>.

[8] *Wikipedia,* 'Legal status of Uber's service' <https://en.wikipedia.org/wiki/Legal_status_of_Uber's_service>

[9] Transport for London v Uber London LTD, Licensed Taxi Drivers Association, Licensed Private Hire Car Association [2015] EWHC 2918 (Admin) CO/1449/2015 <https://www.judiciary.gov.uk/judgments/transport-for-london-v-uber-london-ltd-licensed-taxi-drivers-association-licensed-private-hire-car-association/>.

(PHVs). The act defines a taximeter as 'a device for calculating the fare to be charged in respect of any journey by reference to the distance travelled or time elapsed since the start of the journey (or a combination of both).'[10] A more detailed definition is contained in the Measuring Instruments (Taximeters) Regulations 2006. Therein a taximeter is defined as:

> '…a device that works together with a signal generator to make a measuring instrument; with the device measuring duration, calculating distance on the basis of a signal delivered by the distance signal generator; and calculating and displaying the fare to be paid for a trip on the basis of the calculated distance or the measured duration of the trip, or both.'

Both definitions have a lot in common. Both describe a device that is used to calculate distance and duration for the purposes of calculating a fare. One difference, however, is that the latter definition stipulates that a fare be 'displayed' in addition to being calculated. What is particular critical for the purposes of the High Court's ruling is that the latter definition specifically qualifies its definition by stating that a taximeter functions together with an additional device fitted within the vehicle: a signal generator.

In correspondence sent to black cab operators TfL laid out their position:

> 'TfL's view is that smartphones that transmit location information (based on GPS data) between vehicles and operators, have no operational connection with the vehicles, and receive information about fares which are calculated remotely from the vehicle, are not taximeters within the meaning of the legislation (section 11 of the Private Hire Vehicles (London) Act 1998).[11]

The key phrase here is 'operational connection'. In their letter to drivers TfL took the expansive view that because there is no operational connection between an Uber driver's smartphone and their vehicle the app does not constitute a taximeter. This view is questionable primarily because neither relevant statute makes any mention of an operational connection being necessary to define a taximeter. This is made more problematic by the fact that Uber supplies its drivers with a smartphone, a 12v adapter to power it, and a cradle to affix it to the dashboard of their vehicle. This provides at least two physical points of connection between the phone that runs the Uber app, and the vehicle it corresponds to. Is the power an Uber driver's smart phone relies on not an operational necessity, and therefore an operational connection? Moreover, it seems altogether arbitrary to conclude that because fare calculations take place external to the Uber app and vehicle that their interoperation does not reproduce the functionality of a taximeter. What it seems then is that TfL has attempted to sidestep the thorny question of just what Uber is, and how it works, by emphasising form over function. From the perspective of a passenger there is little difference between what the Uber app does and what a traditional taximeter does. Thus TfL opted to take the most literal reading of the statute possible and conclude that the Uber app is essentially a signal receiver, and not a signal generator.

The UK high court more or less endorsed the view of TfL. In his ruling Mr Justice Ouseley determined:

> 'The question for decision…is whether the Uber PHVs are equipped with a taximeter, that is, a device for calculating fares. In my judgement, these PHVs are not equipped with a taximeter as defined by section 11(3). The driver's Smartphone with the Driver's App is not a device for calculating fares by itself or in conjunction with Server 2, and even if it were, the vehicle is not equipped with it.'[12]

He summarised his judgment with the declaration that:

---

[10] Private Hire Vehicles (London) Act 1998 s11(3)

[11] TfL Notice 07/14 'Taxi and Private Hire smartphone apps in London: Letter to all drivers and private hire operators' (17 July 2014) <http://www.tfl.gov.uk/cdn/static/cms/documents/07-14-taxi-and-private-hire-smartphone-apps-in-london-letter-to-drivers.pdf>.

[12] [2015] EWHC 2918 (Admin) CO/1449/2015 at s17.

> 'A taximeter, for the purposes of Section 11 of the Private Hire Vehicles (London) Act 1998, does not include a device that receives GPS signals in the course of a journey, and forwards GPS data to a server located outside of the vehicle, which server calculates a fare that is partially or wholly determined by reference to distance travelled and time taken, and sends the fare information back to the device.'[13]

For the London taxi industry much is at stake. One regulatory advantage of being certified as a London taxi driver is the ability to collect passengers on the street. This ability is seen as a 'perk' for black cab operators given the stringent regulatory requirements they must adhere to, not least of which is the formidable 'The Knowledge of London' test that prospective drivers must pass before being licensed to operate in the City.[14] However, the Uber app's use of GPS allows drivers to be matched with customers in real-time based on proximity and effectively pick up customers from anywhere.

While the High Court's ruling turned on a relatively technical matter, there is no question that Uber is hoping the ruling will give it leverage in similar regulatory dilemmas in other jurisdictions. The company wasted no time in declaring the ruling a 'victory for common sense' on its company blog.[15] It also stated:

> 'We understand that black cab drivers are feeling the pressure from services like Uber. But the answer is to reduce today's burdensome regulations on cabbies—not introduce new regulations on an entire industry.'

Uber also used its blog to call TfL's wider proposals, such as a mandatory five minute wait for Uber pickups, 'nonsensical' and argued that the proposals will be '…bad for riders—making the app clunkier to use; bad for drivers—limiting their choices; and bad for London—restricting the ability of everyone to share a ride across town.' However, the most telling aspect of Uber's blog is its closing sentence:

> 'Let's hope today's High Court decision in favour of new technology leads to TfL shelving their nonsensical new rules.'

Uber's position is indicative of other companies who generally argue that the 'solution' to technological disruption of regulations is a loosening of those very regulations. Whether it is Amazon with their proposals for drone based delivery or Airbnb with its lobbying for the relaxation of occupancy and tax regulations, there is a common belief in technological determinism amongst companies at the forefront of the 'sharing economy'. On the surface the Uber ruling would seem to be a classic example of the 'legal lag' problem: the idea that technological innovation outpaces law's ability to keep pace with it. For some the Uber ruling would seem to be a victory for common sense and consumer choice. While this may be partially true it also reveals an interesting point about the social ontology of technology and our dependence upon it.

The humble taximeter has not changed much since it was invented in 1891 by Freidrich Bruhn and incorporated into taxis in 1897 by Gottlieb Daimler. The first meters were, of course, mechanical but were replaced by electronic meters in the 1980s. Whether mechanical or electronic the taximeter was designed for one job, for the exclusive use of one industry. From an industrial design perspective they are a triumph of function. However, one hidden consequence of the UK High Court's ruling in the Uber case is that is tacitly disincentives the use of single-function devices such as taximeters in favour of highly complex technological infrastructures such as those that support the backend data crunching Uber requires to provide its service.

---

[13] [2015] EWHC 2918 (Admin) CO/1449/2015 at s49.

[14] J Rosen, 'The Knowledge, London's Legendary Taxi-Driver Test, Puts Up a Fight in the Age of GPS' (*New York Times,* 10 November 2014) <http://www.nytimes.com/2014/11/10/t-magazine/london-taxi-test-knowledge.html>.

[15] J Bertram, 'High Court rules that Uber's app is not a taximeter' (*Uber Newsroom*, 16 October 2015) <http://newsroom.uber.com/london/2015/10/high-court-rules-that-ubers-app-is-not-a-taximeter/>.

One of the most influential industrial designers of the modern era Dieter Rams has laid out 10 principles of what he calls 'good industrial design'.[16] In Rams' view a product is well designed if:

- It is innovative
- It's design makes it useful
- It has good aesthetic quality
- its design makes its functionality understandable
- It is unobtrusive
- It is honest
- It is thorough
- It is environmentally friendly
- It utilises as little design as possible

Comparing Rams' criteria to the form and function of the taximeter, it is easy to conclude that the taximeter would meet—or did meet at the time of its invention—most, if not all criteria. Now, this is not to say that Uber's app does not also fulfil some of these criteria, however, it is the final of these criteria that provides the starkest contrast between the service the Uber app provides and what a taximeter does. In Ram's own words, good design is as little design as possible:

> 'Less, but better—because it concentrates on the essential aspects, and the products are not burdened with non-essentials. Back to purity, back to simplicity.'

Rams is not alone in his preference for simplicity over complexity in design. A taximeter may not be a glamorous piece of technology but it is a simple and reliable device for accomplishing the only purpose it serves: calculating a fare. Uber on the other hand takes the long way around; it relies on GPS data, servers dotted across the globe, as well as individual smart phones having data connectivity for an Uber booking to be possible. For consumers the Uber app is a paragon of simplicity and convenience, but in actuality the mechanism through which Uber operates is remarkably complex. Like other locational based services, depends upon a constellation of no less than 24 GPS satellites in geo-synchronous orbit to provide all devices in the world with positioning data. One hidden dimension of the High Court's ruling last week is the disincentivisaiton of simplicity in design and the endorsement of complexity in the guise of consumer choice and convenience.

There are many reasons to be skeptical of Uber and its unrepentant brand of libertarian capitalism. Whether it is the shameless exploitation of drivers, its continued indifference to the needs of disabled passengers, or its downright brazen circumvention of legal regulation. Despite all of this there is good reason to conclude that Uber, and other companies at the forefront of the erstwhile 'sharing economy', will eventually be eventually be brought into regulatory compliance. The type of technological and economic disruption these companies pose is not wholly unique, nor is it unprecedented. What is unprecedented is the trust and reliance consumers now place in increasingly complex technological paradigms, and the insidiousness of the tradeoffs they require. Complex technologies are converging, and the pace of their convergence compounds the societal consequences of their failure. Instead of repeating the old mantra that law is lagging behind technology, perhaps the law is sometimes too eager to reify technology and imbue it with unique properties that transcend its essential functionality.

[16] 'Dieter Rams: ten principles for good design' <https://www.vitsoe.com/rw/about/good-design>.