Society 5.0: How will Japan Approach 'Data Capitalism'

JACK MOSS
The University of Sheffield

Executive Summary

The Japanese Society 5.0 initiative bolsters claims of solving a multitude of the G20's pressing issues through utilising artificial intelligence (AI), smart technology and the Internet of Things (IoT). The latest innovations will allegedly help the Japanese government with issues such as their ageing population, education, agriculture and climate change. However, this policy brief argues that the Japanese government does not have the ability, innovation nor technology for a government-led Society 5.0.

Society 5.0 – the Utopian Future

During the World Economic Forum in Davos in January 2019, Japanese Prime Minister Abe Shinzo, stated that "in Society 5.0, it's no longer capital but data that connects and drives everything". Building on the main theme of the G20 Buenos Aires Summit, "building consensus for fair and sustainable development", the Japanese government has recently launched its Society 5.0 initiative.

Society 5.0 bolsters claims of simultaneously achieving solutions to social and environmental problems as well as economic development through the incorporation of smart technology which seeks "to create a human-centric society where digital technology enhances people's quality of life... where the benefits of technology flow to all corners of life". Pertinent to this idea is utilising the most modern innovations and technologies, for example AI, smart technology and the IoT, to solve social and environmental issues such as the ageing population, education, agriculture and climate change.

Benson Hougland's example regarding the use of smartwatches for healthcare provides a clear explanation of what the IoT, and by extension Society 5.0, is. Hougland's hypothetical illustration states that, in the not too distant future, a smartwatch may be capable of detecting an individual's heart rate and breathing abilities, among other data, to the extent that it could identify when an individual is suffering a cardiac arrest.

Through the IoT, this data could be automatically transmitted to a hospital where a (perhaps driverless) ambulance would be dispatched to respond quickly and potentially save a life. This example is just one of many regarding the possible positive implications of increased interconnectedness between smart technologies, and it is this potential which has sparked the promotion of Society 5.0. The IoT is at the heart of this, and its potential implications have led Abe to [claim](#) that Society 5.0 could "fill the gap between the rich and the less privileged". So, if it bolsters such positive potential, what's the problem?

What's Wrong with Utopia?

The problem arises when the question is asked: 'who owns the data?' The Japanese government has been purposefully vague regarding the practical implementation of Society 5.0 and has not outlined how exactly it proposes to gain access to the technology at the core of its new initiative. Abe claims that "it will be digital data driving our economy forward", including medical records and personal information. However, he neglects to address the security and privacy issues that are becoming salient as the use of such data is increasingly encroaching on multiple aspects of public life. Currently, the Japanese government does not have the capacity nor innovation to achieve Society 5.0, hence, it is forced to rely on the private sector.

The largely US-based private sector has been developing smart technology in the years prior to the promotion of Society 5.0. Many of the major tech firms understood the future capacity and potential of smart technology and IoT years before government initiatives were launched, and hence invested heavily in research and development of such technologies. IBM started the trend on 1st March 2011, when it announced the Smarter Computing framework to support [Smarter Planet](#). This was later followed in 2014 by Google, Samsung and Apple who invested in Nest, Smart Things and HomeKit (and Health) applications respectively.

So, the question is thus raised that if the technology to achieve the Japanese promised land of Society 5.0 is in fact owned by the modern-age tech giants, then how does the Japanese government ensure the security of its initiative? In other words, what mechanisms are in place to prevent society 5.0 becoming subject to ['data capitalism'?](#)

Data capitalism can be broadly understood as "a system in which the commoditization of our data enables an asymmetric redistribution of power that's weighted toward the actors who have access and the capability to make sense of information", or, in simpler terms, a system whereby large tech companies with expert data analysts can manipulate their expertise to

concentrate power. The concentration of power among the expert few entails potential risks of data misuse and data exploitation. Again, drawing on Hougland's illustration, the data collected during the cardiac arrest could be purchased by health insurance companies, who could, in turn, raise the price of health insurance or even deny cover altogether.

Concerns have already been raised regarding data capitalism. For example, Murat Sonmez, Head of the World Economic Forum for the Fourth Industrial Revolution Network, says:

> the risk is that only a privileged few individuals will benefit from this technological progress. The gap that is already widening between the privileged few and the rest of the society will become even greater. To ensure that everyone enjoys the benefits of technology, we need to take action now through society-oriented approaches as well as through technology.

It is clear that data protection is a pressing issue and that avoiding data capitalism is a necessary step if indeed we want the technological benefits of Society 5.0 to "spread to the rest of the world".

The G20's Response

The G20 has, thus far, praised technological innovation and sought to incorporate it into myriad areas, from agriculture to healthcare. In Buenos Aires at the 2018 summit, Argentina's Leader's Declaration stated that "[t]ransformative technologies are expected to bring immense economic opportunities, including new and better jobs, and higher living standards. The transition, however, will create challenges for individuals, businesses and governments".

The G20 appears to view technological progress a utopian magic wand which, once waved, will help solve contemporary issues across the spectrum but do not appear to have concerned themselves with the logistical implementation of this technology. The G20 Argentina Menu of Policy Options for the Future of Work claims that transformative technologies "will bring immense economic opportunities, such as new ways of doing business, new industries, new and better jobs, higher GDP growth, and better living standards". This vague rhetoric surrounding the future potential of smart technology appeared to be the furthest point to which the G20 was willing to stretch as regards digital governance prior to Osaka.

Not exclusively related to the G20, Prime Minister Abe has proposed the 'Data Free Flow with Trust' (DFFT) to

ensure that international trade can occur in the digital age of e-commerce. Abe said that "[w]e have yet to catch up with the new reality, in which data drives everything, where the DFFT, should top the agenda in our new economy". Abe seeks to avoid the "splinternet" – the nationalisation and constriction of data within domestic borders – and claims that the DFFT might help achieve this.

What Happened at the Osaka G20?

In Osaka, United Nations Secretary-General António Guterres stated in a press release that "it is clear that first of all we must recognise that with the digital economy and artificial intelligence there will be a huge impact in the global economy". However, this sweeping statement did not add much substance to the issue of digital governance in the era of Society 5.0. He later stated that "there are questions relating to cybersecurity that need to be addressed and there are questions relating to peace and security", but again vague claims made by an institution that is merely a token guest of the G20 cannot be seen as progress on the issue.

Perhaps Osaka could claim to have opened the door for data governance *discussion* rather than policy. Building on his speech at Davos where he said that he "would like Osaka G20 to be remembered as the summit that started worldwide data governance", Abe has proposed the creation of the

'Osaka Track', a multilateral framework for discussing the creation of rules for the digital economy.

At the G20 ministerial meeting on trade and the digital economy in Tsukuba, a few weeks prior to Osaka, members reiterated the importance of the DFFT. However, this reiteration cannot be taken as uniform as different members have adopted various stances within this understanding. On the one hand, the EU stresses the importance of individual privacy and safety concerning data leading it to propose regulation. On the other, the US is reluctant to interfere in Silicon Valley and has thus adopted a more liberal attitude.

The G20 Leaders' Declaration made a commitment to "work toward achieving an inclusive, sustainable, safe, trustworthy and innovative society through digitalization", which reiterated the fundamental role that data currently plays and will play in the future digital economy. Innovation and AI were also praised as the G20 recognised the "critical role played by effective use of data". Interestingly, the G20 raised concerns of the "challenges related to privacy, data protection, intellectual property rights, and security", which could be viewed as a step in the right direction. It is possible that security and privacy discussions will be addressed further in Riyadh next year but for the time being no tangible results have been seen.

Conclusion

In sum, despite the important concern of data capitalism within the scope of Society 5.0, it appears that the G20 is apathetic about the issue. The age of smart technology and IoT is still inchoate and other areas of importance currently appear more pressing. Generic remarks regarding the future of technology and its benefits were circulated yet again in Osaka, but no real substance was added to the broader conversation of digital governance. Perhaps in the future, once Society 5.0 becomes more of a tangible reality, due attention will be given to the area of personal information security and big data. However, for the time being, it does not appear that data capitalism is the most pressing topic on the agenda.

Jack Moss is a final-year BA International Relations and Politics student at the University of Sheffield