

Artificial Intelligence, Data Capitalism, and the Tech Giants:



You see, in this world there's two kinds of people, my friend: those with 'loaded data' and the 'miners'.



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Artificial Intelligence, Data Capitalism and the Tech Giants:

the Good, the Bad and the Ugly?

1. A BRAVE NEW WORLD

New waves of transformative technology throw up transformed production and delivery possibilities along with the creation of whole new markets. Necessarily they put existing business and business models into a state of flux – but that is good not bad, an essential part of the creative destruction that drives capitalism forward. **The transformative technology of our times is digitalisation, with data the ‘new oil’.** Who could have foretold even a decade ago how big and far-reaching the digital economy would become, ranging from online shopping to new forms of consuming music? The borders of manufacturing and services have become ever more porous, so that many manufacturers regard themselves as service companies as much as makers – “manu-service” companies, making the use of what they make even more consumer friendly. Equally what was a monopoly under one technological paradigm can transmute into a competitive market in the next: thus the telecom monopolies based on expensive non-duplicable pipes through which cable ran have given way to rival and competitive wireless networks. Change is all around us – and we must embrace innovative societies.

Digitalisation and the new world of enormous volumes of data are conferring vast benefits – lowering the costs of doing conventional

business, creating new business opportunities, opening up vast new networks, accelerating the destruction of obsolescent business models and via artificial intelligence potentially lifting economic growth rates to a remarkable degree. The smartphone has become the ubiquitous tool of the age, delighting and connecting us in equal measure. The new manu-service companies are co-opting the new digital possibilities to offer ever better post sale diagnostic tools. The era of the self-repairing machine is almost upon us. Professional services are being reinvented across the gamut.

At the same time new threats are posed. The company that gains first mover advantage with **the creation of the fastest growing network of digital users** is the company on the way to establishing a monopoly position, which can be further entrenched – as monopolies have always been – by buttressing that position by **making its services as distinctive and non-reproducible as possible**. Investment in patents, copyrights and computerised systems has become **a new form of intellectual capitalism**, not only for manufacturing but also the new service products and platforms. On top the winning companies, if they are unconstrained, can eliminate potential competition through **take-over and acquisition**, making their market position yet more entrenched. **Lastly the digital platforms that generate so much commercialisable data throw up awkward ethical questions. Who owns this data? Should it be freely bought and sold for commercial use beyond the purview of those whose personal data it is? What redress should be standardly available when the use of our data is abused?**

The Big Innovation Centre's position is to seek to maximise the benefits of the new digital technologies while minimising as far as possible any risks of adverse effects of the new market dynamics. The digital economy and society are, apart from being unstoppable, a force for good. We want the speed, intelligence and connectivity they bring. But we are also alert to the risks of emergent monopolies and business strategies that are overly self-protective, imposing costs to competition and society. Taking

action on excessive market is of critical importance. **We need faster, savvier interventions by our competition authorities who understand the economics and dynamics of the digital economy – and who put innovation first. But it is only one part of the necessary policy response. We also need stronger checks and balances within companies’ governance systems along with new initiatives effectively to govern the terms on which personal data is used.** The aim is not to muzzle the digital economy – rather we want to unleash it for the benefit of all. Competition policy must be innovation friendly.

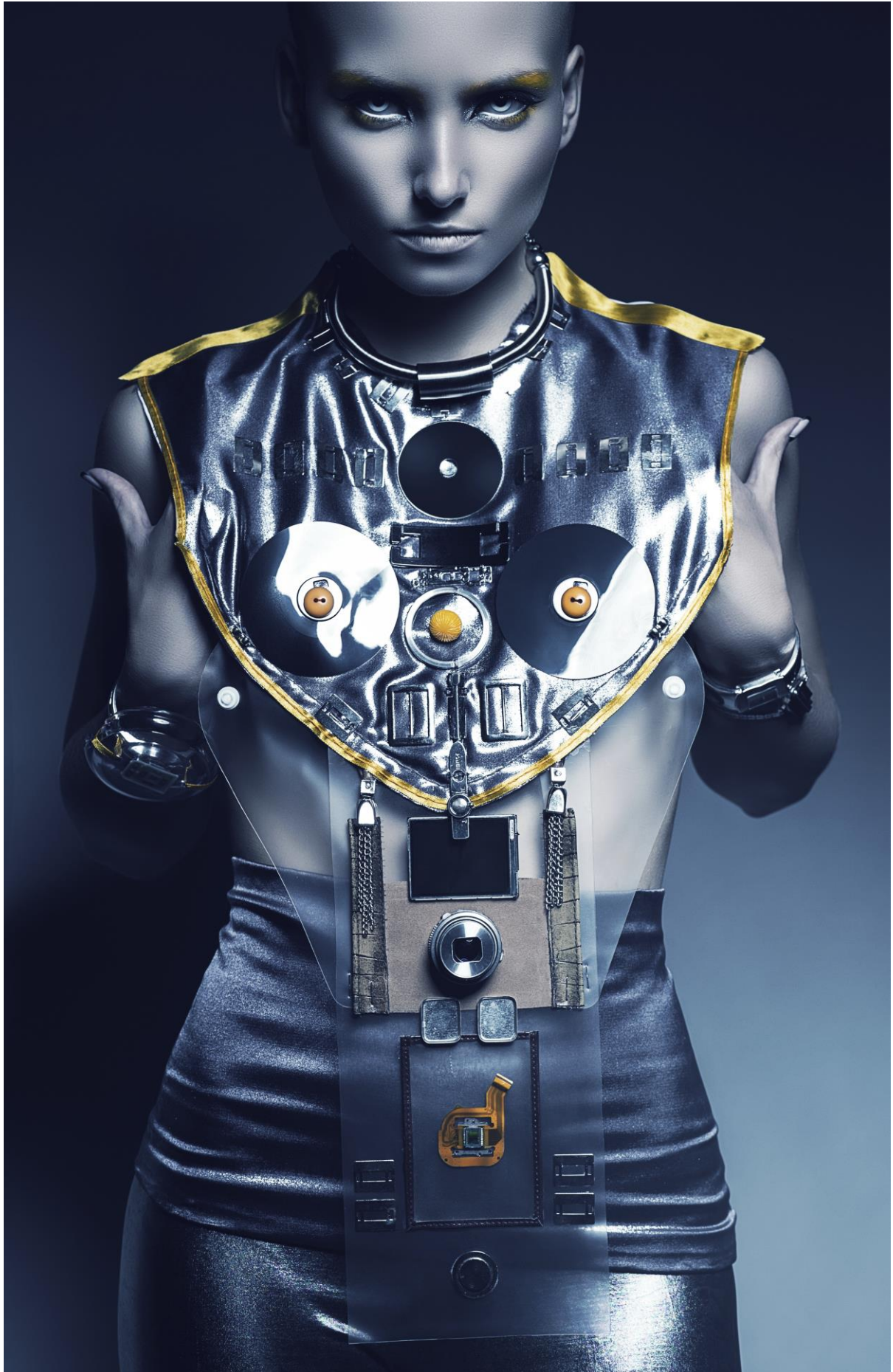
2. THE RISE OF TECH GIANTS

The IT revolution has raised profound questions from the beginning. The first controversies were around companies like Microsoft and IBM - and media majors such as Universal and Warner Bros. - with their restrictive approach to the use of IP, copyright and software patents. **The attempt to create a world-wide regime for the controlled use of IP through the World Trade Organization was no less controversial, as were attempts essentially to privatise knowledge commons in medicine, biology and even art. Now it is Facebook, Spotify, Uber, Amazon, Google, WhatsApp and Airbnb who exhibit both the best and worst of the new data capitalism.** They have grown to an immense size and scale because of their sheer usefulness. For users, the bigger the peer-to-peer network, the more efficient. Google and Amazon provide the search engine of choice because of their scale. Facebook has done the same for social media. Uber is becoming a national and international smartphone cab service, and Airbnb has become the means to find a room anywhere in the world. **We use them because of the ubiquity, extent of their connectivity and user-friendliness of their digital platforms. Scale breeds scale, and the first round results have pleased consumers and benefited society.**

But scale also brings attendant problems, as the recent scandal of Facebook selling data involving as many as 87 million friends to Cambridge Analytica dramatised. It was because Facebook had so much data which it could make available with no questions asked (at least at the time) that made its cache of data so valuable, allowing political advertisers to customise their digital message so it conformed with what they knew would be the character and likes of the reader. Suddenly the issue of data privacy and the sheer size of the new high tech goliaths has become a number one public policy issue. Scale and organisational opacity have their downsides.

2.1 The winner takes all...

The debate about what confers companies' competitive advantage is as old as economics: a range of dissident economists over the decades have challenged the comfortable assumptions of the economic consensus on which much competition policy is based. **Now is their time, and time also to reflect on how competition policy can be reframed for our times.** Of course some monopolistic behaviour bridges both the new and old economies; everyone agrees that sooner or later monopolists start predatory pricing. Amazon is already securing extortionately lower pricing from its deliverers, while Facebook is using its market power to divert huge volumes of advertising that would have supported journalism and other content provision onto its platforms. Google and Facebook alone account for half of all digital advertising revenue. **Do they crowd out the new? Competition authorities have to be faster on their feet. Speed of response was always important – it is more important than ever today.**



But digital monopolists go one step further - and certainly a step further than the current remit of national and international competition authorities. Anticipating cleverly where technology is going, they use today's market power and accompanying financial strength to buy out competitors present and future – **the “kill in the crib” strategy**. This is the kind of strategic effort to create market distinctiveness and power that Professor Michael Porter observed thirty years ago in his magisterial survey of what drove international competitiveness – except it has been taken to a new level by the high tech monoliths. Thus Facebook has bought WhatsApp, Microsoft owns LinkedIn and Google YouTube - along with over two hundred small companies that were destined to be potential challengers but have just been devoured

2.2 BIG is good but even BIGGER is better

Here any comfort provided by traditional economics has been exploded. It used to be claimed that as companies got larger they became more inefficient, which was a check on monopoly. But in today's digital marketplace, **the more ‘produced’, the cheaper every successive unit becomes, pretty much indefinitely**. Far from their managers losing control, Artificial Intelligence and computerised techniques allow costs – from wages to how production lines, supply chains and warehouses are organised – to be ever more efficiently managed as they expand. **The bigger the network – whether peer-to-peer as at Facebook or centralised ‘hub and spoke’ models as at Amazon - the more valuable being a member**, a phenomena observed by Professors Nicholas Economides, Michael Katz and Carl Shapiro more than a generation ago. **Big is good in the digital universe. And even bigger is better.**

Here the authorities need to be especially alert. The damage comes at multiple levels. **Size makes it easier for companies to offer bundles of interlocking services – providing both the infrastructure of routers, service providers, servers and wireless along with content – so that**

the consumer enters a “walled garden“ hard to break out of. She wants the internet access but finds herself perforce buying the content too. These were the market dynamics of which Professor Brian Arthur famously warned when the Internet was in its infancy.

Market power of this type casts a sclerotic pall. Young companies tend to be more open and agile than their more hierarchical older peers; high tech goliaths may be only a couple of decades old, but already their arteries are hardening.

For all these reasons Britain’s Competition and Markets Authority has to be more pro-active, and much more alert to the size threshold at which it permits acquisitions to go unchallenged - looking for the same complementarities in technologies that the companies themselves do and which may provide future threats even if they are less apparent today. Again speed of response is essential – and speed in enforcing remedies, penalties and fines. In the digital economy first mover advantage is often the stepping stone to monopoly. Again, this **is not just a Schumpeterian type of first mover regarding products and production innovations, but about new forms of digitally enabled competition via the new networks, digital platforms, data, and IP.**

But there has to be an equally keen awareness that new alliances and collaborations between small firms, seeking to exploit the advantage of open innovation strategies or creating networks of countervailing scale to an entrenched incumbent, are not necessarily anti-competitive in themselves. **The value of stable inter-organisational ties, is especially important.** The report *“TECHNOPOLY” and what to do about it: Reform, Redress and Regulation* (by ResPublica and Big Innovation Centre 2018) floats the idea of safe harbour provisions to allow small firms to create alliances and networks of their own without attracting charges of market collusion or anti-competitive behaviour: it is as important to encourage such countervailing power as limiting the power of the incumbent monopolist and enfranchising the new entrant. It is worth repeating that it is not in the societal interest for the

same old, same old to entrench their position by snuffing out the new. In the US young firms have been consistently declining as a share of the economy for 40 years – and it's a similar story in Britain. There is some evidence this may have slowed the pace of innovation and productivity growth.

2.3 Innovators are intelligent

The stakes are very high. The new technologies present astonishing opportunities. Over the next twenty years the use of Artificial Intelligence alone could double the growth rates of the dozen advanced economies, estimates Accenture. Britain's growth rate could climb to 3.9 per cent in 2035 - with AI particularly impacting professional and financial services, advanced manufacturing, health, music and retail. AI is not alone. Whether blockchain or drones, virtual reality or nano technologies - similar opportunities - but with similar monopolistic dynamics are under way. It will be a period of massive Schumpeterian creative destruction. So policy has to be designed to ensure that it is not only about destruction, already beginning to manifest itself in our high streets with a string of high profile companies in trouble, but creativity. And monopoly is the long run enemy of creativity.

We need our firms to think in innovation terms – and policy needs to protect them. The Big Innovation Centre has developed a self-diagnostic innovation framework with seven **categories under which firms can organise their innovation thinking** (see biginnovationaudit.com):

Innovation should be streamed into all avenues of a firm's strategy – its approach to 1) cost reduction, 2) its development of new products and services, 3) its inventiveness of its business model, 4) its stewardship of its human capital, 4) its approach to leveraging and networking, 5) its capacity to absorb new ideas from outside and 6) its stimulating an entrepreneurial culture. It should also crucially

ask itself to what degree 7) its innovations benefit wider society.

None of this is easy – but it is made much easier if the wider policy framework rewards the fruits of thinking in these terms rather than firms trying to develop a monopoly position and harvesting it.

A report *“TECHNOPOLY” and what to do about it: Reform, Redress and Regulation* (by ResPublica and Big Innovation Centre 2018) draws on recent American evidence that today’s corporations, for different reasons, are growing ever bigger in the new and old economy alike. We need a new urgency from our competition authorities not only in the EU but the US, which is curiously impotent before this new concentration of market power. For example the US thresholds for considering whether an acquisition will entrench a buyer’s predatory market power are far too low, so kill in the crib strategies are far too easy – as Google’s Eric Schmidt has tacitly conceded. *“Google made the decision last year to accelerate the acquisition of companies below the HSR threshold,”* the report quotes, *“or the amount that is subject to FTC notification requirements and a waiting period”*. On top there is far too little US emphasis on the impact of increasing returns to scale, so that **policy is locked in an analogue world of simple calculations about what constitutes current market share rather asking whether future market share is going to be anti-competitive**. In short there is too little understanding of innovation in a digital universe.

Britain has both to draw similar lessons and look closer to home, but we recognise that national action is inadequate. It may be true that global action is difficult to marshal and global institutions weak, but we have to try. Less than twelve months before Britain potentially leaves the EU, it is ironic to note that it has been the EU that has challenged Google’s monopoly and made Facebook and Amazon pay fairer tax. Google alone has faced an EU fine of 2.4 billion euro for favouring its own Google comparison shopping sites. Britain by itself has no chance of challenging any of the West Coast tech giants over their policies. Post Brexit we are going to have work closely with EU competition authorities if we are to secure the massive potential opportunities ahead of us.



3. DATA SHARING *and your social contract*

Competition cannot do all the work. There is the need to establish **clear protocols for the use of data**: at Big Innovation Centre we have consistently pushed for a Data Charter based on the presumption that **while all data is personally owned, we are opted into a sharing economy from birth so that on the right terms data is useable by third parties**:

The Charter would establish the principle of personal data ownership and data use.

- All organisations would offer providers of data **the opportunity to opt out** of its use if they chose, and be obliged to **establish transparent processes so that data providers could see how their data was being used** – along with clear procedures for redress if any data provider complained.
- The focus of **policy would change from trying to control how data is used to ensuring that common, transparent and effective governance processes are in place for all data-using organisations** – a change that would make the UK the European leader.

This needs to be accompanied by a more general commitment by companies to set out their purpose, written into their articles of association, to which consumers, workers, regulators and government can hold them to account.

- **Companies would then be expected to create ethics boards that would systematically report on data use.**
- **An official AI watch dog, with consumers as members of its governing councils, should enforce trading standards,**

which would include the disclosure of open source codes and user-rights.

The aim is to create a social contract for data use – and in so doing create forces that countervail the market dynamics propelling monopoly. Work at the **All Party Parliamentary Groups on AI and Blockchain**, for which the Big Innovation Centre acts as Secretariat and research hub, shows how the regulatory process can be democratically strengthened and open innovation better promoted.

The Data Charter idea was first published in (i) Big Innovation Centre – Written evidence (AIC0119) to Lords Select Committee on Artificial Intelligence – (06 September 2017), <https://www.parliament.uk/business/committees/committees-a-z/lords-select/ai-committee/publications/>; (ii) the All-Party Parliamentary Group on Artificial Intelligence, October 16 2017, ‘Theme Report: Evidence Meeting 3 – Ethics and Legal: Data Capitalism’ (including Big Innovation Centre text box on a Data Charter from Professor Birgitte Andersen, Big Innovation Centre, Big Innovation Centre), <http://www.appg-ai.org/evidence/>

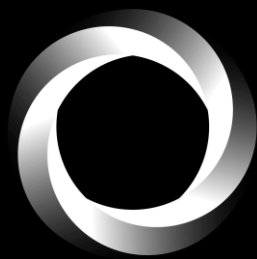
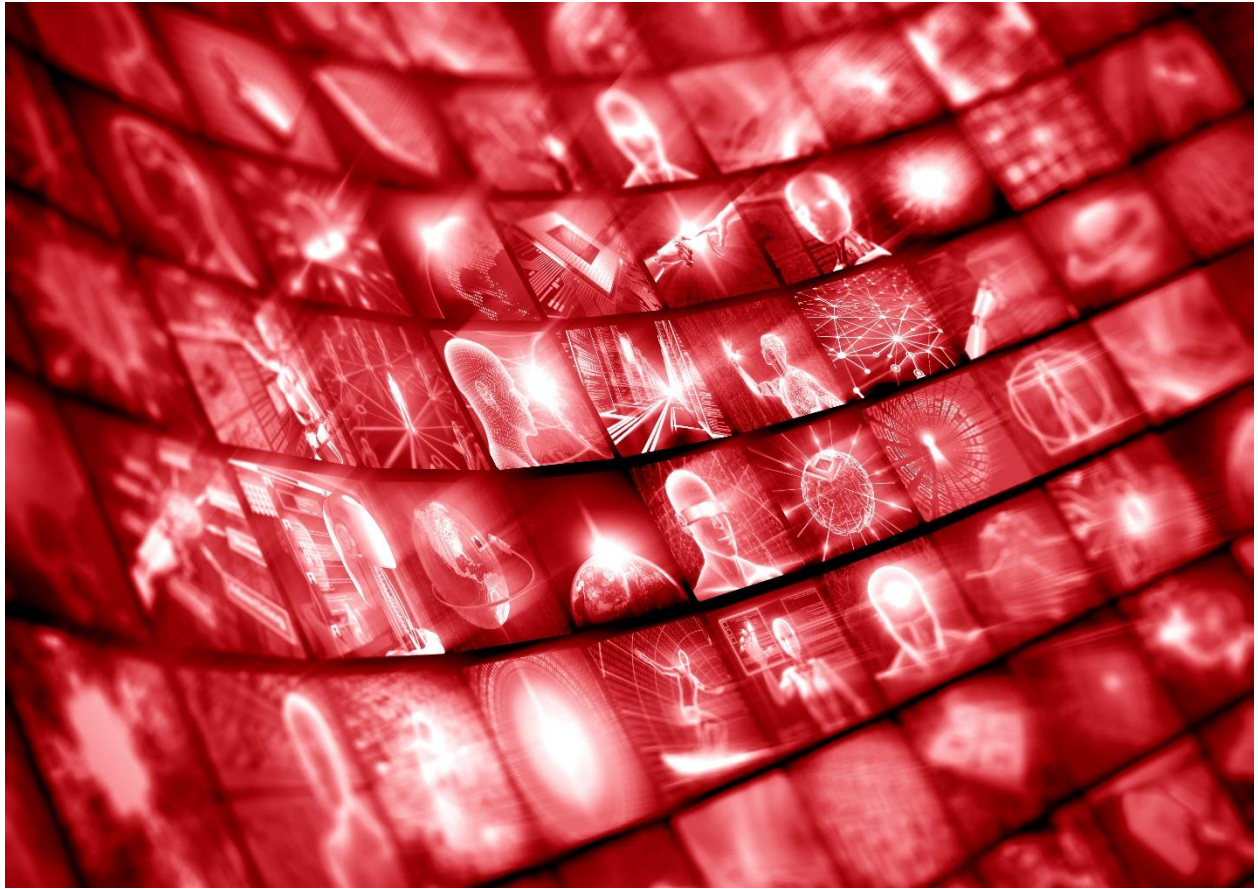
If Britain is to enjoy the dynamic fruits of more innovation, then we have to do more to stimulate trust in our companies who now hold so much information about us. We need to open up our high-tech companies to ever higher standards of transparency and accountability. There may also be a case, where private digital platforms seem to have unassailable monopoly power, to create public benefit digital platforms as a source of competition.

4. THE END

Yet the truth stands. An innovative economy and society is a more competitive one with a diverse, plurality of providers. We hope we have begun a vital discussion about some of the options available both to national and supranational competition regulators to achieve that end. Competition authorities have to be hawk like, not only in assessing what is happening today – but the likelihood of what will happen tomorrow.



**THIS TOWN
AIN'T BIG ENOUGH
FOR THE BOTH OF US.**



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