

Global capitalism post-pandemic

WILLIAM I. ROBINSON

Abstract: Global capitalism is at the brink of another round of restructuring and transformation based on a much more advanced digitalisation of the entire global economy and society, and the application of fourth industrial revolution technologies. The changing social and economic conditions brought about by the coronavirus pandemic are accelerating the process, helping a new bloc of transnational capital, led by the giant tech companies along with finance and the military-industrial complex, to amass ever-greater power during the pandemic and to consolidate its control over the commanding heights of the global economy. As restructuring proceeds, it will heighten the concentration of capital worldwide, worsen social inequality and aggravate international tensions. Enabled by digital applications, the ruling groups, unless they are pushed to change course by mass pressure from below, will turn to ratcheting up the global police state to contain social upheavals.

Keywords: coronavirus/COVID-19, crisis, digitalisation, fourth industrial revolution, global capitalism, global police state

Karl Marx and Frederick Engels famously declared in *The Communist Manifesto* that 'all that is solid melts into air', under the dizzying pace of change wrought by capitalism. Not since the Industrial Revolution of the eighteenth century has

William I. Robinson is distinguished professor of sociology and global studies at the University of California at Santa Barbara. His latest book is *The Global Police State* (Pluto Press, 2020). His Facebook blog is <https://www.facebook.com/WilliamIRobinsonSociologist>.

the world experienced such rapid and profound changes as those ushered in by globalisation. But now it appears that the system is at the brink of another round of restructuring and transformation based on a much more advanced digitalisation of the entire global economy and society. This restructuring had already become evident in the wake of the 2008 Great Recession. But the changing social and economic conditions brought about by the coronavirus pandemic are accelerating the process. These conditions have helped a new bloc of transnational capital, led by the giant tech companies, to amass ever-greater power during the pandemic and to consolidate its control over the commanding heights of the global economy. As restructuring proceeds, it will heighten the concentration of capital worldwide, worsen social inequality and aggravate international tensions. Enabled by digital applications, the ruling groups, unless they are pushed to change course by mass pressure from below, will turn to ratcheting up the global police state to contain social upheavals.

The emerging post-pandemic capitalist paradigm is based on a digitalisation and application of so-called fourth industrial revolution technologies. This new wave of technological development is made possible by a more advanced information technology. Led by artificial intelligence (AI) and the collection, processing and analysis of immense amount of data ('big data'), the emerging technologies include machine learning, automation and robotics, nano- and bio-technology, the Internet of Things (IoT), quantum and cloud computing, 3D printing, virtual reality, new forms of energy storage, and autonomous vehicles, among others. Computer and information technology (CIT) first introduced in the 1980s provided the original basis for globalisation. It allowed the transnational capitalist class, or TCC, to co-ordinate and synchronise global production and therefore to put into place a globally integrated production and financial system into which every country has become incorporated. Just as the original introduction of CIT and the internet in the late twentieth century profoundly transformed world capitalism, this second generation of digital-based technologies is now leading to a new round of worldwide restructuring that promises to have another transformative impact on the structures of the global economy, society and polity.

The first generation of capitalist globalisation from the 1980s and onwards was based on simple digitalisation – the so-called third industrial revolution. What distinguishes the fourth from the third revolution is a fusion of the new technologies and the blurring of lines between physical, digital and biological worlds.¹ If the first generation of capitalist globalisation from the 1980s on involved the creation of a globally integrated production and financial system, the new wave of digitalisation and the rise of platforms have facilitated since 2008 a very rapid transnationalisation of digital-based services. By 2017, services accounted for some 70 per cent of the total gross world product² and included communications, informatics, digital and platform technology, e-commerce, financial services, professional and technical work, and a host of other non-tangible products such as film and music.

It is hard to overestimate just how rapid and extensive is the current digital restructuring of the global economy and society. According to United Nations data,³ the 'sharing economy' will surge from \$14 billion in 2014 to \$335 billion by 2025. Worldwide shipments of 3D printers more than doubled in 2016, to over 450,000, and were expected to reach 6.7 million by the end of 2020. The global value of e-commerce is estimated to have reached \$29 trillion in 2017, which is equivalent to 36 per cent of global GDP. Digitally deliverable service exports amounted in 2019 to \$2.9 trillion, or 50 per cent of global services exports. By 2019, global internet traffic was sixty-six times the volume of the entire global internet traffic in 2005, whereas Global Internet Protocol (IP) traffic, a proxy for data flows, grew from about 100 gigabytes (GB) *per day* in 1992 to more than 45,000 GB *per second* in 2017. And yet the world is only in the early days of the data-driven economy; by 2022 global IP traffic is projected to reach 150,700 GB per second, fuelled by more and more people coming online for the first time and by the expansion of the IoT.

The coronavirus pandemic has spotlighted how central digital services have become to the global economy. But more than shine this spotlight, the pandemic and its aftermath, to the extent that it accelerates digital restructuring, can be expected to result in a vast expansion of reduced-labour or labourless digital services, including all sorts of new telework arrangements, drone delivery, cash-free commerce, fintech (digitalised finance), tracking and other forms of surveillance, automated medical and legal services, and remote teaching involving pre-recorded instruction. The pandemic has boosted the efforts of the giant tech companies and their political agents to convert more and more areas of the economy into these new digital realms. The giant tech companies have flourished during the contagion, their digital services becoming essential to the pandemic economy, as hundreds of millions of workers worldwide moved to remote work at home or through enhanced platforms, or became engaged in digitally-driven service work, and as in-person services were replaced by remote digital services. The post-pandemic global economy will involve now a more rapid and expansive application of digitalisation to every aspect of global society, including war and repression.

New capital bloc led by tech, finance and the military-industrial complex

Technological change is generally associated with cycles of capitalist crisis and social and political turmoil. Indeed, digitalisation has been spurred on by capitalist crisis. The coronavirus was but the spark that ignited the combustible of a global economy that never fully recovered from the 2008 financial collapse and has been teetering on the brink of renewed crisis ever since. But the underlying structural causes of the 2008 debacle, far from being resolved, have been steadily aggravated. Frenzied financial speculation, unsustainable debt, the plunder of public finance, over-inflated tech stock, and state-organised militarised accumulation have kept the global economy sputtering along in recent years in the face of chronic stagnation, and concealed its instability.⁴

There are three types of capitalist crises.⁵ The first type is *cyclical*, or the business cycle, involving economic downturns or recessions approximately once a decade. There were recessions in the early 1980s, the early 1990s and at the turn of the century. The second type is *structural* and appears about once every forty to fifty years. These are called structural, or restructuring crises, because their resolution involves restructuring the capitalist system. The restructuring crisis of the late 1870s into the early 1890s was resolved through a new round of colonialism and imperialism. The 1930s Great Depression was resolved through the rise of a new type of capitalism based on redistribution and state intervention to regulate the market, known technically as Fordism-Keynesianism, and led to the social welfare systems of the twentieth century. The next structural crisis hit in the 1970s and led to globalisation and the rise of a TCC from the 1980s and on. As A. Sivanandan famously noted in the late twentieth century, 'the handmill gives you a society with the feudal lord and the steam-mill gives you society with the industrial capitalist, the microchip gives you society with the global capitalist'.⁶

A new restructuring crisis began with the 2008 financial collapse.⁷ Leading the way in this restructuring, the giant tech companies, among them Microsoft, Apple, Amazon, Tencent, Alibaba, Facebook and Google, and to which are now added Zoom and other companies boosted by the pandemic, have experienced astonishing growth over the past decade. Apple and Microsoft registered an astounding market capitalisation of \$1.4 trillion each in 2020, followed by Amazon with \$1.04 trillion, Alphabet (Google's parent company) with \$1.03 trillion, Samsung with \$983 billion, Facebook with \$604 billion, and Alibaba and Tencent with some \$500 billion each.⁸ To give an idea of just how rapidly these tech behemoths have grown, Google's market capitalisation went from under \$200 billion in 2008 to over one \$1 trillion in 2020, or a 500 per cent increase.⁹ Meanwhile, in just two years, from 2015 to 2017, the combined value of the platform companies with a market capitalisation of more than \$100 million jumped by 67 per cent, to more than \$7 trillion.¹⁰

A handful of largely US-based tech firms that generate, extract and process data have absorbed enormous amounts of cash from transnational investors from around the world who, desperate for new investment opportunities, have poured billions of dollars into the tech and platform giants as an outlet for their surplus accumulated capital. Annual investment in CIT jumped from \$17 billion in 1970 to \$65 billion in 1980, then to \$175 billion in 1990, \$496 billion in 2000, and \$654 billion in 2016, and then topped \$800 billion in 2019.¹¹ As capitalists invest these billions, the global banking and investment houses become interwoven with tech capital, as do businesses across the globe that are moving to cloud computing and AI. By the second decade of the century, the global economy came to be characterised above all by the twin processes of digitalisation and financialisation.

Data shows that, from the 1980s onwards, those corporations that transitioned to CIT were dramatically more productive than their competitors, managing to resolve the so-called 'productivity paradox', whereby the growth in productivity notably slowed from starting in 1973, the date of the onset of a structural crisis

and subsequent globalisation.¹² As a result, the centre of gravity in the circuits of accumulation began to shift towards those corporations developing and producing CIT. Digitalisation is a 'general purpose technology', meaning that, like electricity, it spreads throughout all branches of the economy and society and becomes built into everything. Those who control the development and application of digital technologies acquire newfound social power and political influence. As this process deepens, those TCC groups that control general digitalisation develop new modalities for organising the extraction of relative surplus value and increasing productivity at an exponential rate. Hence the new technologies disrupt existing value chains and generate a reorganisation among sectors of capital and fractions of the capitalist class. They allow the tech giants and digitalised finance capital to appropriate ever-greater shares of the value generated by global circuits of accumulation.

In this process there emerge new configurations and blocs of capital. The rise of the digital economy involves a fusion of Silicon Valley with transnational finance capital – US bank investment in tech, for instance, increased by 180 per cent from 2017 to 2019¹³ – and the military-industrial-security complex, giving rise to a new bloc of capital that appears to be at the very core of the emerging post-pandemic paradigm. This new bloc will emerge even more powerful than it was going into the health emergency, spurring a vast new centralisation and concentration of capital on a global scale. At the head of this bloc, the tech behemoths are larger financial entities than most countries in the world and are able to wield enormous influence over capitalist states. New York state governor Mario Cuomo showcased this emerging capital-state relation when, in early May, he appointed three tech billionaires, Eric Schmidt of Google, Apple and Facebook, former Microsoft CEO Bill Gates, and Michael Bloomberg, to head up a Blue Ribbon Commission to come up with plans to outsource public schools, hospitals, policing and other public services to private tech companies.¹⁴ Such 'public-private partnerships' privatise to capital traditional state functions, while converting public funds into corporate subsidies.

The third leg in this triangulated bloc of capital is the military-industrial-security complex. As the tech industry emerged in the 1990s it was conjoined at birth to the military-industrial-security complex and the global police state.¹⁵ Over the years, for instance, Google has supplied mapping technology used by the US Army in Iraq, hosted data for the Central Intelligence Agency, indexed the National Security Agency's vast intelligence databases, built military robots, co-launched a spy satellite with the Pentagon, and leased its cloud computing platform to help police departments predict crime. Amazon, Facebook, Microsoft and the other tech giants are thoroughly intertwined with the military-industrial and security complex.¹⁶ The rise of the digital economy blurs the boundaries between military and civilian sectors of the economy, and brings together finance, military-industrial and tech companies around a combined process of financial speculation and militarised accumulation.

Worldwide, total defence outlays grew by 50 per cent from 2006 to 2015, from \$1.4 trillion to \$2.03 trillion, although this figure does not take into account secret budgets, contingency operations and 'homeland security' spending. By 2018, private military companies employed some 15 million people around the world, while another 20 million people worked in private security. The new systems of warfare, social control and repression are driven by digital technology. The market for new social control systems made possible by digital technology runs into the hundreds of billions. The global biometrics market, for instance, was expected to jump from its \$15 billion value in 2015 to \$35 billion by 2020.¹⁷ The concept of *militarised accumulation* helps us identify how transnational capital has become more and more dependent on a global war economy that, in turn, relies on perpetual state-organised war-making, social control and repression, and is driven by the new digital technologies.

Labourless production and surplus humanity

Crises provide transnational capital with the opportunity to restore profit levels by forcing greater productivity out of fewer workers. The first wave of CIT in the latter decades of the twentieth century triggered explosive growth in productivity and productive capacities, while the new digital technologies promise to multiply such capacities many times over. Specifically, digitalisation vastly increases what radical political economists, following Marx, refer to as the organic composition of capital, meaning that the portion of fixed capital in the form of machinery and technology tends to increase relative to variable capital in the form of labour.

In laymen's terms, digitalisation greatly accelerates the process whereby machinery and technology replace human labour, thus expanding the ranks of those who are made surplus and marginalised. One US National Bureau of Economic Research report found that each new robot introduced in a locale results in a loss of three to 5.6 jobs.¹⁸ In 1990, the top three carmakers in Detroit had a market capitalisation of \$36 billion and 1.2 million employees. In 2014, the top three firms in Silicon Valley, with a market capitalisation of over \$1 trillion had only 137,000 employees.¹⁹

This increase in the organic composition of capital aggravates over-accumulation and social polarisation, which has reached unprecedented levels worldwide. As is now well known, just 1 per cent of humanity owns over half of the world's wealth and the top 20 per cent own 94.5 per cent of that wealth, while the remaining 80 per cent have to make do with just 4.5 per cent.²⁰ As savage as these inequalities already were, the wealth gap widened rapidly during the pandemic, as many governments turned to massive new bailouts of capital with only modest relief, if at all, for the working classes. The US and EU governments provided an astonishing \$8 trillion handout to private corporations in the first two months of the pandemic alone, an amount roughly equivalent to their profits over the preceding two years.²¹ In the United States, the richest 600 billionaires increased

their wealth by \$700 billion from March to July 2020, even as 50 million workers lost their jobs, and as poverty, hunger and homelessness spread.²² Not surprisingly, top among the earners were tech tycoons.

Such inequalities, however, end up undermining the stability of the system as the gap grows between what is (or could be) produced and what the market can absorb. The extreme concentration of the planet's wealth in the hands of the few and the accelerated impoverishment and dispossession of the majority meant that transnational capital had increasing difficulty in finding productive outlets to unload the enormous amounts of surplus it accumulated.²³ The total cash held in reserves of the world's 2,000 biggest non-financial corporations increased from \$6.6 trillion in 2010 to \$14.2 trillion in 2020 as the global economy stagnated.²⁴ But capital cannot remain idle indefinitely without ceasing to be capital. Can the current wave of restructuring open up enough new opportunities for the TCC to invest this over-accumulated capital in the new technologies and circuits of accumulation?

The apologists of global capitalism claim that the digital economy will bring high-skilled, high-paid jobs and resolve problems of social polarisation and stagnation. It is true that the first wave of digitalisation in the late twentieth century resulted in a bifurcation of work, generating high-paid, high-skilled jobs on one side of the pole, giving rise to new armies of tech and finance workers, engineers, software programmers, and so on. On the other side of the pole, digitalisation produced a much more numerous mass of deskilled, low-wage workers and an expansion of the ranks of surplus labour. But the new wave of digitalisation threatens now to make redundant much so-called 'knowledge work' and to deskill and downgrade a significant portion of those knowledge-based jobs that remain. Increasingly, cognitive labour and gig workers face low wages, dull repetitive tasks and precariousness. As 'big data' captures data on knowledge-based occupations at the workplace and in the market, and then converts it into algorithms, this labour itself is threatened with replacement by AI, autonomous vehicles and the other fourth industrial revolution technologies. Digital-driven production ultimately seeks to achieve what the Nike Corporation refers to as 'engineering the labour out of the product'.²⁵ The end game in this process, although still far away, is labourless production.

A 2017 United Nations report estimated that tens, if not hundreds, of millions of jobs would disappear in the coming years as a result of digitalisation. As an example, the report estimated that more than 85 per cent of retail workers in Indonesia and the Philippines were at risk. The report also said that the spread of online labour platforms would accelerate a 'race to the bottom of working conditions with an increasing precarity'.²⁶ A series of International Labor Organization (ILO) reports documented these conditions. A 1998 study found already in the late twentieth century some one-third of the global labour force was under- or un-employed. The ILO then reported in 2011 that 1.53 billion workers around the world were in 'vulnerable' employment arrangements, representing more than 50 per cent of the global workforce. Eight years later, in 2019, it concluded that a

majority of the 3.5 billion workers in the world 'experienced a lack of material well-being, economic security, equality opportunities or scope for human development'.²⁷

Even before the pandemic hit, automation was spreading from industry and finance to all branches of services, even to fast food and agriculture. It is expected to eventually replace much professional work such as lawyers, financial analysts, doctors, journalists, accountants, insurance underwriters and librarians. AI-driven technologies are at this time becoming more widely adopted worldwide as a result of the conditions brought about by the contagion. The pandemic allows the TCC to massively push forward capitalist restructuring that it could not previously accomplish because of resistance to the digital takeover. Those economic sectors bolstered by accelerated restructuring during the pandemic are where precarious forms of employment prevail, that is, the self-employed, contract, temporary, platform and other such workers.²⁸ There appears to be a new bifurcation of work spurred on by the pandemic, between those who will shift to remote work (more than half of all employees in the United States were working at home in May 2020, whereas worldwide, according to the ILO, some 20 per cent of employment may become permanently remote²⁹), and from their homes face new forms of control and surveillance, and those locked into high-risk 'essential' in-person work, such as health care providers, cleaners, transport and delivery workers.

Yet with heightened digitalisation brought about by the pandemic there will be tens, even hundreds, of millions, who lost their jobs but will not be reabsorbed into the labour force as technology takes over their former tasks. One University of Chicago study estimated that 42 per cent of pandemic layoffs in the United States would result in permanent job loss.³⁰ As well, large corporations will snatch up millions of small businesses forced into bankruptcy (the ILO estimates that some 436 million such businesses worldwide are at risk³¹). Capitalists will use this mass unemployment along with more widespread remote and precarious work arrangements as a lever to intensify exploitation of those with a job, to heighten discipline over the global working class, and to push surplus labour into greater marginality.

Conclusion: the fire this time

The pandemic lockdowns served as dry runs for how digitalisation may allow the dominant groups to restructure space and to exercise greater control over the movement of labour. Governments around the world, from India to South Africa to El Salvador, decreed states of emergency and violently repressed those who violated stay-at-home orders.³² The lockdowns may have been necessary from the perspective of the health emergency. Yet they showcased how the TCC and capitalist states may more tightly control the distribution of labour power, especially surplus labour, by controlling movement and by locking labour into cyberspace and therefore making it disaggregated and isolated. As new digital

technologies expand the cognitive proletariat and the ranks of workers in the gig economy, they also allow for a stringent surveillance and control of this proletariat through cyberspace.

Capitalist states face spiralling crises of legitimacy after decades of hardship and social decay wrought by neoliberalism, aggravated by these states' inability to manage the health emergency and the economic collapse. In the aftermath of the pandemic, there will be more inequality, conflict, militarism and authoritarianism as social upheaval and civil strife escalate. The ruling groups will turn to expanding the global police state to contain mass discontent from below. Well before the contagion, the agents of this emerging global police state had been developing new modalities of policing and repression made possible by applications of digitalisation and fourth industrial revolution technologies.³³ These include artificial-intelligence-powered autonomous weaponry, such as unmanned attack and transportation vehicles, robot soldiers, a new generation of superdrones and flybots, hypersonic weapons, microwave guns that immobilise, cyber-attack and info-warfare, biometric identification, state data mining, and global electronic surveillance that allows for the tracking and control of every movement.

The sustained uprising in the United States (and worldwide) sparked by the 25 May 2020 police murder in the US state of Minnesota of an unarmed black man, George Floyd, brought these technologies of the global police state out in full force against hundreds of thousands of anti-racist protesters across the country. State data mining and global electronic surveillance have allowed the agents of the global police state to expand theatres of conflict from active war zones to militarised cities and rural localities around the world. These combine with a restructuring of space that allow for new forms of spatial containment and control of the marginalised. We are moving towards permanent low-intensity warfare against communities in rebellion, especially racially oppressed, ethnically persecuted and other vulnerable communities. All of this was displayed in the state repression against anti-racist protesters. Yet this low-intensity warfare is defensive, meant to disarticulate popular insurgency from below. The anti-racist uprising was the first full-scale pushback against the global police state in the richest and most powerful country in the world. It hit at the jugular vein of the machinery of war and repression, giving us a glimpse of how states and ruling groups will try to ratchet up the global police state, but also how the popular majority of humanity is prepared to fight back.

There has been a rapid political polarisation in global society since 2008 between an insurgent far Right and an insurgent Left. The ongoing crisis animates far-right and neofascist forces that have surged in many countries around the world and that have sought to capitalise politically on the health calamity. But it also roused popular struggles from below as workers and the poor engaged in a wave of strikes and protests around the world. We have entered into a period of mounting chaos in the world capitalist system. Capitalist crises, let us recall, are times of intense social and class conflict. Depending on how these struggles

play out, structural crises may expand into the third type of crisis, a *systemic* one, meaning that the crisis must be resolved by moving beyond the existing socio-economic system, in this case capitalism.

Whether a structural crisis becomes a systemic one depends on a host of political and subjective factors that cannot be predicted beforehand. What is clear is that mass popular struggles against the depredations of global capitalism are now conjoined with those around the fallout from the health emergency. While the ruling groups deploy the new technologies to enhance their control and profit-making, this same technical infrastructure of the fourth industrial revolution is producing the resources in which a political and economic system very different from the global capitalism in which we live could be achieved. If we are to free ourselves through these new technologies, however, we would first need to overthrow the oppressive and archaic social relations of global capitalism.

References

1. There is now a vast literature on the new technologies. See, inter alia, Klaus Schwab, *The Fourth Industrial Revolution* (Geneva: World Economic Forum, 2016).
2. Thomas Marois, 'TiSA and the threat to public banks', 21 April 2017, Transnational Institute, accessed on 18 July 2020 at <https://www.tni.org/en/publication/tisa-and-the-threat-to-public-banks>.
3. United Nations Conference on Trade and Development (UNCTAD), *Digital Economy Report 2019* (New York: United Nations, 2019), available at https://unctad.org/en/PublicationsLibrary/der2019_en.pdf.
4. William I. Robinson, *The Global Police State* (London: Pluto Press, 2020).
5. William I. Robinson, *Global Capitalism and the Crisis of Humanity* (New York: Cambridge University Press, 2014).
6. A. Sivanandan, 'Heresies and prophecies: social fallout of the technological revolution', *cy. Rev.*, no. 5 (1998), p. 11.
7. Robinson, *Global Capitalism and the Crisis of Humanity*.
8. Nicole Rashotte, '10 top technology stocks by market cap', *Investing News*, 11 February 2020, accessed on 18 July 2020 at <https://investingnews.com/daily/tech-investing/top-technology-stocks/>.
9. 'Alphabet market cap 2006–2020', *Macrotrends*, undated, see continuously updated graph, accessed on 18 July 2018 at <https://www.macrotrends.net/stocks/charts/GOOGL/alphabet/market-cap>.
10. UNCTAD, *Digital Economic Report 2019*.
11. Federal Reserve Bank of St. Louis, *Economic Research*, 'Private fixed investment in information processing equipment and software', see continuously updated data in graph, US Bureau of Economic Analysis, accessed on 18 July 2020 at <https://fred.stlouisfed.org/series/A679RC1Q027SBEA>.
12. Erik Brynjolfsson and Andrew McAfee, *The Second Machine Age: work, progress, and prosperity in a time of brilliant technologies* (New York: W.W. Norton, 2014), pp. 100–01.
13. Research Brief, 'Where top US banks are betting on fintech', *CBinsights*, 20 August 2019, accessed on 18 July 2020 at <https://www.cbinsights.com/research/fintech-investments-top-us-banks/>.
14. Naomi Klein, 'Screen new deal: under cover of mass death, Andrew cuomo calls in the billionaires to build a high-tech dystopia', *The Intercept*, 8 May 2020, accessed on 18 July 2020 at

- <https://theintercept.com/2020/05/08/andrew-cuomo-eric-schmidt-coronavirus-tech-shock-doctrine/>.
15. For detailed discussion, see Robinson, *The Global Police State*.
 16. Yasha Levine, *Surveillance Valley: the secret military history of the internet* (New York: PublicAffairs, 2018).
 17. For the data in this paragraph, and much more, see Robinson, *The Global Police State*, Chapter 3, 'Militarized accumulation'.
 18. Daron Acemoglu and Pascual Restrepo, 'Robots and jobs: evidence from US Labor markets', Working Paper 23285, National Bureau of Economic Research, Cambridge, MA: 2017, accessed on 20 July 2020 at <https://www.nber.org/papers/w23285>.
 19. *The Economist*, 'The superstar company: a giant problem', 17 September 2016, accessed on 20 July 2020 at <https://www.economist.com/leaders/2016/09/17/a-giant-problem>.
 20. Oxfam, 'Wealth: having it all and wanting more', January 2015, accessed on 20 July 2020 at https://oi-files-d8-prod.s3.eu-west-2.amazonaws.com/s3fs-public/file_attachments/ib-wealth-having-all-wanting-more-190115-en.pdf.
 21. *The Economist*, 'Corporate Bail-Outs: Bottomless Pit, Inc.', 4 April 2020, p. 8.
 22. Americans for Tax Fairness/Institute for Policy Studies, 'Billionaires' pandemic wealth gains burst through \$700B', 16 July 2020, accessed on 21 July 2020 at <https://americansfortaxfairness.org/wp-content/uploads/2020-7-16-Billionaires-Wealth-Gains-Top-700-Billion.pdf>.
 23. Over the past few years there has been a rise in under-utilised capacity and a slowdown in industrial production around the world. (Eric Toussaint, 'No, the coronavirus is not responsible for the fall of stock prices', *CADTM*, 5 March 2020, accessed on 20 July 2020 at <https://www.cadtm.org/No-the-coronavirus-is-not-responsible-for-the-fall-of-stock-prices>.) All the telltale signs of an over-accumulation crisis have been present for some time. The pandemic was but the spark that lit the fuse.
 24. *The Economist*, 'Hanging together', 16 May 2020, p. 60.
 25. Martin Ford, *The Rise of the Robots* (New York: Basic Books, 2015), p. 198.
 26. UNCTAD, *Information Economy Report 2017: digitalization, trade and development* (New York: United Nations, 2017), accessed on 20 July 2020 at https://unctad.org/en/PublicationsLibrary/ier2017_en.pdf.
 27. For this data, see the following three ILO reports: 'World employment report 1996-97'; 'Global employment trend 2011'; 'The challenge of job recovery; world employment and social outlook: trends 2019', all published in Geneva by United Nations.
 28. ILO, 'COVID-19 and the world of work: concept Note', dated July 1-2 and 7-9, 2020, p. 4, accessed on 21 July 2020 at https://www.ilo.org/wcmsp5/groups/public/-dgreports/-dcomm/documents/meetingdocument/wcms_747931.pdf.
 29. For the US data, see Jose Maria Barrero, Nick Bloom and Steven J. Davis, 'COVID-19 is also a reallocation shock', Working Paper No. 2020-59, Becker Friedman Institute, University of Chicago, last edited on 25 June, <https://bfi.uchicago.edu/working-paper/covid-19-is-also-a-reallocation-shock/>, p. 3. For the worldwide data, see ILO, 'COVID-19 and the world of work: concept note', p. 4.
 30. For a summary of the report, see Kenneth Rapoza, 'Some 42% of jobs lost in pandemic are gone for good', *Forbes*, 15 May 2020, accessed on 20 July 2020 at <https://www.forbes.com/sites/ken-rapoza/2020/05/15/some-42-of-jobs-lost-in-pandemic-are-gone-for-good/#d371c7c50ab9>.
 31. ILO, 'COVID-19 and the world of work', p. 2.
 32. William I. Robinson, 'Global capitalist crisis deadlier than coronavirus', *Arena*, 28 April 2020, <https://arena.org.au/global-capitalist-crisis-deadlier-than-coronavirus-part-iii/>.
 33. William I. Robinson, 'The next economic crisis: digital capitalism and global police state', *Race & Class* 60, no. 1 (2018).