

BOOK REVIEW

Terra incognita - 100 maps to survive the next 100 years, by Ian Goldin and Robert Muggah, London, Century (Penguin), 2000, 480 pp., £30.00 (hardback), ISBN: 9781529124194, £30.00 (Ebook), ISBN: 9781473570122, £13.00 (Audio Download), ISBN: 9781473587182

Terrible though the global COVID-19 pandemic has undoubtedly been, and continues to be, its eruption has provided a stunningly stark new context to the many aspects of human life examined in this remarkable book.

When Ian Goldin, Professor of Globalisation and Development at Oxford University, and Robert Muggah, an internationally recognized scholar and practitioner of political economy, co-founder of the renowned Igarapé Institute in Brazil, first embarked on the task of assembling their exhaustive compendium of maps and charts they could not have anticipated that the entire world would soon be engulfed and distorted by a rogue virus.

Lesser mortals might have lost heart when the pandemic struck just as they were putting the finishing touches to their manuscript. But, as Goldin and Muggah watched the first wave unfold, they must have recognized that this global calamity presented them with a powerful new lens with which to examine the global dynamics they were addressing.

In those first few months before the book went to press in June 2020, as the pandemic's trail of disruption, disease and death spread across the globe, they undertook a radical rewrite and brilliantly integrated a COVID-19 perspective throughout, giving the book an arresting immediacy and sense of urgency.

There are three over-arching themes, all hugely impacted by COVID-19 – globalization, inequalities and new technologies – which act as golden threads running through all fourteen chapters on topics ranging from climate to culture, from urbanization to education, and from demography to geopolitics. For each topic the authors use maps, charts and commentary to highlight the key challenges and potential solutions.

The '100 maps' of the title are derived from more than five million images collected by NASA satellites over the past three decades, overlain with other data from such organizations as the UN, WHO, EU, numerous research institutes and private partners such as Google. Most of the maps have been created by *EarthTime*, a data visualization process developed by the CREATE Lab at Carnegie-Mellon University, Pittsburgh PA, and they vividly show patterns across the globe, either as a snapshot of the distribution or flow of various attributes or as changes over time. Additional information is provided in the more traditional form of tables and charts.

Alongside this visual cornucopia, there is a well-written commentary which goes way beyond merely expanding on or supplementing the graphics. It is

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nothing less than a compelling treatise on the joys of collectivism, multilateralism and internationalism. Its fundamental tenet is that we are all in this together – this being our existence as humanity on this precarious planet – and we must all work together to solve our world's problems. The argument is baldly utilitarian and progressive and unashamedly critical of neoliberalism, nationalism, populism and protectionism.

The stresses and strains of the pandemic are used to expose the vices and virtues of globalization. The virus has rudely exploited our global interconnectedness and interdependence. But at the same time,

those very attributes have allowed the world to collaborate and share data, knowledge and resources in the fight to overcome the horrors of the pandemic and its consequences.

Comparing with the state of the world at the time of the Spanish Flu pandemic of 1918, the authors point to the impacts of accelerated movement of peoples, products, ideas and investment. Air travel, the internet, social media, global financial systems, superpower dynamics, and in particular the reach of China, are all depicted as flows across the global map. Compared to the SARS epidemic of 2003, China's role in world economy has increased dramatically – from 4% of global economy to today's 16%. But even China's supercharged trade, infrastructure investments and geopolitical influence have been knocked sideways by the repercussions of COVID-19.

Similarly, the pandemic has shone a spotlight on the causes and consequences of the many inequities in the world's myriad economies and systems – especially the growing gulf between rich and poor, illustrated by maps and charts. Just 42 of the world's richest people own more wealth than 3.7 billion of the poorest. The commentary argues that COVID-19 will exacerbate inequalities within and between countries and that recovery will be slow and painful, especially for the most vulnerable.

Racism, oppression and social injustice are considered in some depth and detail, with references to George Floyd and the Black Lives Matter movement. The role of populist nationalist leaders fanning the flames of division, anger and hatred is highlighted, among them Donald Trump.

These divisive issues spill over into a substantial chapter on 'violence'. It begins by making the distinction between the violence of war and non-war armed organized violence. A map shows the global distribution of casualties in war zones compared to organized criminal activity. Whilst deaths in Afghanistan, Syria and Yemen have mounted inexorably in recent years, even more people have been killed in such non-war areas as Brazil, Colombia and Mexico by gangs, police and militia groups. Nevertheless, the authors make the point that, although today's world feels a very violent place, fewer people per head of population die a violent death than at any time in history.

A number of charts and maps are used to plot the global dynamics in arms – from small arms to nuclear warheads – and in a similar way the proliferation of terrorist incidents across the globe are also depicted. Interestingly, the authors make the point that, whilst the number of terrorist incidents in the West has cranked up dramatically since 9–11, the great majority of incidents occur in low-

income countries, particularly where ongoing armed conflicts have increased tensions.

Another core chapter deals with migration, where superb maps depict migrant flows and link these to shifting geopolitics and climate change. From the pre-historic migrations of early Homo, through the age of discovery to today's economic migrants and refugees from conflict zones, the maps bring clarity and enhance understanding. At the same time the commentary describes how migrants can fuel growth and create a culture of dynamism rather than dependency.

There are signs of the world coming together to tackle the big issues. The spectre of COVID-19 has engendered a revived sense of community, of mutual aid. The rapid sharing of information and knowledge about the virus and the establishment of a WHO-coordinated drive to ensure that effective vaccines reach low- and middle-income countries in equitable quantities are encouraging demonstrations of a collective, internationalist response. On the climate front, the growing awareness and shared commitment to reducing emissions and pollution and moving towards lower-carbon economies is gaining increasing traction despite push-backs by the likes of various national administrations, notably the US under Trump.

Similarly, with inequalities – the authors argue for a more collectivist approach: 'The fight is not between capitalism and socialism. Our priority must be to fundamentally reshape capitalism to prioritise the welfare of people – especially the most vulnerable – and our planet, not shareholder profits'. (43)

Ultimately, this book is a remarkable exposition and analysis of so many of the world's overriding pre-occupations and fundamental drivers. Its 100 maps do their job with clarity and precision, summarizing

huge amounts of information. As the authors say: “We believe that maps can help us navigate an increasingly uncertain world. . . . we are living in a ‘zetabyte’ era, with more data generated every day than in all of history combined (444).

But to this reviewer’s mind, the real thrust and power of the book comes from the superbly forceful and compelling commentary. Not only do Goldin and Muggah add persuasive detail and powerful examples in their supporting text, but they go on to offer cogent solutions to so many of the world’s challenges. As they say: ‘In our case, the goal is to help clarify what is happening around us, not just to enlighten, but to inspire action’. (444)

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