



CIONET

OPINION PAPER

CLASH OF THE DIGITAL TITANS



As we are propelled by COVID-19 into home working, online shopping and contact restricted to Zoom and social media, we might ponder where we end up during the new decade. In this paper Roger Camrass, Director of CIONET UK and visiting professor of the University of Surrey, draws comparisons between the colonisation of the 'New World' five hundred years ago and the colonisation of the digital 'New World' today.

Colonisation of the Americans, 1492

When Christopher Columbus set sail in 1492 across the Atlantic, he discovered uncharted islands in the Caribbean just off the coast of the 'New World'. At the same time John Cabot accidentally arrived on the shores of North America. Two centuries later the British, Spanish, and Portuguese had successfully colonised the 'New World', from the polar north to the southern tip of South America.

These explorers brought with them domestic viruses that wiped out most of the original inhabitants of the 'New' continent. With little local resistance, these European nations were able to plunder and carry home many valuable resources such as gold, potatoes and tobacco.

A new wave of colonisation: 2020

Sounds familiar? In just twenty years a similar process of colonisation has taken place where a handful of digital titans such as Facebook, Apple, Amazon, Netflix and Google (FAANG) in the West have captured and colonised the digital world with little resistance from incumbents. Instead of gold and tobacco, the valuable resource that these titans seek is 'your data' which is rapidly becoming the currency of the digital economy.

The COVID-19 virus has compressed this colonisation from decades down to months, fuelled by consumer demand for online services and a cash mountain of cheap money that is being poured into the FAANG and associated communities. It is quite possible that within the next 5-10 years these digital leaders and related start-ups will represent most of the equity value in the Western world. Companies such as Baidu, Alibaba and Tencent (BAT) are following suit in Asia. By 2030 little will remain of the 'analogue' world. Colonisation will be complete, and all 'data' will be in the hands of a few powerful monopolies. Let's trace this remarkable journey.

Birth of the digital world

In April 1969 Vince Cerf, Robert Kahn and others began a programme sponsored by

US defence agency, ARPA, to design an infinitely expandable, indestructible data network that became known as the ARPANET. In 1975 Roger Camrass (an early ARPANET research fellow) joined a team at MIT to help industrialise this early prototype by developing efficient data communication protocols[1]. By 1983 the network architecture was complete and became known as TCP/IP. This enabled ARPA to assemble the 'network of networks' that is the foundation of today's Internet.

Beyond this period an important event occurred in April 1989 when a scientist working at CERN laboratories in Switzerland, Sir Tim Berners-Lee, invented an information system that allows documents to be connected to other documents by hypertext links, enabling the user to search for information by moving from one document to another. One can say that with such an invention, referred to as the World Wide Web (www) we entered the modern digital era.

Work led by Roger Camrass at SRI in the nineties under a global research programme 'Business in the Third Millennium' identified the transformational powers of such an information network within business and social domains. It was at this time that start-ups such as Amazon and Google emerged to commercialise the technical capabilities of the Internet and related World Wide Web.

Enter the hyper-connected world

The current ubiquity of broadband connections and mobile networks around the globe has heralded in a new era of 'hyper-connectivity' with some two billion people now accessing mail, social media, and web sites daily. By the end of 2019, some 20% of consumer transactions had migrated to online channels. Digital leaders represented over 25% of S&P market value and were continuing to grow revenues in double digits. Elsewhere growth of incumbents barely kept up with inflation, and productivity in western economies flatlined:

The COVID-19 pandemic has accelerated the move to digital as it sent billions of office workers to their homes and restricted families to online rather than physical shopping. Fortunately, the investment in global cloud platforms such as AZURE, Google Cloud and AWS enabled a relatively smooth transition to take place. But the divergence between incumbents and digital leader stock market values continues to widen. The former witnessing sharp declines of 20-30% and the latter enjoying increases of similar amounts since January 2020.

This divergence has profound implications. Investment is attracted by healthy returns. The prospect for large incumbents is ever gloomier as they become starved of investment capital and dividends begin to dry up. In contrast, the digital leaders can continue to fuel their double-digit growth through access to 'cheap money'.

New horizons - hyper-personalisation and smart everything

A second wave of technologies following broadband and cloud platforms will include the Internet of Things (IoT), 5G mobile[2], Artificial Intelligence (AI) and Machine Learning, Blockchain, Edge computing, and 3D printing. These are set to further enhance the capabilities of the digital economy and the related strength of the digital leaders.

Such technologies enable us to capture, store, analyse and retrieve data from every possible source, both human and mechanical. As we enter the new decade, we are witnessing an explosion of data on the planet. More data has been created in the past two years than in the entire previous history of humans (as of 2018). Data is growing faster than ever before and by the year 2020, about 1.7 Megabytes of new information will be created every second for every human being on the planet.

The implications are potentially transformational. We are about to witness the era of 'smart everything', from smart cities and homes to wearables that sense and respond to our every mood and desire. So far, digital leaders have succeeded by simplifying our ability to shop and communicate such as Amazon's 'One click' transactions and Facebook's social media platform. Now we will see the emphasis changing towards anticipation of need through accurate profiling of our personal habits. Note Google's acquisition of Deep Minds.

Soon this will extend into the workplace as Artificial Intelligence helps corporates to analyse and automate workflows, displacing millions of jobs in the UK and elsewhere. Just as in modern factories, robots will take over repetitive activities leaving humans to concentrate on value adding tasks. In the words of Jason Kingdon, Chairman and CEO of Blue Prism, "we think there's a future where the workplace consists of one third robots, one third humans and one third core IT".

Preparing for a digital future

The prospect of a handful of colonists such as FAANG and BAT dominating the entire digital economy is not a healthy one, especially if these titans influence and control over aspect of our lives through ownership of personal 'data'. There are measures we can take as a society:

- Own and protect our personal data which is becoming the currency of the digital economy. This may take the form of digital assistants that act as intermediaries between us and the digital titans

- Encourage incumbent organisations to be more radical in their approach to digital transformation. Instead of trying to streamline the core, we believe that progress will only be made by creating new digital businesses out at the edge
- Alert governments and regulatory bodies to the danger of colonisation. Given the virtual nature of the digital economy they may struggle to win back control. Digital titans operate with relative impunity across borders. Time is running out.



About CIONET

CIONET is the leading community of more than 10,000 digital leaders in 20+ countries across Europe, Asia, and the Americas. Through this global presence CIONET orchestrates peer-to-peer interactions focused on the most important business and technology issues of the day. CIONET members join over a thousand international and regional live and virtual events annually, ranging from roundtables, programs for peer-to-peer exchange of expertise, community networking events, to large international gatherings. Its members testify that CIONET is an impartial and value adding platform that helps them use the wisdom of the (IT) crowd, to acquire expertise, advance their professional development, analyse and solve IT issues, and accelerate beneficial outcomes within their organisation.

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