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**Big Tech and Monopoly**

At the beginning of the 20th century, the invention of the automobile liberated individuals from the yoke of distance. While people could travel before the invention and diffusion of the automobile, they were bound in their daily life by the limited space a horse could easily cover. The diffusion of the railways alleviated those restrictions but did not eliminate them. Movement was confined by the railway track and the train schedule. It was only the invention and diffusion of the car that set individuals free to move at their own leisure. This freedom revolutionized the way humans shop, work, and mate.

At the beginning of the 21th century, the invention and diffusion of the smartphone triggered a similar revolution. Before the smartphone, people were tethered to their landlines as they had been similarly restrained by the distance a horse could ride. The diffusion of the mobile phone and increasing access to the internet in the 1990s sparked the freedom to communicate and access information that we subsequently achieved in the 2010s. Yet, it was only with the introduction of the iPhone and other subsequent smartphones, which coupled mobile communication and internet access, that brought unprecedented access to information to the Western world and a significant portion of the developing world.

Today’s average individual has at her fingertips more advanced hardware and computing power than was necessary to send man to the moon, more information than the best library used to contain, and more communicating power than any propaganda machine ever dreamed to possess. Yet, the average individual would not know how to take advantage of all these hardware advances and computational powers without the proper applications. Google, Facebook, Twitter, Amazon, Match.com, etc. enabled the average individual to use all of these powers to improve her life. The combination of the smartphone and what the press now calls “Big Tech” revolutionized the way we shop, work, and mate.

Just as the introduction of the car improved lives in the 19th century, there is no doubt that what I call the “Big Tech revolution” dramatically improved our lives. Yet, it would be foolish to ignore the challenges that the diffusion of the cars posed to the free market economy: from the surge in lethal accidents to pollution. In the same way, it would be foolish to ignore the new challenges the Big Tech revolution is posing to free markets. In this brief essay, I will list what these challenges are and how to address them in the least intrusive way possible.

*This Time is Different*

At its beginning, the car industry was very fragmented. Woutat (1985) estimates that roughly 3,000 companies were started in the United States with the intent to produce cars. Henry Ford’s introduction of mass production with the Model T in 1908 significantly increased economies of scale. Yet, at the onset of the Great Depression there were 44 independent car companies in the United States.[[1]](#footnote-1) It was only after the Great Depression that the number of US car manufactures dropped to eight, and it took until the early 1980s for this number to dwindle to the big three (GM, Ford, Chrysler). By that time, import of foreign cars started to rise and concentration of domestic car sales dropped. Even today, more than 100 years after the introduction of Ford’s Model T, the market share of the largest car manufacturer in the United States is only 18%, of the largest two 32%, and of the largest four 54%.[[2]](#footnote-2)

 What produced a relative fragmentation of the car industry? First of all, geographical segmentation. High transportation costs favored local producers. Second, product differentiation. Henry Ford famously said that you can choose Model T of any color as long as it is black. But consumers like not only different colors but also different models, which reduces the economy of scale advantage. Finally, important diseconomies of scale, not just from a managerial point of view, but also from a production point of view. Concentrating production increases the pollution costs and also increases the ability of the labor force to unionize, increasing the production cost. What is forcing a car industry consolidation today, at the global level, are R&D costs.

 The history of the smartphone industry is very different from that of the car industry. Only 10 years after the iPhone’s introduction, the market share of Apple, the largest smartphone seller in the United States, is 38%, of the largest two is 64%, and of the largest four 90%.[[3]](#footnote-3) When we go to the specific application markets, the picture is even bleaker. The market share of largest search engine in the United States is 86%, of the largest two 93%, and of the largest four 99%.[[4]](#footnote-4) The market share of largest social media in the United States is 60%, of the largest two 86%, and of the largest four 98%.[[5]](#footnote-5) To be fair, it is difficult to measure market share of products that are given away for free. A more relevant statistic is the market share in the online advertisement market. The numbers are a bit better there. The market share of largest online ad company in the United States is 37%, of the largest two 57%, and of the largest four 61%.[[6]](#footnote-6)

As Haskel and Westlake (2018) point out, intangible assets are more likely to be scalable, to generate spillovers, and to exhibit synergies with each other than tangible ones. Finally, their costs are more likely to be sunk. All these characteristics favor a more concentrated nature of the industry. In particular, scalability, spillover, and synergies also make the efficient size larger, while the sunk-nature of these investments deter entry (Sutton, 1991).

 Yet, there is another aspect that makes the Big Tech revolution different from any previous technological revolution: the quantity and precision of data it provides to the Big Tech firms. While businesses have accumulated data on their clients since the beginning of time, the amount and the precision of data that the Big Tech revolution concentrates in the hands of a few companies is beyond anything previously recorded. Google and Facebook know more about us than our spouses or closest friends.[[7]](#footnote-7) In fact, they know more about us than we do.

In many situations, the value of these data *increases* not decreases in quantity. Consumption patterns of an individual are more valuable if linked to the geolocation of those individuals. Their value increases further if information about health is then coupled with consumption and location, and so on so forth. Not only does this data concentration represent an insurmountable barrier for new entrant, it also represents a serious threat to the privacy of an individual. It can be be a threat to the functioning of our democracy, as the Cambridge Analytica scandal seems to suggest.

In the face of this threat, the techno-optimistic faith that progress will destroy any monopoly seems unjustified, if not logically flawed. It is predicated on the “fact” that historically monopoly not protected by the government did not last a long time. After all, the IBM dominance lasted “only” 30 years and the Microsoft one less than two decades. First of all, this logic is subject to Russell’s criticism of inductivism: the fact that in the past technological monopolies were broken by innovation does not prove that this will occur in the future. Second, it is based on the false premise that the demise of these dominant players occurred without any government intervention. In fact, the Antitrust investigation against IBM created the condition for the emergence of the PC market, while the Antitrust investigation against Microsoft created the conditions for the emergence of Google and Facebook. Thus, if anything the historical past suggests a need for antitrust intervention. Third, it assumes that monopoly rents do not facilitate the acquisition of enduring Government protection for that vary monopoly, as suggested in Zingales (2017). Last but not least, it ignores the privacy and political concerns that digital platforms’ maker power generates.

*Between Scylla and Charybdis*

In my view, the success of Big Tech has posed three distinct sets of problems: traditional market concentration, unprecedented privacy issues, and information/political problems.

 Of the three, the traditional market concentration seems the smallest issue, more easily addressable within the standard set of tools. Traditional antitrust does not penalize a monopoly when organically acquired, as is the case with Google and Facebook. Yet, it does penalize any abuse of that monopoly in the attempt to monopolize other markets. Thus, the tools to pursue these possible abuses exist. The only problem in using those tools is the political will, which is present in the European Union, but much less so in the United States.

 The second bigger problem regards the use (and misuse) of information. In 1987, during the debate on the Judge Bork nomination to the Supreme Court, the Washington Post reported the titles of the videos he rented.[[8]](#footnote-8) During the recent Judge Kavanaugh confirmation hearings it was only because the alleged events took place before the diffusion of cell phones that cell phone companies did not disclose the geolocation of Judge Kavanaugh and Dr. Blasey Ford during that fateful summer of 1982.

Do we want to grant this enormous information power to a private monopoly? Or do we want to put it in the hands of the Government? Neither solution seems very attractive. Yet, there is a worse one: a private monopoly discretionally granting this information power to the Government in exchange for the government protecting its monopoly power.

 Unfortunately, in the absence of any regulation this seems to be the most likely equilibrium. As White (2018) points out, in May 2016 Google banned ads for payday loans, based not on a concern about legitimate search practices but on its judgment of sound public policy. It is not hard to imagine that the same policy concerns might lead Google to de-rank articles that present arguments favorable to the payday loan industry. It is also not hard to imagine that the pursuit of this progressive agenda might gain Google the gratitude of politicians engaged in a campaign against the payday loan industry, gratitude that will materialize in regulation and legislation that favor Google’s interest. Thus, far from creating the best conditions for technological progress, a purely laissez-faire attitude entrenches the incumbents, retarding, if not preventing, innovation.

*The Lean Regulation Method*

In the entrepreneurial world, a new method is gaining traction: the so-called lean start-up method (Reis, 2011). Any start-up faces an enormous degree of uncertainty about the demand for its product. If the product has not demand, any sunk investment is lost. Thus, the lean start-up method advocates the creation of a viable product with the minimum possible investment, to test whether there is demand.

 A similar logic should apply to any form of government intervention. Since the uncertainty about the effects of regulation is huge, government intervention should start from the one that is less likely to generate perverse incentives and only if this fails, move to more intrusive forms. When it comes to digital platforms, what is the least costly form of regulation?

 Guy Rolnik and I (2017) argue this is a redefinition of property rights via legislation. It consists in reassigning to each customer the property of all the digital connections that she creates - what is known as "social graph." If we owned our own social graph we could sign into a Facebook competitor and, through that network, instantly re-route all our Facebook friends’ messages to the new social network, as we re-route a phone call.

If I can access my Facebook friends through a different social network and vice versa I am more likely to try and use new social networks. Knowing they can attract existing Facebook customers, new social networks will be created, restoring the benefit of competition. By guaranteeing access to new customers’ data and contacts, a Social Graph Portability Act will reduce the network externality dimension of the existing digital platforms, ensuring the benefits of competition.

*Conclusions*

The Big Tech Revolution appears to be different from the previous technological revolution: different in the degree of market concentration it creates and different in the legal, social, and political problems it generates besides the traditional market concentration.

 On the one hand, a traditional laissez-faire policy is unlikely to promote innovation and growth. In fact, it is likely to generate capture and distortions. On the other hand, the degree of uncertainty is such that indiscriminate intervention might generate more cost than benefits.

 For this reason, I advocate a “Lean Regulation Method”, the least costly form of intervention that has some chances of addressing the concerns at issue. I identify this “Minimum Viable Regulation” as a form of social graph portability, which facilitates multi-homing across different social media platforms, fostering competition.

 While it remains to be seen whether this approach leads to any measurable benefit, its costs seems very limited or non-existent. Thus, there is no reason not to try.

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2. <https://www.statista.com/statistics/249375/us-market-share-of-selected-automobile-manufacturers/> [↑](#footnote-ref-2)
3. <https://www.counterpointresearch.com/us-market-smartphone-share/> [↑](#footnote-ref-3)
4. <http://gs.statcounter.com/search-engine-market-share/all/united-states-of-america> [↑](#footnote-ref-4)
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6. <https://www.recode.net/2018/3/19/17139184/google-facebooks-share-digital-advertising-ad-market-could-decline-amazon-snapchat> [↑](#footnote-ref-6)
7. See for example <https://www.forbes.com/sites/kashmirhill/2012/02/16/how-target-figured-out-a-teen-girl-was-pregnant-before-her-father-did/#10103e9a6668>. [↑](#footnote-ref-7)
8. http://www.chicagotribune.com/news/ct-xpm-1987-11-20-8703270590-story.html. [↑](#footnote-ref-8)