A Hyperconnected Society is Coming, so how will We Cope?



Director of the Centre for European Policy Research's Digital Forum and Visiting Senior Fellow at LSE **Colin Blackman**, inspired by discussions at a recent **CEPS Digital Forum seminar** on the implications of a hyperconnected society, argues that fundamental principles such as freedom of expression and privacy will become increasingly important as the Internet of Things expands.

With a new European Parliament and a new Commission coming soon, this is an appropriate time to reflect on Europe's future, particularly

regarding matters around information and communications technology. With technology developing so rapidly, and society and the economy evolving, which policies are needed to address this rapidly evolving future – what issues should be the priority for the next Digital Agenda?

Defining a hyperconnected world

A hyperconnected world is one of ubiquity, of embeddedness, a world in which the internet is becoming "like electricity", disappearing even as it becomes more crucial in our daily lives. It means a global, immersive, invisible, ambient, networked computing environment – the so-called Internet of Things connecting smart sensors, cameras, software, databases and data centres.

But it's not just about things – it also means an Internet of People making up an Internet of Everything, with machine-to-machine, people-to-people, and people-to-machine connectivity. The number of internet-connected devices first outnumbered the human population in 2008, and they have been growing much faster than humans. There were about 10 billion internet-connected devices in 2013 and, according to Cisco, and there will be 50 billion in 2020, including PCs, smartphones, tablets, smart TVs, chips, sensors, implants, wearable devices, connected cars and devices which have not yet been thought of. Cisco estimates the value of the Internet of Everything at \$14.4 trillion over the 10-year period from 2013-2024.

In his book *The Singularity is Near*, Ray Kurzweil, extrapolates further to predict that possibly within 30 years, when artificial intelligence, human biological enhancement, or brain-computer interfaces will have progressed to the point of a greater-than-human intelligence, radically changing civilization, and perhaps human nature. Personally, I don't see this happening in the next 30 years and, while we may be liberated from some of life's drudgery, it will be neither a dystopia nor the end of humanity. These musings should, perhaps, best be seen as the "rapture of the nerds".

The consequences of a hyperconnected society

Digital Life in 2025, a survey of nearly 1900 experts, found that most believe that by 2025 the Internet of Things will be a reality. Many believe there this will bring clear benefits, but disagree about the value of benefits compared with the problems it will bring.

Forecasts about the Internet of Things should be treated with scepticism, and there are many who urge caution about the scale and speed of technology development and take-up, arguing that there will always be hype and business bubbles. Nevertheless, there will be substantial business opportunities in areas such as battery technology and energy harvesting, and wearable technology – especially in health applications – as well as niche and fad products.

Optimistically, a hyperconnected society could spur economic growth, and improve the quality of life for the majority – but remember, a third of the world doesn't have electricity. Could it lead to new digital divides, where only those wealthy enough will be able benefit? Or could it mean we will live in a world where things don't work properly and no-one knows how to fix them?

One area of particular concern is the challenge that a hyperconnected society might pose to current concepts of data protection and privacy, and it has become a commonplace to say that it will mean the death of privacy as data becomes easier to collect,



What principles need to govern how we are connected to each other and to the things around us?

store, share and analyse. As lan Brown argued at the CEPS seminar highly concentrated information companies – and the state – seek to scoop up all the information they can in the hope it will be useful later. Without intervention, information asymmetry will increase, with data gathered ubiquitously and invisibly in a way few understand, eg privacy policies are typically long and unreadable and difficult to verify and enforce.

Do we need to think about these issues differently in the future?

At the CEPS seminar, Nicole Dewandre of the European Commission spoke about what it means to be human as we transition from modernity to hyperconnectivity. She described how, in a hyperconnected world, emphasis shifts from a functional view of the individual who seeks autonomy and control to a multidimensional framing of "the self". In future, who we are will be defined more in relation to how others see us, as well as by our relationship to objects and our environment. In such a world, the need for privacy may be seen as less important than the need for intimacy.

The danger in such a post-modernist approach is that it will inevitably undermine hard-fought for principles like privacy. I am more inclined to be optimistic about privacy-protective technologies and agree with Ian Brown that societies can shape the values technologies embed if they wish.

So, can we come to any conclusion about how a hyperconnected society might influence policy making? Where are the certainties and uncertainties? Certainly a hyperconnected society is coming, even if there is still uncertainty about when and how profound a change that will be. What it means to be human in such a world seems more uncertain than ever and implies the need for ever-more flexibility and adaptation. But it also means that fundamental principles – such as freedom of expression and the right to privacy – will become even more important as they will provide the certainty and stability necessary in a world where everything seems fluid.

This article gives the views of the author, and does not represent the position of the LSE Media Policy Project blog, nor of the London School of Economics. The CEPS Digital Forum seminar on a hyperconnected society was the first in a series of forward-looking seminars taking place in Brussels to consider the issues that should shape the next Digital Agenda for Europe.

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