

Planetary Politics in the Twenty-Second Century

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After two centuries of immanent planetary politics, by the twenty-second century the political had become planetary. This means that since the 2020s political analysis encompasses the entire sphere of the planet and cannot be conducted without a holistic approach. The 100-year planetary organic crisis (POC) began with the global ecological overshoot of annual demand on resources exceeding the Earth's biocapacity in 1970, which had the potential to end with the decline in human fertility and population a century later. However, the events of 2022 led to the realisation that humanity was headed for, at best catastrophic 3 °C global heating, and at worst extinction-level 5 °C hothouse earth by the end of the century.

This contribution to the *Handbook of Global Politics in the 22nd Century* was assembled from the teachings of Ian Manners by three of his followers at Lund University (Yoda Betula, Gaia Lovelock Margulis, and Krik Oakenglade) who collaborated using an Ansible Quantum Communicator between the *status quo*, *capitalist*, and *symbiotic* universes. This chapter offers a reflection on how we arrived at planetary politics in the twenty-second century in five sections, drawing on normative empowerment, shared communion, and planetary symbiosis in Manners' teachings. The first section remembers the 100-year POC from ecological overshoot in 1970 to population decline in 2070. The rest of the reminiscence covers three presents since the 2022

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quantum inflation event, where three parallel universes were pinched off from the larger expanding multiverse. The first *status quo* present since 2022 was the return of reactionary power politics and the rebirth of *Dieselpunk* imaginary. The second *capitalist* present since 2022 was the continued neoliberal globalisation of politics and the acceleration of *Cyberpunk* imaginary. The third *sybiotic* present since 2022 was the birth of ecosocial politics and the growth of *Solarpunk* imaginary. By the date of this recollection of how we arrived at planetary politics in 2122, only one of these three presented a future in any meaningful sense for human beings.

1 The 100-Year Planetary Organic Crisis, 1970–2070

[A]ccelerated, energy intensive production, consumption and distribution systems are serving to intensify an unprecedented planetary organic crisis. This crisis involves interacting and deepening structural crises of economy/development, society, ecology, politics, culture and ethics – in ways that are unsustainable. (Gill and Benatar 2020: 171)

As Stephen Gill and Solomon Benatar's (2020) reflections on the political economy of planetary health made clear over a century ago, the POC of neoliberal inequality economics, demographic injustice in society, climate unsustainable ecology, proxy insecure conflict, and ethno-nationalist irresilient politics characterised the period from 1970 ecological overshoot until the 2060–2070 peak in human population (Manners 2022a).

1.1 Beginning in the late 1970s, neoliberal inequality economics had a dramatic effect on inequality across the planet. Neoliberalism was the privatisation of public life, including the deregulation and privatisation of nationalised industries, financial services, welfare state, and government. Evidence demonstrated how income inequality, gini inequality, and wealth inequality had grown globally during a 100-year period. Total income inequality had been increasing since 1980 with the top 10% of income earners capturing the majority of total growth, particularly in the Middle East, Brazil, and Sub-Saharan Africa (Chancel et al. 2021) and <Tremblay et al. ψ 2121>. In contrast, massive decreases in income shares by the bottom 50% of income earners were seen in Russia, China, India, the USA, and Canada since 1980. Changing gini income inequality was also seen in the data, with most OECD countries experiencing increases in inequality since 1980 while more neoliberal economies such as South Africa, China, USA, and UK had seen dramatic increases. Wealth inequality in OECD countries was double the level of income inequality and increasing throughout the 100-year period (Balestra and Tonkin 2018: 4) and <OECD ψ 2120>. Taking the OECD countries as a whole, on average the wealthiest 10% of households owned over half of the total wealth, while the poorest 60% of households owned less than an eighth of total wealth.

1.2 Since the 1991 end of the First Cold War, social transformation significantly changed demographic injustices in society across the planet. Demographic shifts included rapidly altering human populations; the changing nature of employment; and moving patterns of migration, refugees, and asylum seekers. Social, intergenerational, and health injustice grew in the OECD during the inter-Cold War period, 1991–2022. Among the members of the OECD, mean, not median levels of social justice climbed throughout the period, but the 2007 global financial crisis revealed the deteriorating quality of life compared to pre-2008 levels (Hellmann et al. 2019; OECD 2020) and <OECD ψ 2120>. The OECD *How's Life?* surveys revealed how about an eighth of people lived in relative income poverty in the OECD, one in five people reported had difficulty in making ends meet, and more than one-third of people were at risk of falling into poverty (Hellmann et al. 2019), Müller et al < ψ 2119>. Declining intergenerational justice was also a feature from the 2010s onwards, with a general failure to link the concerns of younger generations with those of older generations (Hellmann et al 2019: 92–4) and <OECD ψ 2120>. Female educational attainment, together with sexual and reproductive health and rights drove lower fertility rates across the world; the global population reached just under 10 billion in the 2060s (Vollset et al. 2020) and <Li et al. ψ 2120>. The halving of population by 2100 for many countries around the world meant that intergenerational justice was a crucial component of addressing the planetary organic crisis. Improving health, in terms of declining infant mortality and increasing life expectancy, had been a general feature. The OECD surveys revealed that deaths from suicide, acute alcohol abuse, and drug overdose (particularly the USA's opioid epidemic) disproportionately affected men compared to women and represented significant gender differences in life expectancy at birth.

1.3 In the early decades of the twenty-first century the optimism of the Rio Earth Summit, Kyoto Protocol, and Paris Agreement of the UN Climate Change Convention collapsed as annual increases in global greenhouse gas emissions ensured unsustainability and creeping climate catastrophe across the planet. This climate unsustainable ecology was caused by aggressive human consumption, grotesque human pollution, devastating ecosystem collapse and extinction of wildlife, and the catastrophic climate emergency. While the origins of the global COVID-19 pandemic remained uncertain, what was certain was that accelerating numbers of pandemics were driven by ecosystem collapse (Benatar and Daneman 2020: 1300; The Lancet Planetary Health 2021: e1). Evidence from the Global Footprint Network and the World Wide Fund for Nature, The Lancet Commission on pollution and health (Landrigan et al. 2018), the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), and the Intergovernmental Panel on Climate Change (IPCC) demonstrated how consumption, pollution, ecosystem damage, and climate emergency had grown during 1990–2070. Aggressive human overconsumption among the world's wealthiest people had

increased every year since records began in 1961 according to humanity's 'ecological footprint' and had exceeded the Earth's rate of regeneration since 1970 (WWF 2020: 56–9). By 2022, in relative terms China, the USA, and the EU had the world's largest ecological footprints, while the USA had the largest per capita ecological footprint that was five times the world's average biocapacity per person (WWF 2019: 14). Grotesque human pollution was the product of neoliberal overconsumption in the form of air, water, occupational, soil, chemical, and metal pollution (Landrigan et al. 2018). Across the planet pollution was the largest environmental cause of disease, including premature deaths (Ibid. 2018: 1). Some of the worst affected regions were South Asia, Eastern Europe, and Central Africa, with India, China, Russia, and Brazil having some of the highest death rates from household and ambient air pollution (UNDP 2022). Devastating ecosystem collapse and extinction of wildlife was caused by neoliberal overconsumption and pollution, and human encroachment and abuse of other living species. Compared to the species extinction rate of the previous 10 million years, rates were tens to hundreds of times higher leading to approximately 1 million species threatened with extinction by 2019 (IPBES 2019: 11–2, 24–5). The culmination of human economic, social, and ecological abuse of the planet was the accelerating, catastrophic climate emergency which, when humans doubled atmospheric CO₂ from pre-industrial levels, was inevitability going to lead to the planet heating between 2.6 and 4.1 °C by the end of the twenty-first century (Sherwood et al. 2020).

1.4 In the early twenty-first century it was clear how economic inequality, social injustice, and ecological unsustainability were the symbiotic root causes of insecurity and conflict across the planet. The Central American Dry Corridor from Panama through Costa Rica, Nicaragua, Honduras, El Salvador, and Guatemala to southern Mexico became a region of climatic and political instability that drove climate refugees northwards since 2009. At the same time the combination of climate change and food shortages in the Middle East and North Africa, together with drought and desertification in the Sahel, acted as stressors or multipliers that amplified the underlying causes of the 'Arab Uprisings', regional conflict, and subsequent refugees throughout the 100-year POC (Werrell and Femia 2013). In general, ontological security, societal safety and security had slightly deteriorated across the planet during the early twenty-first century with improvements in Europe offset by growing civil unrest in the USA (Kinnvall et al. 2018). During the period Norway, Iceland, Switzerland, Denmark, Japan, and Singapore had the highest levels of societal safety and security, while Afghanistan, Venezuela, Yemen, South Sudan, Iraq, and the DR Congo had the highest levels of societal risk and insecurity. Ongoing domestic and international conflict referred to the extent to which countries are involved in internal and external conflicts, as well as their role and duration of involvement in conflicts. The lowest levels of ongoing domestic and international conflict were found in Botswana, Bulgaria, Iceland, Ireland, Mauritius, and Singapore, contrasting with the highest levels of conflict in Syria, Afghanistan, Yemen, Somalia, Libya, and South Sudan. In

contrast to both safety and security, and ongoing conflict, militarisation had declined during the inter-Cold War period with armed service and military expenditure declining. By the start of the Second Cold War in 2022, the least militarised countries in the world included Iceland, Slovenia, Hungary, New Zealand, Moldova, and Malaysia, compared to the most militarised countries of Israel, Russia, USA, North Korea, France, and Lebanon.

1.5 The 100-year POC, 1970–2070 had a long-lasting effect on ethno-nationalist irresilient politics, in particular through the third wave of autocratisation from the 1990s onwards. The rise of ethno-nationalist parties and leaders across the planet was a defining feature of the inter-Cold War period. Ethno-nationalists were rent-seeking elites who use populist, ethnic, and nationalist appeals to legitimise their concentration of power. More specifically ethno-nationalists such as Putin, Trump, and Johnson practised ‘sadopopulism’ in making electoral promises they had no intention of delivering, instead their lack of policies made the suffering of their popular constituency even worse (Snyder 2018). Shelly Gottfried (2019) found that ethno-nationalism and sadopopulism were driven by the needs of a neoliberal oligarchy to disguise their failures by supporting ‘populist oligarchy’ across the planet, arguing that the governments of Trump, Johnson, Orbán, and Netanyahu were all predicated on the need to protect the wealthy elite. The erosion of civil liberties and the decline of political rights accelerated during the inter-Cold War period as the ‘third wave of autocratisation’. Almost three-quarters of the world lived in countries with a deterioration in civil liberties, driven by economic and physical insecurity, violent conflict, and the pandemic. Erosions in civil liberties were most resisted by free democracies while partially free and unfree countries were most susceptible to decline. At the same time the decline of political rights and democracy was accelerating with democracy in retreat throughout the inter-Cold War years. According to this evidence, by the start of the Second Cold War, only about half of the world lived in a democracy of some sort. In contrast, most of the ethno-nationalist parties and leaders ruled ‘not free’ authoritarian or hybrid regimes, ‘partially free’ flawed democracies, or ‘free’ flawed democracies.

Summary: The 100-year POC from 1970 to 2070 was viewed as, at best, a run of ‘bad luck’, or at worst as ‘multiple challenges’ at the time (Manners 2021: 159). In general, academia seemed just as helpless and unable as policymakers to escape the prison of reductionism in order to join the dots of holistic planetary political analysis. Existing power hierarchies within the fields of universities, social sciences, and political sciences structurally and systematically marginalised outside voices that would have pointed towards holistic planetary political solutions.

The 100-year POC reached its zenith with the 2022 quantum inflation event that pinched off three parallel universes of nationalist *status quo* politics, neoliberal *capitalist* politics, and ecosocial *symbiotic* politics. The trigger for this event was the quantum-level consequences of Covid-19 pandemic/climate emergency/Russian invasion of Ukraine, but the result was the creation of

three parallel universes. Fortunately, Yoda Betula (*status quo*), Gaia Lovelock Margulis (*capitalist*), and Krik Oakenglade (*symbiotic*) were able to work and communicate across this multiverse in order to assemble this genuinely comparative political analysis and reflection. Drawing on Gill and Benatar's distinctions between ethics, society, ecology, culture, and politics, the three universes provided an opportunity to comparatively analyse them in terms of ideology, society, environmentalism, culture, demography, habitability, and the study of international/global/planetary politics in the twenty-second century. From the perspective of 2122, this triptych also demonstrates the symbiotic relationship between quantum behaviour, cultural imaginaries, and planetary politics <Betula et al. ψ 2100>.

2 Status Quo, Reactionary Politics, and Dieselpunk, 2022–2122

The nationalist *status quo* universe was one where reactionary power, nostalgic ethno-nationalism, brown environmentalism, and *Dieselpunk* imagination dominated.

2.1 The *status quo* universe, similar to the European Restoration (1815–1848) and Fascism (1922–1945) periods, is primarily characterised by the desire to return to an earlier period in order to address the planetary organic crisis. This reactionary world is one in which the challenges of the pandemic, climate, and war are all solved through a return to ultra-conservative and far-right ideology and politics. For example, to address the waves of twenty-first century global pandemics, states in the *status quo* universe closed their borders, implanted ID chips, and onshored strategic production such as pharmaceuticals. To address the twenty-first century climate emergency, states demonstrated the strategic benefits of global warming, such as transpolar shipping and Arctic farming. In response to the Russian invasion of Ukraine states used twentieth-century theories of 'International Relations' (IR) to demonstrate the benefits of the new balance of power. In this universe the hegemony of military power and physical force was clear to see, as the science of IR had successfully predicted all those centuries ago <Morgenwartzheimer ψ 2048>.

2.2 *Status quo* societies simultaneously worshiped national diversity and particularity, at the same time as being functionally driven by the demands of total war, as the prophetic visionary George Orwell argued they should be in the religious scripts of *Twenty Eighty-Four* <Orwell ψ 2049>. Prior to the Second Cold War, nostalgia was no longer what it used to be, but by the end of the 2030s it had been fully reinstated as the central component of societies in, for example, the Anglo, Brahman, and Han empires. The central importance of nostalgia and ethno-nationalism was demonstrated by three events that led to the creation of the *status quo* universe. Firstly, the Anglo Empire was recreated through the role of English nationalists such as Sir Alexander Boris de Piffle Johnson (Lord of Manhattan), Lord Farage of Frankfurt, and the Russian Tsar Putin in using nostalgia for the white empire and widespread propaganda to

convince 27% of UK residents to vote for 'Brexit' in 2016. Secondly, life-long US President Trump was first elected in 2016 and then re-elected for life in 2024 on the strength of widespread support for his plans to engage Russia in World War III by 'bombing the shit out of Russia'. This was despite the fact that it was Tsar Putin's electoral interferences in 2016 and 2024 that put Trump in The White House with the supermajority needed to change the constitution. Thirdly, it was Vladimir Putin's desire to return Russia to the Romanov Empire that led to the invasions of Ukraine and beyond from 2022 onwards <Ivan ψ 2032>. These three events led to the fulfilment of Orwell's prophecy of unending imperial conflict between the Anglo-Oceania (USA and UK), Euro (EU and Ukraine), Han-Eastasia (China), Russo-Westasia (Russia), and Brahman-Southasia (India) empires.

2.3 In the *status quo* universe, brown was the new green in environmentalism with the benefits of fossil fuel emissions clearly outweighing the risks of the coming ice age in the new state-sanctioned sciences. Brown environmentalism demanded pursuing a business-as-usual, very high emissions Shared Socioeconomic Pathway (SSP) 3—Representative Concentration Pathway (RCP) 8.5 in order to realise the strategic benefits of low-cost fossil fuels, strengthening national energy strategies in favour of coal, oil, and fracking, as well as the agricultural benefits of warmer, wetter weather for crops. These benefits were soon realised through an increase in GMT by 3 °C (2050), 4 °C (2080), 5 °C (2110), and 5.5 °C (2122) over pre-industrial temperatures. Although there were extinctions of ecosystems, extreme weather events, flooding, and sea level rises across the American, Russian, Han, and Brahman empires, these were believed to be far worse in enemy empires <Monckridleyborg ψ 2045>. By following the successful agricultural policies of brown environmental pioneers Stalin (1932–1933) and Mao (1958–1962), the *status quo* empires were able to advance 'creative destruction' through famines across the formerly productive fields of America, Russia, India, and China in the latter half of the twenty-first century. Another benefit of brown environmentalism was the reductions in numbers of elderly and vulnerable citizens weighing down the great power empires, largely through increased heat-related ozone-related mortality, as well as through malaria and dengue diseases (IPCC 2022) and <IPCC ψ 2122>. Obviously by 2122, the findings of the IPCC were entirely subject to the positive interpretations of reactionary inter-imperial conflict, such as the 'benefits, advantages, and invulnerabilities' of the climate apocalypse in the twenty-second century <IPCC ψ 2122>.

2.4 *Dieselpunk* dystopian petroculture and imaginary was vital to sustaining the *status quo* universe. *Dieselpunk* was a retrofuturist cultural genre displaced from the early/mid-twentieth century into the early/mid-twenty-first century that combines neo-noir aesthetics, petroculture, and neofascism (Knopf 2021). *Dieselpunk* had its origins in 1990s nostalgia and retrofuturism of the earlier generation's experiences of the 1920s, 30s, 40s, and 50s, including art, fiction, cinema, and gaming. Early fiction of *dieselpunk* included Philip K. Dick *The Man in the High Castle* (1962), Robert Harris *Fatherland* (1992), Mike

Mignola *Hellboy* (1993), and Philip Reeve *Mortal Engines* (2001). Films of petroculture included the *Mad Max* series (1979), while *Dieselpunk* gaming included *Fallout* (1997) and *BioShock* (2007) series. Thus, the aestheticism of nationalistic flags, salutes, songs, demonstrations, literature, and wider culture so reminiscent of the 1930s became wildly popular in the 2030s *status quo* universe of far-right *Dieselpunk* and neofascism, where *World War Z* (2013) zombies embraced World War III through the Russian Z (zwastika) invasion of Ukraine (2022).

2.5 *Status quo* demography was significantly affected by a combination of female educational attainment and empowerment, declining male fertility, and ecosocial reproductive reluctance, as Margaret Atwood *The Handmaid's Tale* (1985) and PD James *The Children of Men* (1992) predicted. As predicted in the 2020s just five large polities retained populations of over 300 million throughout the twenty-first century (Vollset et al. 2020) and <Li et al. ψ 2120>. Chinese population peaked at 1432 million in 2024 before being predicted to halve to 732 million in 2100. India was predicted to peak at 1605 million in 2048 before reducing to 1093 million in 2100. The EU population peaked at 446 million in 2038 before reducing to 307 million in 2100. The USA was predicted to peak at 364 million in 2062 before reducing to 336 million in 2100. Nigerian population rose from 206 million in 2017 to a predicted 790 million in 2100. In contrast, the Russian population reduced from 146 million in 2017 to 106 million in 2100, with one of the lowest fertility rates in the world. However, these numbers were reduced by the decline in male fertility and the reluctance of people to have children in declining ecological and socio-economic conditions (Smith 2021). Hence, rather than the 1970s neo-Malthusian predictions of exponential human population growth, in the *status quo* world population peaked at 9732 million before 2064 (Meadows et al. 1972) and <Thomas ψ 2072>.

2.6 The greatest challenge faced in the *status quo* universe was the large number of people displaced from the human temperature niche by 2070. Using a human climate niche of a mean average temperature of around 11–15 °C, it was estimated that approximately 3.09 billion people (± 0.56 billion) were displaced from their habitat by 2070, assuming the RCP 8.5 temperature rise of 3.2 °C by 2070 (Xu et al. 2020). This shifting human climate niche meant that displacement primarily affected highly populated areas such as North Africa, parts of Southern China, and the Mediterranean region, but also shaped migration in Central America, the Sahel, Middle East, South Asia, Southeast Asia, and Northern Australia. The effects of the large-scale displacement of one-third of the human population over half a century generally fed the reactionary ethno-nationalist irresilient politics through zero-migration policies and shoot-to-kill border security, as well as widespread xenophobia and racism.

Summary: As the *status quo* universe demonstrated, the study of International Relations in the twenty-second century generally reflected the gradual collapse of humanity during the previous 100 years. By 2122 the international

decline of pluralistic society, environmental diversity, popular culture, human fertility, habitable space, and ethnic relations were co-constituted by the accelerating rise of reactionary, nostalgic ethno-nationalist movements, parties, and regimes promoting resource consumption and conflict. As the final, 33rd centenary edition of the *Deglobalization of World Politics* <Johndotter et al. [ψ 2097](#)> made clear, the worldview of the ‘American Social Science of International Relations’ <Stanmann [ψ 2077](#)> fundamentally clashed with the worldviews of the ‘Chinese Social Science of Guanxi Relationality’ <Zhang [ψ 2091](#)> and the ‘Indian Social Science of Hindutva Values’ <Kumar [ψ 2081](#)>.

3 Capitalist, Neoliberal Politics, and Cyberpunk, 2022–2122

The *capitalist* universe, similar to European liberalism in the second half of the nineteenth century and interwar liberalism in the 1920s, was increasingly characterised by the neoliberal globalisation of politics accelerating the POC.

3.1 This hyper-global world was one in which the challenges of pandemics, climate, and war were all solved through the further privatisation of public life and minimisation of government involvement. For example, to address the waves of twenty-first century pandemics, political actors in the *capitalist* universe handed over health care, medical testing, and pharmaceutical production to private corporations. To address the twenty-first century climate emergency, political actors introduced market mechanisms, green products, and geoengineering. And in response to the Russian invasion of Ukraine political actors used twentieth-century theories of ‘Liberal Peace’ to advocate greater democratisation, economic interdependence, and international organisations to demonstrate the failures of autocracy. In this universe the rationale of economic power and material incentives was structurally important, as the science of democratic and liberal peace had successfully predicted a century earlier <Keodoylessett [ψ 2048](#)>.

3.2 *Capitalist* societies simultaneously worship individual and corporate freedom, at the same time as being driven by the demands of the market, a transformation set out in the guiding words of Friedrich August von Hayek (1944) which firmly set the majority of humanity on the road to serfdom. Prior to the Second Cold War, the future was not what it used to be, but by the end of the 2030s faith in neoliberalism and a technofantastic future had been fully restored through corporate ownership of media, education, and welfare. The central importance of technofantasy and neoliberalism was demonstrated by two events that led to the creation of the *capitalist* universe. Firstly, Global Britain’s Brexit was created through the role of Koch and Bradley foundations in funding and facilitating the State Policy, Atlas, and Eurocenter networks of neoliberal libertarian think tanks such as the IEA, Adam Smith Institute, Policy Exchange, Legatum Institute, and Academy of Ideas, all worshipping Hayek’s (1944) ‘battle of ideas’. Secondly, as UN votes condemning the Russian invasion of Ukraine demonstrated, the Second Cold War was also a battle of ideas

between capitalist democracy and autocracy. From 2022 onwards, democratic capitalism was made up of two groups of US-led liberal democratic capitalism (including Australia, Britain, Canada, Japan, and New Zealand) and EU-led social democratic capitalism (including Georgia, Moldova, Switzerland, and Ukraine). In contrast, autocratic capitalism was made up of three groups of Russian-led autocratic kleptocracy (including Belarus, Eritrea, North Korea, and Syria), Chinese-led fully autocratic capitalism (including Algeria, Ethiopia, Iran, and Vietnam), and Indian-led borderline-autocratic capitalism (including Pakistan, Bangladesh, and Sri Lanka). The emergence of democratic and autocratic capitalism led to the growth of autocapitalism studies, as pioneered by Åhall and Ciksos <ψ 2031>.

3.3 In the *capitalist* universe greenwashing was the new colour of environmentalism with companies, products, and services proudly advertising their commitment to reduce, reuse, and recycle themselves in the coming centuries without affecting profit margins. In contrast to the *status quo* universe, greenwashing environmentalism assumed high emissions SSP4-RCP6 where some attempt was made in the overdeveloped global north to switch to unsustainable gas, nuclear, and biofuels. Although not as immediately catastrophic as the *status quo* universe, increases in GMT of 2.5 °C (2050), 3.5 °C (2080), 4 °C (2110), and 4.5 °C (2122) eventually ensured ecosystem collapse, freshwater and food insecurity. Across the planet corporations started adopting the names of well-known future-oriented fictional entities such as HelthWyzer, OrganInc, RejoovenEsense, AnooYoo, CorpSeCorps, and Corpsbank in order to be able to provide personal health and security solutions at affordable costs for the wealthiest sector of society to adapt to the climate emergency (Atwood 2003) and <Bezos et al. ψ 2103>.

3.4 *Cyberpunk* dystopian technofantasy and imaginary was vital to sustaining the *capitalist* universe. *Cyberpunk* was a futurist cultural genre that combined high tech and low life (Gibson 1984) such as artificial intelligence and cybernetics with corporate dominance and social collapse (Michaud 2008). *Cyberpunk* had its origins in 1960s and 1970s counter-cultural dystopian comics and novels, with speculative fictions set in the period 2000–2035. Early fiction of *cyberpunk* included Philip K. Dick *Do Androids Dream of Electric Sheep?* (1968), John Wagner and Carlos Ezquerro *Judge Dredd* (1977), William Gibson *Neuromancer* (1984), Masamune Shirow *Ghost in the Shell* (1989), and Neal Stephenson *Snow Crash* (1992). Films of *cyberpunk* included *Blade Runner* (1982), *Judge Dredd* (1995), *Johnny Mnemonic* (1995), and *The Matrix trilogy* (1999–2003), while gaming included the *Deus Ex* series (2000–2016), *Watch Dogs* series (2014–2020), and *Cyberpunk 2077* (2022). Thus, the aestheticism of post-industrial landscapes, megacorporations, cyberspace, technology, and wider cultural expectations of the 1980s came to dominate the popular imaginary of the 2030s *capitalist* universe of libertarian *Cyberpunk* and corporatism, where *Blade Runner* replicants embraced oligarchs and their Tyrell/Canaan-like corporations after the 2022 economic shocks.

3.5 *Capitalist* demography was able to profit with the shift from unassisted to assisted childbirth throughout the second half of the twenty-first century, in particular through the use of in vitro and in vivo artificial fertilisation (IVF) techniques which became the norm among paying parents in the global north. The accelerated impact of declining fertility and the high costs of IVF, together with the full privatisation of the Sustainable Development Goals (SDGs), ensured that the reduction of human population occurred earlier than in the *status quo* universe (Vollset et al. 2020) and <Li et al. ψ 2120>. Thus, human population reduced to 6290 million by 2100 (lower than the 7954 million in 2022), with Chinese population (700 million), Indian population (930 million), and USA population (286 million) all reduced. In contrast, the EU population grew to almost 600 million because of the enlargements of the Union in the 2030s and 2040s, before reducing to 392 million by 2100. At the same time the Nigerian population grew to a peak of 408 million in 2100. The Russian population crashed throughout the twenty-first century, initially predicted to decline to 89 million by 2100, but the post-2022 Russian socio-economic catastrophe significantly worsened this prediction. The economic consequences of shifting *capitalist* demography were important, as the 7 largest economies in the world in 2020 were the USA, EU, China, Japan, India, Brazil, and Russia (with the big three USA, EU, and Chinese economies each being about ten times larger than the Russian economy). By 2100 the enlargements of the EU and the relative reductions of populations lifted the EU back to the largest economy in the world, followed by the USA, China, India, Japan, Australia, Nigeria, and Canada. In contrast, Russia crashed out of the top 10 in the 2030s.

3.6 The greatest challenge faced in the *capitalist* universe was the economic costs and financial burdens of the cascading tipping elements eventually leading to hothouse earth in the twenty-second century (Steffen et al. 2018). At least 15 tipping elements were cascading in the twenty-first century: ice/cryosphere entities (Arctic winter and summer sea ice, Greenland, West and East Antarctic ice sheets, Alpine glaciers, permafrost); atmosphere/circulation patterns (Atlantic thermohaline circulations, El Niño southern oscillation, Indian and West African monsoons); and ecosystems/biosphere components (Amazon rainforest, Boreal forest, Coral reefs, marine carbon sinks). As each of these elements tipped and cascaded into further tipping elements throughout the later twenty-first and early twenty-second century, so the costs to livelihoods escalated and the impossibility of geoengineering the earth away from a hothouse condition became clear. Even eventual solar engineering, solar power, stabilising sea levels, solar-electric sea ships and airships, and carbon coin currency were not able to address the cascading tipping elements quickly enough (Robinson 2020). Ultimately wealthy corporations of the global north were forced to relocate their headquarters and operations further north with the retreating Arctic circle, while the 40% of human population living in the tropical zone found their lives systematically degraded over the generations (Xu et al. 2020).

Summary: As the *capitalist* universe demonstrated, the study of global politics in the twenty-second century was contorted by the hegemony of knowledge and science owned by wealthy corporations, allowing the global north to blame the global south for their misfortune. By 2122 the UN could congratulate itself on implementing the SDGs while failing to achieve sustainability or address inequality anywhere in the world. Populist oligarchic society across the world achieved its technofantasy of living in the metaverse while simultaneously shielding in gated communities of corporate compounds north of 40 °N latitude. As the realtime updates to the standard university IR teaching resource, *Generosity of Globalization* <Bezos et al. ψ 2122> makes clear, globalisation is good for you because it allows for individual choice, freedom, and opportunity (if you can afford it).

4 Symbiotic, Ecosocial Politics, and Solarpunk, 2022–2122

4.1 The *symbiotic* universe was unlike anything in human history that had preceded it. This symbiotic world was built on the recognition that everyone and everything shared a relationship of mutual benefit from which they could not escape (Margulis 1998). Rather than reactionary or neoliberal politics, the planetary organic crisis was recognised and addressed for what it is: a planet-wide crisis of the organism where the causes were addressed through a holistic and symbiotic approach to the alienation of human and nonhuman coexistence. Thus, the symbiotic world was one in which the challenges of the pandemic, climate, and war are all solved holistically through ecocentric, socialised, local politics rather than egocentric, antisocial state and privatised politics. For example, to address the waves of twenty-first century pandemics, local and regional political actors in the *symbiotic* universe tackled ecosystem collapse and unhealthy human–nonhuman relations. To address the twenty-first century climate emergency, local and regional political actors worked translocally to reduce overconsumption, unsustainability, injustice, pollution, ecosystem collapse, and climate catastrophe. In response to any invasion by any political leader, local and regional political leaders worked translocally to strengthen the large majority of communities opposed to violence in order to implode the corrosive propaganda and corruption of power on which all such leaders depended. In this universe the symbiosis of shared communion and normative empowerment was proven through actions and outcomes (Manners 2022b).

4.2 *Symbiotic* societies were simultaneously committed to the idea of transforming sustainability through radical decarbonisation and progressive politics by achieving equity and local empowerment, as suggested in *Ecovillages: Lessons for Sustainable Community* (Litfin 2014). The rising spectre

of the Second Cold War in the 2020s took away any future hope from the green generation across the planet, but by the end of the 2030s faith in humanity and belief in planetarity had been restored through a series of green revolutions. The central importance of sustainability and equality was demonstrated by three events that led to the creation of the *symbiotic* universe. Firstly, the clear failures of the 2015 Paris Agreement on Climate Change led to increasing numbers of grassroots activists and groups taking nonviolent direct actions after 2018 to bring about a green revolution in addressing the climate emergency through transnational solidarity, led by ‘School Strike for Climate’/‘Fridays for Future’, ‘Extinction Rebellion’, and ‘Scientist Rebellion’ (Manners 2020). Secondly, the global financial crisis, Covid-19 pandemic, and Russian invasion of Ukraine made necessary a green revolution through fairer deglobalisation, regionalisation, and localisation (Raworth 2017; O’Sullivan 2019; van Bergeijk 2020). Thirdly, the 2022 IPCC Sixth Assessment Report (6AR) found that exceeding the Paris Agreement target of 1.5C increases in GMT was ‘almost inevitable’ and that the cumulative scientific evidence was unequivocal that the ‘brief and rapidly closing window of opportunity to secure a liveable and sustainable future for all’ was being missed. Ultimately it was the green revolution in education unleashing the power of imagination that helped restore faith in humanity <Inspiration Journey ψ 2031>.

4.3 In the *symbiotic* universe green comes in many shades from deep ecology to dark ecology to bright green environmentalism. Deep ecology shifted human egocentrism to ecocentrism in which all and every life is equally important (Næss 1973). Dark ecology recognised that humans are just one part of the planetary ecosystem, and that they cannot control the planetary ecosystem but instead have already caused ecological catastrophe (Morton 2016). Bright green environmentalism advanced a vision of prosperity and well-being combining sustainability and innovation through the idea that for the future to be green, it must also be bright (Steffan 2006). In contrast to the *status quo* and *capitalist* universes, *symbiotic* green ecology accepted that intermediate emissions SSP1-RCP4.5 were inevitable as lifestyles and energy sources were immediately transitioned away from unsustainable and destructive fossil fuels, nuclear, and biofuels towards solar, wind, hydro, geothermal, and wave/tidal power during the 2020s. Although increases in GMT of 2 °C (2050), 2.5 °C (2080), and 2.7 °C (2110) were historically unavoidable, by 2122 GMT had peaked at around a 3 °C rise over pre-industrial levels.



4.4 *Solarpunk* utopian *symbiosis* and imaginary was vital to sustaining diversity on planet Earth. *Solarpunk* was a counter-cultural genre that combined cli-fi, indigenous and Afro-futurist sci-fi, sustainability, community, renewable energy, and technology in order to overcome socio-ecological injustices and increasing empirical and ontological violence by imagining an end to the global capitalist system that had resulted in planetary ecological destruction (Flynn 2014; Hudson 2015; Cameron 2019; Steinkopf-Frank 2021). *Solarpunk* had its origins in online aesthetic social media communities and transnational literary anthologies of the 2010s, with speculative art and novels set in the realisable near-future. Early fiction of *solarpunk* included Ursula Le Guin *The Dispossessed* (1974), Octavia Butler *The Parable of the Sower* (1993), Margaret Atwood *MaddAddam* trilogy (2003), and Kim Stanley Robinson *New York 2140* (2017). Films of *solarpunk* included aspects of Hayao Miyazaki's *Studio Ghibli* works from the 1980s, Ryan Coogler *Black Panther* (2018), and Bjørn-Erik Aschim *Dear Alice* (2021). Imaginaries of *solarpunk* sustainable lifestyles included the Na'vi hometree from *Avatar*, Amity farmlands from *Divergent*, *Terra Nova* colony, and Birnin Zana the capital city of Wakanda from *Black Panther*. Thus, the aestheticism of organicist technology, symbiotic lifestyles, radical decarbonisation, and progressive politics grew from the ground up in the 2030s *symbiotic* universe of counter-cultural *solarpunk* and ecosocial sustainability, where green activists embraced transnational solidarity after the IPCC's 6AR gave a final warning to humanity in 2022.

4.5 Overconsumption rather than demography was the problem in the *symbiotic* universe. The world's richest 1% caused double the emissions (20% of

total) of the poorest half of the population (10% of total emissions), while the world's richest 10% caused half of all greenhouse gas emissions in the 2020s. Thus, the problem was primarily overdevelopment in the global north, rather than overpopulation in the global south. The 2015 SDGs were nowhere near adequate to return human overconsumption back to pre-1970s levels, so the 2030 *Planetary Overdevelopment Goals* (POG) primarily targeted the problems of inequality, injustice, unsustainability, insecurity, and irresilience created by the world's 1% ultrawealthy, 10% superwealthy, and overdeveloped global north. The locally and translocally empowering POG combined women's social justice (minimum 18 years of education, 100% access to contraception, and empowerment) with progressive social policies (parental leave, childcare, employment participation, and rights) and addressing the distinctive dynamics of planetary politics. Together this progressive social and green revolution reduced total fertility rates below 1.4 and increased life expectancy above 80 years, while simultaneously reducing human ecological footprint to 1.7 global hectares per person. By 2100 human population was reduced to 6 billion and by 2122 human ecological footprint was below 1.7 gha., both levels that were unlikely to be ever reached again <Li et al. [ψ 2120](#); Global Footprint Network [ψ 2122](#)>.

4.6 The greatest challenge faced in the *symbiotic* universe was addressing the distinctive dynamics of planetary politics (Litfin 2003). These began with achieving decolonial repair, reparation, and restoration in North–South dilemmas (Shiliam 2015). Next, recognising the symbiotic nature of local–global relationships through deglobalisation, regionalisation, and localisation. Thirdly, shifting the functioning of social justice and demographic justice from short-term democratic cycles and life-long autocratic cycles to intergenerational time horizons. Fourthly, taking a precautionary approach to planetary action to ensure that ‘where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation’ (Rio Declaration 1992), and that local and regional political actors enact precautionary principles as well as preventative action, rectification at source, and that the responsible should pay. Finally, a holistic understanding of the planet's political systems was essential for the *symbiotic* universe. The governance partnerships for the POG and to address the distinctive dynamics were the same: a governance communion of planetary politics of local subsidiarity where decisions are taken as openly and as closely to the people with planetary ethics of global suprasidiarity where actions are taken to better achieve together what cannot be achieved apart.

Summary: As the *symbiotic* universe demonstrated, the study of planetary politics in the twenty-second century was radically different to *status quo* international relations or *capitalist* global politics. By 2122 human civilisation was a very different place, with industrialisation replaced by organicisation, capitalism replaced by symbiosm, and inter/national relations replaced by planetary politics. The *symbiotic* world was no panacea for the loss of the

Holocene world: approximately one-third of Earth's biodiversity was extinct, GMT climbed by 3 °C, sea levels rose by a metre on average, but human population returned below 2000 levels of 6 billion by 2122. It was not nonviolent direct action; fairer deglobalisation, regionalisation, and localisation; or even the scientific urgency of the loss of a liveable and sustainable future that produced the green revolution needed for the *symbiotic* world. In the end it was a revolution in the way people thought about, studied, and lived their planet, starting with a revolution in education through enhancing creativity and innovation by thinking differently about ourselves—unleashing the power of imagination rather than continuing a system of education that was modelled in the interests of industrialisation and in the image of it (Robinson 2008, 2009). In practical terms this *symbiotic* green revolution was to be found in radical transition away from industrial higher education towards, for example, embracing Active Learning in the faculty of Planetary Studies and department of Planetary Politics at Lund University in the north <Inspiration Journey ψ 2031; Betula ψ 2041 [2022]>. It was through these revolutions in thinking that we realised only the *symbiotic* world of ecosocial politics and *Solarpunk* culture presented a future in any meaningful sense for human beings to live and sustain for all.

5 Planetary Politics in the Twenty-Second Century: A Status Quo, Capitalist, or Symbiotic Universe?

On reflection, what does knowledge about the 100-year POC and the *status quo*, *capitalist*, and *symbiotic* universes mean for contemporary readers in 2122? Yoda Betula communicating from the *status quo* universe tells us that by the twenty-second century it was entirely possible to return the world of 1922—a very hot 1920s with a lethal mix of nostalgic ethno-nationalist neofascism at 5 °C over pre-industrial temperatures. And all Yoda and fellow academics had to do was nothing—keep calm and carry on regardless—safe in their far northern universities teaching courses on the international relations of inter-imperial balance of power. As Yoda says, the absence of children and hope was depressing, but what could you do? Nobody wants to lose their job for publishing the wrong things, and certainly no one wants to be imprisoned for thought crimes such as questioning the national culture, the environmental apocalypse, or the hegemony of military power and physical force in international relations.

Gaia Lovelock Margulis communicating from the *capitalist* universe tells us that by the twenty-second century it was entirely possible to live in the technofantasy world of the 1980s or 2010s—an almost as hot 4 °C world where the technocracy was eternally promising the geoengineering benefits of nuclear power-driven carbon capture, sulphate aerosols, and market-based solutions.

And all Gaia and fellow academics had to do was accelerate the neoliberalism—place your trust in the market—precarious but wealthy on the income generated by citation streams, quality assurance scores, and online research retail. Teaching profit-making courses had been a challenge, in particular the monetisation of online texts, citations, and exam grades. But zero-hours jobs did make student-customer satisfaction more motivating. And the courses in global politics using the corporate publisher-sanctioned online teaching resources helped. As Gaia put it, in the end the rationale of economic power and material incentives put food on the table and kept poverty at bay.

Krik Oakenglade communicating from the *symbiotic* universe has a very different story to tell. A tale of struggle and hard work against the powerful status quo and the hegemony of capitalism. Because of the struggles and sacrifices of the twenty-first century generations, by the year 2122 it was safe to say that the planet and its species had mostly been saved from the worst excesses of humanity. And while a 3 °C rise over pre-industrial levels was not good, it was possible to put in place the decarbonised society and reforesting earth needed to avoid cryospheric collapse and associated sea level rise. But the path of understanding symbiosis and adopting solarpunk lifestyles was not the easy route. Far from it, this path meant changing everything about industrialisation in favour of far more demanding organisation of society, including a symbiotic economy and radical decarbonisation. But most important of all for the study of global politics in the twenty-second century, this path meant radically changing education and higher education, in particular by recognising the fallacy of inter/national relations and embracing the ecocentric reality of planetary politics.

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