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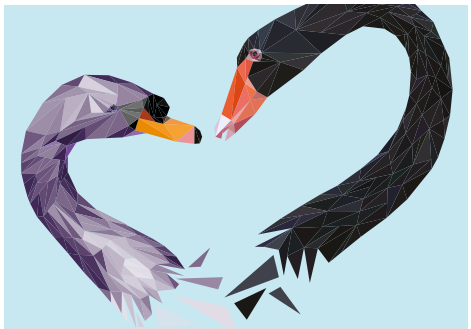

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comment

Our cover of this edition depicts growing malaise around governance, leadership, technology and trust.

Why are these issues so important in a crisis context? Put simply, because of the consequences that poor, malicious, narcissistic or corrupt governance can have on our daily lives, communities, livelihoods, safety and quality of life.

Denise Thompson (p64) explores the importance of governance in regulating the actors and processes around disaster risk reduction. Weak governance is a disaster risk driver, linked to other drivers, such as poverty, inequality, poor planning and development.

And other actors are always ready to fill the vacuum left by poor or weak governance, including those with criminal or malevolent intent, all too willing to capitalise on the opportunities this presents.

Humanity has inexhaustible supplies of ingenuity and creativity; none so evident as in the technology field. If applied correctly, the solutions have immense potential for good. Yet, as climate is a risk amplifier, if applied unwisely, technology can be a risk enabler.

Other articles examine governance and technology. On p14 Maha Hosain Aziz describes a 'global legitimacy crisis' which, she says, is linked with a headlong rush for technological domination. Meanwhile on p18, Andrea Bonime-Blanc presents a view of the megatrends that every leader – of nations, business, institutions, local governments or humanitarian organisations – needs to be aware of. She discusses the collapse of global trust, the ethical leadership paradox and how unscrupulous actors could commandeer technology to further their own agendas.

The Fourth Industrial Revolution is set to fundamentally change the way we live. On p58 Laurence Marzell calls for citizens to be placed at the centre of smart cities, emphasising that cities are for people. Vincent Mosco supports this on p66: "Genuinely intelligent cities start with a vibrant democracy, support for public space and a commitment to citizen control over technology," he says.

Constant monitoring, sensors and data gathering all present threats and opportunities. It would be naïve to expect Utopia, but we do have the opportunity to harness burgeoning technological developments for the benefit of our resilience, livelihoods and security. In this new, disruptive landscape, with emerging protagonists and technology, we need to be careful in what – and in who – we place our precious trust.

What have the Romans ever done for us?

Cities are evolving faster than at any point in our history, putting them on the cusp of major transformation which, if managed well, could lead to unprecedented economic growth and prosperity for all, but if managed in an uncoordinated manner, could drive social, economic and environmental decline, explains **Laurence Marzell**

Apart from better sanitation, medicine, education, irrigation, public health, roads, a freshwater system, baths and public order, what have the Romans ever done for us? Yet, despite these amenities, the Romans had as many public health issues as their predecessors, in part because they failed to understand the interconnected and interdependent nature of the environment in which they lived – lessons we would do well to learn in the mission to transform 'smart' cities into 'intelligent' ones

Monty Python | Alamy

For many people, the phrase 'What have the Romans ever done for us?' recollects the classic comedy scene from Monty Python's *Life of Brian*. When plotting to overthrow the Romans, the rebel leader asks this question, only to hear from his followers that the Romans gave them better sanitation, medicine, education, irrigation, public health, roads, a freshwater system, baths and public order.

Whether these were truly Roman inventions or not, they certainly brought societal order to a huge variety of citizens, with technological development providing a higher quality of life.

This pace of change could be likened to that which we see today, as modern society rushes ever deeper into the Fourth Industrial Revolution, the outcomes of which are yet to be clearly understood.

The Fourth Industrial Revolution is expected to fundamentally change how we live. Developments such as Blockchain, AI, the Internet of Things (IoT), autonomous systems, and big data are too often looked at individually.

Although both academia and policymakers understand theoretically that society functions as an interconnected ecosystem, this insular view of the component parts of the Fourth Industrial Revolution shows this is not being effectively put into practice. Instead, it serves to provide a very limited understanding of their combined effect and changes on the societal ecosystems they are intended to foster.

In parallel with these developments, urbanisation is set to increase and, with it, the complex societal challenges it brings. Today, cities occupy just 2.6 per cent of the Earth, but are home to more than 50 per cent of the world's population, generate more than 80 per cent of the world's GDP and use 75 per cent of the world's natural resources. The International Energy Agency estimates that urban areas account for over 67 per cent of energy-related greenhouse gases, expected to rise to 74 per cent by 2030.

The UN estimates that our global population will rise to 9.6 billion by 2050. Most of this growth will occur in cities, with an estimated 66 per cent of the global population living in urban areas by 2050.

These cities are evolving faster than at any point in our history, which puts them on the cusp of major transformation. If managed well, this could lead to unprecedented prosperity. But, if managed in an uncoordinated manner, it could drive social, economic and environmental decline. This is especially true when the many challenges mentioned in the UN's Sustainable Development Goals (SDGs) – such as climate change, sustainability and migration – are brought into focus in the context of urbanisation.

The consequences of the Fourth Industrial Revolution and urbanisation will coalesce around the development of smart cities – connected places to empower citizens to lead smarter lives.

But it is here where the humorous question: 'What have the Romans ever done for us?' might become a practical one, providing lessons for our future smart society; helping to shape the concept of smart cities to be one of intelligent cities instead, as described so judiciously at the World Economic Forum.

Despite the fact the Romans outwardly removed signs of poor hygiene from their cities, they didn't understand how to benefit fully from their own technological advances. They failed to recognise the interconnected and interdependent nature of the environment in which their problems existed. The Romans had not designed their sewers or aqueducts poorly, but instead made parallel bad decisions that worked cumulatively to undermine health improvements. Despite their amenities, the Romans had as many public health issues as their predecessors. The risks from poor hygiene remained unseen elsewhere, creating no deeper benefit to societal resilience than existed before.

The Romans lacked the knowledge of the interconnected ecosystem upon which society sat; they needed a whole system approach and the understanding this brings of the consequences and management of their technological innovation.

Despite society's advances, we have an analogy with the Romans in terms of the technology-driven transformation of society. The outputs of the Fourth Industrial Revolution will soon permeate our daily lives and urbanisation will continue relentlessly. Without a whole system approach and its holistic view, smart cities will struggle to become intelligent ones. The advertised benefits of innovation, just as with the Romans, can backfire through unintended consequences from the very interconnectivity of society that the technology was intended to enhance. This is especially so in terms of societal resilience, which could be described as being achieved through the sum of the parts of the many disparate activities and essential services provided to citizens by public, private and voluntary organisations. These are the services that keep communities safe from harm and promote their wellbeing. By no means exhaustive, examples include: Community policing; serious and organised crime; health and social care; crisis and emergency planning; critical infrastructure protection; public health; education; welfare; fire safety; and local government services.

Fragmented implementation

The challenge as it exists today, between the practical application of these activities on the ground, and the often misunderstood narrative of societal resilience as a single, albeit vague concept, comes essentially through a lack of understanding and visibility of the interconnectivity between these separate activity domains and the roles they play within the whole system. This is further compounded by a lack of coherence between policy and practice, with often fragmented implementation in the delivery of these services on the ground and, therefore, the outcomes sought across the different domains, stakeholders and strategies.

This lack of understanding results in increased risk and dilution of resilience – both in its conceptual societal sense as well as in practice on the ground – affecting many areas of daily life for citizens and communities in real terms.

Cities are for people. To become truly intelligent, as opposed to merely smart, they need to become inhabitant-centric: placing emphasis on citizen focused approaches and outcomes that can address the root causes of our increasing urban challenges – rather than introducing quick fix technology as is often the case.

This is particularly true for these essential services described that are the lifeblood upon which cities run. For inhabitant-centric intelligent cities to avoid the analogous pitfalls of the Romans, adoption of a whole system approach to improve

> The Romans lacked the knowledge of the interconnected and interdependent ecosystem upon which their society sat; they needed a whole system approach

understanding, management and integration of these component parts that underpin sustainable and socially resilient community ecosystems is key.

An approach like that more recently used in the EU Horizon 2020 project, Unity, will bring the governance, people, process, technology and information together into a unified view of the whole. This gives decision-makers clearer views of the interconnected consequences arising from urbanisation and the Fourth Industrial Revolution. With this comes an essential governance framework for information to help organisations work collaboratively. Thus, they can make better informed decisions from collective understanding – ones that transcend their individual boundaries or artificial borders to improve resilience at a meaningful societal level.

In intelligent cities, heterogeneous data must flow seamlessly if it is to be manageable and achieve sustainable and resilient innovation. Data is the new currency, where smart usage is as important as quantity. Managing its volume in an increasingly connected society is essential to beneficial transformation, as this data becomes correspondingly more complex. Even with advances in big data processing, those providing essential infrastructure and services still need to decide which data becomes useful information and how to use it. The current methods of stockpiling or scatter-gunning compound the complexities of this data, reducing its efficiency and increasing the risks in decision-making.

A whole system approach facilitates a governance framework for information and decision-making, such as that of the Joint Decision and Information Governance (JDIG) used in the EOPEN H2020 project. Here, the system architecture approach provides volume data users with the means to identify how they can improve their services. This takes place through better understanding and focus on information identification, collection, communication and storage and the governance needs surrounding it. The JDIG, being a core component within the whole system approach, facilitates the identification of shared challenges in multi-organisational decision-making to tackle contemporary challenges.

One significant aspect of these challenges to future cities is that of cybersecurity. Here, where data, systems and services are interconnected, resilience is compounded by the fragmented approach of cybersecurity. If citizens are to trust in the benefits of the Fourth Industrial Revolution, then cybersecurity must become integral to the whole system approach, integrated within the governance, people, process, technology and information capabilities upon which communities sit.

Such a 'public good' approach to cybersecurity, is posed eloquently by co-authors Mariarosaria Taddeo, Research Fellow and Deputy Director, Digital Ethics Lab, Oxford Internet Institute, University of Oxford and Francesca Bosco, Project Lead, Cyber-Resilience, Centre for Cybersecurity, World Economic Forum. In their article, *We must treat cybersecurity as a public good*, the authors argue cybersecurity should be treated no differently to defence or streetlighting.

Whether or not this is revelatory, the essential infrastructure and services upon which society relies don't just need to be individually smart, they need to become collectively intelligent with their associated whole system resilience, bolstered through public input and acceptance, treated no differently to that of public health, sanitation or defence. Bringing the infrastructure, services, cybersecurity, and other disparate elements needed for our future wellbeing into a whole system unified view, is an intelligent lesson to learn from the Romans, in that the visible improvements innovation brings do not necessarily transform society in a sustainable and resilient way. CRJ

Hakki Arslan | 123rf

Sources

- *Monty Python (1979):* The Life of Brian*;*
- *Schwab, K (2016):* The Fourth Industrial Revolution*; World Economic Forum; weforum.org;*
- *Marr, B (2018):* The Fourth Industrial Revolution – are you ready? *Forbes.com;*
- *World Economic Forum,* The future of urban development services*; weforum.org;*
- *United Nations Sustainable Development Goals; un.org;*
- *World Economic Forum (2019):* Intelligent rather than smart cities can address the roots of urban challenges*; weforum.org;*
- *Grabor H (2016):* What 2,000-year-old infrastructure tells us about urban planning*; nextcity.org;*
- *Weber, V (2019):* Smart cities must pay more attention to the people who live in them*; weforum.org;*
- *Marzell, L (2019):* Unity Framework for Trust*; www.academia.edu/36137186/Unity_FW_for_Trust;*
- *Marzell, L (2018):* The societal resilience narrative – bringing the chapters together*;* Crisis Response Journal *blog; crisis-response.com*
- *EOPEN H2020 project: http://eopen-project.eu/;*
- *Taddeo, M, Basco, F (2019):* We must treat cybersecurity as a public good*; weforum.org*

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