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Sustainable Urbanism and the Climate Crisis

An examination of the field and its future

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Introduction

A catastrophe of unimaginable proportions looms over human civilization, one that threatens the continued existence of our civilization as we know it, the lives of billions of people, and the continued existence of countless non-human species. It is a crisis entirely of our own making, and one completely within our power to stop. Yet we are not stopping. We continue to pump billions of tons of carbon dioxide and other greenhouse gases into the atmosphere, and each subsequent year, we emit more.¹

We are no longer in the age where the true scale of the climate crisis was only understood by a few scientists and environmental activists. In 2023 it is regularly reported by the media, addressed by politicians, discussed in popular culture.. And yet, nothing substantial has changed since the days of ignorance and denial, except that we as a planet are burning more fossil fuels today than we were back then.

Every day we experience first hand or hear about the climate catastrophe, and yet we see a world around us that continues to function as if nothing was happening. “It’s a kind of schizophrenia,” says Noam Chomsky, “and it runs right through society.”² Every day we get up and live out this schizophrenia in our everyday lives, aware of the coming catastrophe and yet helplessly contributing to it, as a consumer and as a laborer.

Those who work in the design of the built environment — architects, urban planners, urban designers, and the like — are perhaps more affected by this schizophrenia than most.

¹ International Energy Agency, *CO2 Emissions in 2022*, Paris, IEA, 2023, <https://www.iea.org/reports/co2-emissions-in-2022> (accessed August 29, 2023).

² R. Hackett, “Noam Chomsky: ‘In a couple of generations, organized human society may not survive,’” *Canada’s National Observer*, 12 February 2019, <https://www.nationalobserver.com/2019/02/12/features/noam-chomsky-couple-generations-organized-human-society-may-not-survive-has-be> (accessed 29 August 2023).

Architects and urbanists have long seen themselves as innovators who design new ways to live and to build, and given that the built environment is one of the biggest contributors to CO₂ emissions globally, they seem well placed to protagonize the fight against climate change. But in reality, the design professions are not the main decision makers in how the city is built under capitalism. That role belongs to the real estate and construction industry, of which architects and urbanists are often just an appendage. The continued voracious growth of real estate underpins huge swathes of the global economy and financial system. The global real estate market is worth more than four times global GDP, and more than all equities and securities combined.³ Architects and urban planners can try to intervene where they can to make cities more sustainable, but against the central role the unending growth of real estate plays in the global economic system, they are quite impotent.

What is called sustainable urbanism is the product of this impotence. Not a unified field or set of practices, it encompasses a range of responses to this schizophrenic situation. This work seeks to examine sustainable urbanism as an array of ideological responses to the impotence of architects, urban planners, urban designers, and other urban practitioners experience when it comes to making cities play a major role in the mitigation of and adaption to climate change. In this work, I seek to answer the question “What is the role of architecture and urbanism in the face of the climate crisis?” Firstly by exploring the current state of sustainable urbanism, and then by suggesting an alternate way forward.

When discussing the climate crisis in any capacity, it is essential to start by establishing the scientific context. This is what I do in Chapter 1. I look at the scientific literature on the state of climate action, predicted levels of warming given current action, and

³ P. Tostevin, “The total value of global real estate,” *Savills Impacts*, September 2021, <https://www.savills.com/impacts/market-trends/the-total-value-of-global-real-estate.html> (accessed 29 August 2023).

the effects we can expect to see at those levels. I then look at the attitudes of the global public towards climate change. In Chapter 2, I look at the situation sustainable urbanism finds itself in, in terms of the proportion of emissions that comes from cities, and the professional situation of sustainable urbanism within the real estate industry. I then look at how sustainable urbanism is an ideological response to these conditions. In Chapters 3 and 4 I examine and critique two dominant ideological trends within sustainable urbanism. In Chapter 5 and 6 I explore an alternative way forward for architects and urbanists committed to the fight against climate change.

Chapter 1: The Climate Context

On November 4th, 2016, the Paris Agreement, the international treaty on climate mitigation, formally entered into force. Then-US President Barack Obama, upon depositing the world's second largest (and cumulatively largest) CO₂ emitter's ratification of the treaty, optimistically predicted that "someday we may see this as the moment that we finally decided to save our planet."⁴ Paris was indisputably a landmark agreement, committing its signatories to "holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels."⁵ Although its only mechanism to achieve this goal was to compel its parties to "prepare, communicate and maintain successive nationally determined contributions that it intends to achieve,"⁶ it was remarkable in that virtually every nation in the world agreed on the existence of climate change as an urgent problem and the absolute necessity of limiting warming to these critical levels, and committed to taking important measures to mitigate their emissions and report on their progress to the global community.

Since the return of the US to the treaty in 2021, every UN member state is a signatory to the Paris Agreement, although three have not ratified it — the failed states Libya and Somalia, and Iran, which has made its ratification contingent on the lifting of American

⁴ T. Somander, "President Obama: The United States Formally Enters the Paris Agreement," <https://obamawhitehouse.archives.gov/blog/2016/09/03/president-obama-united-states-formally-enters-paris-agreement> (accessed 22 August 2023).

⁵ *Paris Agreement to the United Nations Framework Convention on Climate Change*, Dec. 12, 2015, T.I.A.S. No. 16-1104, Article 2.

⁶ Paris Agreement, Article 4.

sanctions.⁷ Compared to a decade before, when then-American President George W. Bush effectively tanked the Kyoto Protocol while repeatedly publicly questioning whether humans were contributing to climate change,⁸ or even five years before in 2011, when Canada withdrew from Kyoto in order to “create jobs and growth,”⁹ this is undeniably a major achievement that made the Paris Agreement the first real step forward towards a global mitigation of climate change — although one that came late, when atmospheric CO₂ had already crossed the 400 ppm mark,¹⁰ nearly a quarter century after the United Nations Framework Convention on Climate Change (UNFCCC) was set up in 1992, and more than five decades after the American oil industry began to research the effect CO₂ emissions from fossil fuels on the global climate.¹¹

Seven years later, Obama himself acknowledges that “we are nowhere near where we need to be”¹² when it comes to meeting the targets set out in Paris. This is an understatement. The Intergovernmental Panel on Climate Change (IPCC)’s 2018 Special Report on Global Warming of 1.5°C (SP15), commissioned by the UNFCCC as part of the framework set out

⁷ M. McGrath, “Climate change: Iran says lift sanctions and we’ll ratify Paris agreement,” *BBC News*, 11 November 2021, <https://www.bbc.com/news/science-environment-59242986> (accessed 22 August 2023).

⁸ L. Burbank, “Bush Views Shift on Climate Change,” *NPR*, 1 February 2007, <https://www.npr.org/templates/story/story.php?storyId=7115660> (accessed 22 August 2023).

⁹ *Guardian* staff, “Canada pulls out of Kyoto protocol,” *The Guardian*, 13 December 2011, <https://www.theguardian.com/environment/2011/dec/13/canada-pulls-out-kyoto-protocol> (accessed 22 August 2023).

¹⁰ NASA, “Vital Signs: Carbon Dioxide,” *Global Climate Change: Vital Signs of the Planet*, <https://climate.nasa.gov/vital-signs/carbon-dioxide/> (accessed 22 August 2023).

¹¹ A. Malm and the Zetkin Collective, *White Skin, Black Fuel: On the Danger of Fossil Fascism*, London, Verso, 2021, pp. 24-26.

¹² B. Obama, “Speech at COP26,” available at <https://www.youtube.com/watch?v=D2ScHyXs50Q> (accessed 22 August 2023)

in the Paris Agreement, called for a 45% decline in emissions from 2010 levels by 2030.¹³

Given that global emissions have continued to increase and were 4.5% higher in 2021 than in 2016 and 11.3% higher than in 2010,¹⁴ it is safe to say that we are not just nowhere near where we need to be, we are in fact going in the opposite direction.

Despite the progress made and emissions reductions by many countries, not a single country evaluated by the independent Climate Action Tracker, which tracks the climate commitments and policies of all major emitters and a representative sample of smaller countries that together amount to 85% of global emissions, is on track to meet the Paris targets.¹⁵ The world as a whole is well off track towards keep warming below 2°C, and so off track towards preventing an overshoot of 1.5°C that the IPCC's Sixth Assessment Report (AR6) concluded that "global warming is more likely than not to reach 1.5°C even under the very low GHG [greenhouse gas] emissions scenario."¹⁶

The Paris Agreement calls for all signatories to communicate a new nationally determined contribution (NDC) every five years, in which they report their plans to achieve the emissions reductions necessary to keep warming to the Paris targets.¹⁷ The United Nations Environment Programme (UNEP), assessing the latest NDCs submitted after 2021,

¹³ Intergovernmental Panel on Climate Change, "Climate Change 2023 Synthesis Report: Summary for Policy Makers," *IPCC Sixth Assessment Report (AR6)*, Geneva, Switzerland, IPCC, 2023, p. 12.

¹⁴ Our World in Data, "CO2 emissions," <https://ourworldindata.org/co2-emissions> (accessed 22 August 2023).

¹⁵ Climate Action Tracker, <https://climateactiontracker.org> (accessed 22 August 2023).

¹⁶ "Climate Change 2023 Synthesis Report: Summary for Policy Makers", B.1.1

¹⁷ Paris Agreement, Article 4.9.

calls them “highly inadequate.”¹⁸ Modeling the likely warming under the emissions reductions implied by the latest NDCs, the UNEP estimates that global warming will well surpass both the 1.5°C or 2°C thresholds, and reach a median estimate of 2.6°C by the end of the century, and at the upper end of the ranges given by their models could reach 3.1°C.¹⁹ However, many countries are not on track to meet even their highly inadequate NDCs, and this “implementation gap” means that a continuation of current policies is predicted to lead to even higher warming, with a median of prediction of 2.8°C and up to 3.3°C.²⁰ It should also be noted that these climate models have large uncertainties and are based on an imperfect understanding of factors such as carbon feedback cycles. The IPCC therefore cautions that extreme warming above 4°C cannot be ruled out even under lower emissions scenarios.²¹

The models IPCC’s predictions are based on may even be too conservative. Multiple studies have suggested that the Arctic will warm faster than the models the IPCC uses suggest,²² and one recent study predicted that the Arctic will be seasonally ice-free by mid century even if warming is kept below 2°C.²³ Some of the most recent projections indicate

¹⁸ United Nations Environment Programme, “Emissions Gap Report 2022: The Closing Window — Climate crisis calls for rapid transformation of societies,” Nairobi, 2022, <https://www.unep.org/emissions-gap-report-2022>, p. XVIII.

¹⁹ This is the estimate excluding conditional NDCs, which are NDCs made conditional on receiving international financing or other aid. Including conditional NDCs lowers the projection by 0.2°C. See Emissions Gap Report 2022, p. XXI.

²⁰ Emissions Gap Report 2022, p. XXI.

²¹ AR6 Synthesis Report: Summary for Policymakers, p. 9.

²² C. Heuzé et al, “The Deep Arctic Ocean and Fram Strait in CMIP6 Models,” *Journal of Climate*, vol. 36, no. 8, 2023, pp. 2551–2584.

²³ Y.H. Kim et al, “Observationally-constrained projections of an ice-free Arctic even under a low emission scenario,” *Nature Communications*, vol. 14, article 3139, 2023.

that at the current rate the world will exhaust its remaining carbon budget to limit global warming to 1.5°C in less than two years.²⁴

The Effects of Climate Change

The average global surface temperature has increased 1.09°C since the 19th century, at least one 1.07°C of which is attributable to human activity.²⁵ This means that the world is still far from experiencing the kind of temperatures implied by average warming of 1.5°C, 2°C, 3°C, or above. Yet severe consequences are already being felt. Severe droughts in Spain decimated the country's grain crop in the spring of 2023.²⁶ Heat-induced wildfires in Canada's boreal forests blanketed New York City in smoke in June.²⁷ July 2023 is estimated to have been the hottest month of the last 120,000, and saw heatwaves not just across the northern hemisphere but also during the winter in temperate South America.²⁸

This type of summer is not an anomaly anymore. The northern hemisphere summer of 2022 saw Pakistan hit by catastrophic floods that affected more than 8 million people and

²⁴ Z. Liu et al, "Monitoring global carbon emissions in 2022," *Nature Reviews Earth & Environment*, vol. 4, 2023, pp. 205-206.

²⁵ AR6 Synthesis Report: Summary for Policymakers, A.1.2.

²⁶ A. Tena, "El 60% de los cultivos del país ya sufre daños "irreversibles" por la sequía," *Público*, 13 April 2023, <https://www.publico.es/sociedad/60-cultivos-pais-sufre-danos-irreversibles-sequia.html> (accessed 22 August 2023).

²⁷ D. Bilefsky and I. Austen, "What to Know About Canada's Exceptional Wildfire Season," *New York Times*, 29 June 2023, <https://www.nytimes.com/article/canada-wildfires-what-to-know.html> (accessed 22 August 2023).

²⁸ K. Mackenzie and T. Sahay, "Global Boiling," *Phenomenal World*, 3 August 2023, <https://www.phenomenalworld.org/analysis/global-boiling/> (accessed 28 August 2023).

destroyed over 2 million homes,²⁹ and China experience its worst recorded heatwave and devastating droughts.³⁰ A study estimated that over 61,000 died from heat-related causes in Europe alone.³¹ The summer of 2024 will without a doubt be worse, as will each subsequent summer.

Perhaps the most widely known effect of climate change is sea-level rise. The global mean sea-level has already increased by 0.2 meters since the beginning of the 20th century due to anthropogenic global warming.³² Even under the lowest emissions scenario the IPCC considers (SSP1-1.9), global mean sea-level will rise by between .15 and .23 meters by 2050, and between .28 and .55 meters by 2100.³³ High-end estimates for IPCC scenario SSP1-2.6, which has temperatures peaking at just below 2°C, are .9 meters by 2100 and 2.5 meters in 2300.³⁴ Predictions of sea-level rise are necessarily uncertain, and the IPCC says that “due to deep uncertainty linked to ice-sheet processes, global mean sea level rise above the likely range — approaching 2 m by 2100 and in excess of 15 m by 2300 under the very high GHG emissions scenario (SSP5-8.5) — cannot be excluded.”³⁵

²⁹ R. Cleetus, “A Year After the Deadly Pakistan Floods Began, Hard Lessons About Climate Loss and Damage,” *The Equation*, Union of Concerned Scientists, 13 June 2023, <https://blog.ucsusa.org/rachel-cleetus/a-year-after-the-deadly-pakistan-floods-began-hard-lessons-about-climate-loss-and-damage> (accessed 22 August 2023).

³⁰ V. Yu, “China reports ‘most severe’ heatwave and third driest summer on record,” *The Guardian*, 7 September 2022, <https://www.theguardian.com/world/2022/sep/07/china-reports-most-severe-heatwave-and-lowest-rainfall-on-record> (accessed 22 August 2023).

³¹ J. Ballester et al, “Heat-related mortality in Europe during the summer of 2022,” *Nature Medicine*, vol. 29, 2023, pp. 1857-1866.

³² AR6 Synthesis Report: Summary for Policymakers, A.2.1.

³³ AR6 Synthesis Report: Summary for Policymakers, B.3.1.

³⁴ R.S.W. van der Wal et al, “A High-End Estimate of Sea Level Rise for Practitioners,” *Advanced Earth and Space Sciences*, vol. 10, no. 11, art. e2022EF002751, 22 October 2022.

³⁵ AR6 Synthesis Report: Summary for Policymakers, B.3.3.

These are only short-term rises, and sea level will continue rising whatever due to the very slow processes of deep ocean warming and ice sheet melt, and these processes are likely irreversibly even if global temperatures were to be brought back down. Even if warming is limited to 1.5°C, global mean sea level will continue to rise by at least 2 meters over the next 2000 years.³⁶

These levels of sea level rise would have devastating effects. It has been estimated that 275 million people live in areas that will eventually be underwater if global warming reaches 3°C (which again, it is currently on track to even with current mitigation efforts), including virtually the entire populations of some coastal cities like Shanghai, Osaka, and Miami.³⁷ And with tidal and storm-caused flooding, the numbers affected will be much higher.

Yet the impacts of sea level rise may be dwarfed by what Kemp et al. call the “four horsemen” of the climate change end game:” famine, extreme weather, conflict, and vector-borne disease.³⁸ All degrees of warming will cause stresses to food systems, with large swathes of current croplands becoming unsuitable for agriculture.³⁹ Heatwaves, flooding, and

³⁶ IPCC, *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, Geneva, Switzerland, IPCC, 2023, sec. 3.1.3.

³⁷ J. Holder, N. Kommenda, and J. Watts, “The three-degree world: the cities that will be drowned by global warming,” *The Guardian*, 3 November 2017, <https://www.theguardian.com/cities/ng-interactive/2017/nov/03/three-degree-world-cities-drowned-global-warming> (accessed 4 September 2023).

³⁸ L. Kemp et al, “Climate Endgame: Exploring catastrophic climate change scenarios,” *Earth, Atmospheric, and Planetary Sciences*, vol. 119, no, 34, art. e2108146119, 1 August 2022, p. 6.

³⁹ H.-O. Pörtner et al, “Technical Summary,” in *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, Cambridge, UK and New York, NY, Cambridge University Press, 2022, sec. TS.C.3.1..

extreme storms will become the norm in many parts of the world. 65% of megacities will experience at least one day a year with a heat index above 40.6°C at 2.6°C of warming.⁴⁰ By 2070 under medium-high emissions scenarios, the amount of people living in areas with mean annual temperatures above 29°C will increase from only 30 million to 2 billion.⁴¹ Human displacement from river and rain-related flooding will rise 200% at 1.6°C and 600% at 2.6°C in Africa, and similar amounts in tropical South America.⁴² A warming climate will expand the ranges of vector-borne, with 2.25 billion more people becoming at risk of dengue fever and tens to hundreds of millions more to malaria.⁴³ Climate change likely contributed to the emergence of COVID-19, and one paper warned that “pandemics will be more frequent in the future and more severely impactful unless climate changes are mitigated.”⁴⁴

Human conflict is of course impossible for climate models to predict. But as Kemp et al. point out, the urbanized agricultural societies that began to dominate the planet starting 12,000 years ago have existed during a period of climactic stability and relatively narrow band of temperatures, and small regional climate fluctuations throughout history have been linked to societal collapse.⁴⁵ The so-called Little Ice Age, a relatively minor cool period that peaked in the 17th century coincided with — or perhaps caused — a period known as the General Crisis of the 17th century in Europe. Devastating conflicts wracked the continent, including the Thirty Years’ War, while droughts and harvest failures caused famine. This

⁴⁰ Pörtner et al, “Technical Summary,” table TS.1.

⁴¹ Kemp et al, “Climate Endgame,” p. 3.

⁴² Pörtner et al, “Technical Summary,” sec. TS.C.4.5.

⁴³ Pörtner et al, “Technical Summary,” sec. TS.C.6.5.

⁴⁴ S. Gupta, B.T. Rouse, and P.P. Saranga, “Did Climate Change Influence the Emergence, Transmission, and Expression of the COVID-19 Pandemic?” *Frontiers in Medicine*, vol. 8, 2021.

⁴⁵ Kemp et al, “Climate Endgame,” pp. 3-6.

coincided with famines in China that weakened the Ming dynasty and ushered in the 65-year-long Manchu conquest. Historian Geoffrey Parker calls this combination of climate-caused disaster and human conflict a “fatal synergy,” and estimates it killed one third of the global population.⁴⁶ The historical comparisons should not be overemphasized, but on the other hand, global warming will be a *much* more significant and rapid temperature swing than the Little Ice Age was, so the dangers of climate stressors inducing widespread conflict should not be underestimated.

For all the threat to human life climate change poses, it is a much bigger danger for non-human life. Above 2°C of warming, 20% of species will be in danger of extinction, and above 3°C, 80% of sea life across the Pacific and Indian Oceans will experience dangerous temperatures. If warming reaches 4°C, it will mean the likely extinction of 50% of species in tropical seas.⁴⁷ Coral reefs will decline by 70 to 90% even below 2°C, and marine animal biomass will decline by 13%. The Amazon may cease to be a rainforest at 2°C and turn into a dry savannah.⁴⁸

There is then the issue of “tipping points,” abrupt and irreversible climactic events that the IPCC calls “low likelihood, high impact” and thus does not incorporate into its standard scenarios. There is however evidence that these tipping points could happen at much lower warming levels than previously thought. The West Antarctic ice sheet might already be past the point of no return and on an irreversible path to complete collapse, and some models suggest the Greenland ice sheet might reach that point at 1.5°C of warming. The collapses of

⁴⁶ G. Parker, “Lessons From the Little Ice Age,” *The New York Times*, Opinion, 22 March 2014, <https://www.nytimes.com/2014/03/23/opinion/sunday/lessons-from-the-little-ice-age.html> (accessed 4 September 2023).

⁴⁷ Pörtner et al, “Technical Summary,” sec. TS.C.1.2.

⁴⁸ Pörtner et al, “Technical Summary,” table TS.1.

these two ice sheets, which once they are past their tipping points cannot be reversed by any human action, would add 4 meters and 7 meters to global median sea levels over the next several centuries or millennia.⁴⁹

The Amazon may be nearing a tipping point caused by both climate change and deforestation, which could cause a sudden die off that would — as well as being ecologically devastating — release 90 gigatons of CO₂, more than is released in two years from burning fossil fuels. A sudden collapse of the boreal forest ecosystem has also been hypothesized based on ongoing large-scale dieback, and this would release 110 Gt CO₂. Methane released from permafrost thaw in the arctic could release the equivalent of another 100 Gt of CO₂.⁵⁰ There is also evidence that Atlantic meridional overturning circulation (AMOC) is weakening and might be nearing a collapse.⁵¹ As AMOC has a crucial role in bringing warm water to Europe, a collapse would lead to a catastrophic drop in temperatures across the continent, and destabilize global weather patterns unpredictably.⁵²

All of this is not to even touch on the myriad of non-climate change environmental catastrophes the world is currently undergoing, such as the deforestation of an area the size of

⁴⁹ T.M. Lenton et al, “Climate tipping points — too risky to bet against,” *Nature*, vol. 575, 2019, p. 592.

⁵⁰ Lenton et al, “Climate tipping points — too risky to bet against,” pp. 593-594.

⁵¹ P. Ditlevsen et al, “Warning of a forthcoming collapse of the Atlantic meridional overturning circulation,” *Nature Communications*, vol. 14, art. 4254, 2023.

⁵² S. Rahmstorf, “What is happening in the Atlantic Ocean to the AMOC?” *RealClimate*, 24 July 2023, <https://www.realclimate.org/index.php/archives/2023/07/what-is-happening-in-the-atlantic-ocean-to-the-amoc/> (accessed 4 September 2023).

Portugal every year,⁵³ expanding plastics production,⁵⁴ the ubiquitous contamination of per- and polyfluoroalkyl substances (PFAS) in soils and rainwater even in remote parts of the globe,⁵⁵ the 17% decline of European bird populations in less than 40 years,⁵⁶ the even larger decline of insect populations, and the “sixth mass extinction” more generally.⁵⁷ The world is, to put it mildly, in a dire environmental situation.

Global Attitudes Towards Climate Change

There has long been a tendency among a certain strain of liberal environmentalist to see the lack of action on climate change as stemming from a lack of public awareness of or belief in the scientific consensus on the problem. There may have been some truth to this in past decades, although more due to the sophisticated climate change denialist propaganda machine put together by the fossil fuel industry⁵⁸ than the irresponsibility of the public.

⁵³ H. Ritchie and M. Roser, “Deforestation and Forest Loss,” *Our World in Data*, <https://ourworldindata.org/deforestation/> (accessed 4 September 2023).

⁵⁴ F. Bauer and T.D. Nielsen, “Oil companies are ploughing money into fossil-fueled plastics production at a record rate — new research,” *The Conversation*, <https://theconversation.com/oil-companies-are-ploughing-money-into-fossil-fuelled-plastics-production-at-a-record-rate-new-research-169690/> (accessed 4 September 2023).

⁵⁵ I. Cousins et al, “Outside the Safe Operating Space of a New Planetary Boundary for Per- and Polyfluoroalkyl Substances (PFAS),” *Environmental Science & Technology*, vol. 56, no. 16, 2022, pp. 11172–11179.

⁵⁶ R.D. Gregory et al, “Drivers of the changing abundance of European birds at two spatial scales,” *Philosophical Transactions of the Royal Society B: Biological Science*, vol. 378, no. 1881, art. 20220198, 2023.

⁵⁷ D. Wagner et al, “Insect decline in the Anthropocene: Death by a thousand cuts,” *PNAS*, vol. 118, no. 2, art. e2023989118, 2021.

⁵⁸ Malm and the Zetkin Collective, *White Skin, Black Fuel*, Ch. 1.

Waking up the public to the urgency of climate change was an important goal in the 90s and 2000s, but today the global population is wide awake.

75% of respondents in a Pew Research Center survey of 19 advanced economies in Europe, North America and Asia said that climate change was a major threat to their country, with only 5% saying it was not a threat at all. This ranged from lows of 44%, 47%, and 54% seeing climate change as a major threat in Malaysia, Israel and the US respectively, to over 80% in France, Greece, Italy, Japan, and South Korea.⁵⁹ There is a common perception that environmentalism and concern about climate change is the preserve of the liberal upper middle classes of wealthy Western countries. However, the 2019 Lloyd's Register Foundation World Risk Poll found that at least 60% of people surveyed in every region of the globe said that climate change was a “‘very serious’ or ‘somewhat serious’ threat to people in their country in the next 20 years,” and three regions had higher levels of concern than Northern and Western Europe and North America — Southern Europe, with 73% saying that climate change is a very serious threat and a further 20% saying it is a somewhat serious threat, Latin American and the Caribbean, with 71% answering serious threat and 14% answering somewhat serious threat, and Southern Africa, with 60% and 14% answering the same.⁶⁰ A global survey of 192 countries and territories conducted by the Yale Program on Climate Change Communication and Meta found similarly very high rates of worry almost everywhere, with only Yemen and Jordan not having majorities who were very or somewhat concerned about climate change. (It is worth noting that because this survey was conducted

⁵⁹ J. Poushter, M. Fagan, and S. Gubbala, *Climate Change Remains Top Global Threat Across 19-Country Survey*, Washington, DC, Pew Research Center, 31 August 2022, <https://www.pewresearch.org/global/2022/08/31/climate-change-remains-top-global-threat-across-19-country-survey/> (accessed 22 August 2023).

⁶⁰ Lloyd's Register Foundation, *The Lloyd's Register Foundation World Risk Poll: Full report and analysis of the 2019 poll*, London, Lloyd's Register Foundation, 2019, pp. 111-112.

through Facebook, it does not include Russia or China). Over 90% expressed concern in many Latin American countries, and over 80% across Southern Europe, India, and many countries in Southern and Eastern Asia.⁶¹

Furthermore, the region with the joint highest lack of concern in the Lloyd's survey was the wealthiest region in the world, North America, with 20% of respondents answering that climate change is “not a threat at all.”⁶² Europe is not spared from this rich country skepticism: 18% answer the same in Finland.⁶³ In Germany, the openly climate change-denying Alternative für Deutschland party polled at 21% in July 2023.⁶⁴ The Yale survey demonstrates clearly that climate denialism is now an almost exclusively Western phenomenon. Only three countries surveyed had 10% or more of the population denying climate change, and they were three of the richest countries in the world: the United States, Norway, and Australia. The same survey found some of the lowest percentages thinking that climate change should be a “high” or “very high” government priority in wealthy countries like Finland, Norway, and Japan (less than 60%), compared to 88% in Mexico and Puerto Rico, and the lowest percentages saying climate change is personally important to them in the Netherlands (less than 30%) and again Norway and Finland (less than 40%), compared to 86% in Angola and Zambia.⁶⁵

⁶¹ A. Leiserowitz et al, *International Public Opinion on Climate Change*, New Haven, CT, Yale Program on Climate Change Communication and Data for Good at Meta, 2022, p. 9.

⁶² Lloyd's Register Foundation, p. 13.

⁶³ Lloyd's Register Foundation, *World Risk Poll*, p. 117.

⁶⁴ DAWUM - Darstellung und Auswertung von Wahlumfragen, “Neueste Wahlumfrage zur Bundestagswahl von INSA,” 3 July 2023, <https://dawum.de/Bundestag/INSA/> (accessed 7 July 2023).

⁶⁵ Leiserowitz et al, *International Public Opinion on Climate Change*, p. 9, p. 15.

The Lloyd's survey did find that higher levels of educational attainment and numeracy were predictive of serious concern about climate change, and there are some regions such as Northern Africa and parts of Asia showing lower levels of concern and high levels of "do not know" answers (above 50% in Laos, nearly 30% in China),⁶⁶ The Yale survey found a large percentage of people expressing a lack of knowledge on climate change and uncertainty about its causes across Sub-Saharan Africa and some parts of Southern Asia. They also found that those regions are some of the most likely to say that climate change is "extremely" or "very" personally important to them," with over 70% in most of Sub-Saharan Africa, and that 70% of nearly every country surveyed outside of the Middle East and North Africa said that climate change is a threat to their country over the next 20 years.⁶⁷

The overall picture painted by these global surveys is not the one we are often presented with in the media, with concern about climate change being the prerogative of rich white Westerners who obsess over recycling, while those in the third world have more practical material concerns. Climate change is already a practical concern for people in many parts of the world. The Yale survey found that much higher percentages in much of the developing world were personally concerned about climate change than in the West. When asked how much they expect climate change to harm them personally, a majority of respondents across most of Latin America and much of Sub-Saharan Africa answered "a great deal." So did 43% in Bangladesh, a country where 50 million people live less than 5 meters

⁶⁶ Lloyd's Register Foundation, *World Risk Poll*, pp. 112-117.

⁶⁷ Leiserowitz et al, *International Public Opinion on Climate Change*, pp. 5-13.

above sea level.⁶⁸ ⁶⁹ People in Northern Europe feel much more secure about their future, with less than 10% expecting major personal harm in Denmark, Norway, Finland and the Netherlands, and only slightly more in Sweden. The percentage is similarly relatively low in other rich countries: 22% in the US and Canada, 23% in Germany and Italy, 15% in Japan, and 14% in the UK, although higher in France, Spain and Portugal.⁷⁰

In the Lloyd's survey, although the differences of collective attitudes between countries was not found to have a statistical relationship with the amount of extreme weather events each country has experienced, individuals who had experienced or knew someone who had experienced severe harm from severe weather events in the past two years were substantially more likely to see climate change as a very serious threat.⁷¹ Furthermore, people who said they were financially struggling were more likely to be concerned about climate change than those who were financially comfortable.⁷²

There is some evidence that the concern about climate change in developing countries is actually be more severe. A 2021 survey of young people aged 16-25 across ten countries, six Western and four in the developing world, found very high levels of concern across all countries, with 84% of those surveyed saying they felt extremely, very, or moderately worried about climate change and only 5% not worried at all, but found the highest levels of concern

⁶⁸ Leiserowitz et al, *International Public Opinion on Climate Change*, pp. 65-67.

⁶⁹ B. Roy et al, "Sea level rise induced impacts on coastal areas of Bangladesh and local-led community-based adaptation," *International Journal of Disaster Risk Reduction*, vol. 73, article 102905, 2022.

⁷⁰ Leiserowitz et al., *International Public Opinion on Climate Change*, p. 62.

⁷¹ Lloyd's Register Foundation, *World Risk Poll*, pp. 117-119.

⁷² Lloyd's Register Foundation, *World Risk Poll*, p. 121.

in the developing countries, and the lowest in the richer ones.⁷³ In the Philippines, 49% said they were extremely worried and 35% very worried, followed by 35% and 33% in India and 29% and 38% in Brazil. These are notably three democracies that are not generally seen in the Western media as having politically progressive populations, with all three having or having recently had far-right leaders. By contrast, the supposedly enlightened European countries of France and (yet again) Finland tied for the lowest percentages of young people who were extremely worried about climate change, at 18%. The UK and the US were the only other countries with that number below 20%. The US, UK, Finland, and Australia were the *only* countries where more than 5% said they were not worried at all, with the highest percentages in the US (9%) and Finland (8%). Less than 1% of young Filipinos feel similarly blasé; they do not have the luxury to, in an island nation that has already experienced sea level rise more than three times the global average⁷⁴ and where 24% of the workforce is employed in agriculture.⁷⁵

The same survey further asked respondents about the specific emotions they felt about climate change, and if how it impacted their ability to function. Here the difference between the West and the rest of the world is even more stark. Nearly three quarters of young people in India and the Philippines said that their feelings about climate change had a negative impact on their daily functioning, two thirds in Nigeria, and half in Brazil, compared to

⁷³ C. Hickman et al, “Climate anxiety in children and young people and their beliefs about government responses to climate change: a global survey,” *The Lancet Planetary Health*, vol. 5, no. 12, 2021, pp. e863-873.

⁷⁴ P. Lee-Brago, “Rising sea level threatens stability of boundaries, Philippines warns,” *The Philippine Star*, 20 February 2023, <https://www.philstar.com/headlines/2023/02/20/2246224/rising-sea-level-threatens-stability-boundaries-philippines-warns> (accessed 23 August 2023).

⁷⁵ Philippine Statistics Authority, “Unemployment Rate in December 2022 is Estimated at 4.3 Percent,” 8 February 2023, <https://psa.gov.ph/content/unemployment-rate-december-2022-estimated-43-percent> (accessed 23 August 2023).

slightly more than a quarter in the US and about a third in Europe and Australia.⁷⁶ Putting aside the difference between countries, it is clear that young people everywhere are concerned about climate change, and not just abstractly. 56% agreed with the extreme statement “humanity is doomed” (nearly three quarters in the Philippines), 52% “the things I most value will be destroyed,” and 39% “I am hesitant to have children.”⁷⁷

This survey dealt only with climate anxiety in young people, and the conclusion could be drawn from these results that the young are much more concerned about climate change, and that the current political inaction is a result of the less-concerned older generations still being in the majority. However, the previously cited Pew survey found that although young people in many countries were more likely to view climate change as a threat than older adults, the pattern was not clear across all countries, and in some countries such as Japan older adults are more concerned than young people.⁷⁸ Even if young people are more concerned — understandably, as they will be the ones that will live long enough to suffer the most severe consequences — is clear that a large majority of the global population of all ages is concerned about climate change.

Yet that concern is not being translated into political action: it bears repeating that *not a single country* evaluated by Climate Action Tracker is on track towards the necessary emissions reductions agreed to in the Paris Agreement. The public is not unaware of this. The survey of climate anxiety in young people aged 16 to 25 found that nearly two thirds across

⁷⁶ Hickman et al, “Climate anxiety in children and young people and their beliefs about government responses to climate change,” p. e867.

⁷⁷ Hickman et al, “Climate anxiety in children and young people and their beliefs about government responses to climate change,” p. e868.

⁷⁸ Poushter, Fagan, and Gubbala, *Climate Change Remains Top Global Threat Across 19-Country Survey*, p. 11.

the countries surveyed agreed that the government is not “taking their concerns seriously enough,” not “doing enough to avoid a climate catastrophe,” “failing young people across the world,” and “lying about the effectiveness of the [climate] actions they are taking.”⁷⁹

Another survey of 11 large democracies found that majorities in France, Germany, Brazil, Japan, Mexico and South Africa said that their government was not doing enough to combat climate change, with over 40% saying the same in the US, UK, Canada and Australia.⁸⁰ Notably, the situation is not the same in China, where a 2016 survey found that 60.6% were satisfied with their government’s response to climate change, with only 11% unsatisfied.⁸¹ This is not because the Chinese public is unconcerned about climate change; the 2021-2022 European Investment Bank Climate Survey found that the Chinese are much more likely to say that climate change is humanity’s biggest challenge in the 21st century (93%) than are EU citizens (81%), the British (74%), or Americans (59%). They are also more in support of climate measures such as reducing energy usage, increasing education on sustainable consumption, and taxes on carbon-intensive services.⁸²

Rather, the Chinese satisfaction with their government’s climate action is a result of a general trust in their government to solve the problem. The EIB found that only 7% in China think that their government will fail to meet its emission reduction targets by 2050, compared

⁷⁹ Hickman et al, “Climate anxiety in children and young people and their beliefs about government responses to climate change,” p. e869.

⁸⁰ POLITICO/Morning Consult, “Davos: Climate Change” [PowerPoint], *POLITICO Morning Consult Global Sustainability Poll*, December 2021, p. 11.

⁸¹ J. Chung-En Liu, “Public opinion on climate change in China—Evidence from two national surveys,” *PLOS Climate*, vol. 2, no. 2, article e0000065, 2023.

⁸² European Investment Bank, “Reducing carbon emissions and tackling climate change,” *2021-2022 EIB Climate Survey*, Kirchberg, Luxembourg, EIB, <https://www.eib.org/en/surveys/climate-survey/4th-climate-survey/skepticism-reduced-carbon-emission-targets.html> (accessed 7 July 2023).

to 58% in the EU, 55% in the UK, and 49% in the US.⁸³ This is despite China’s climate action being categorized as “highly insufficient” by Climate Action Tracker.⁸⁴

It is possible to interpret this Chinese trust in their government as misguided, as a result of information restrictions and propaganda leading the Chinese public to think their government is doing more than it is to mitigate climate change. This is besides the point, however. The more pertinent question is not why the Chinese trust their government, but why citizens of democratic countries have so little trust in their governments’ climate policy.

⁸³ EIB, “Reducing carbon emissions and tackling climate change.”

⁸⁴ Climate Action Tracker, “China,” 6 June 2023, <https://climateactiontracker.org/countries/china/> (accessed 22 August 2023).

China may be the world's largest greenhouse gas emitter, with a 26% share in 2019, but the majority of the world's emissions come from democracies.⁸⁵ A key question in the fight against climate change is why the the concern expressed by large majorities of people across the world is not leading to major political action on climate change in democratic countries. Not in the world's second largest emitter and second largest democracy, the United States, whose climate action is rated "insufficient" by Climate Action Tracker.⁸⁶ Not in the

⁸⁵ All calculations done on the basis of Climate Watch data for 2019 (the latest available besides the anomalous year 2020), using total GHG excluding LUCF. (Climate Watch, "Historical GHG Emissions," <https://www.climatewatchdata.org/ghg-emissions> [accessed 11 July 2023].)

Using the oft-cited *Economist Democracy Index* as a basis (Economist Intelligence Unit, *Democracy Index 2022: Frontline democracy and the battle for Ukraine*, The Economist Intelligence Unit Limited, 2023), I added together the emissions of the European Union and all the countries that contribute more than .1% of global emissions and that are considered by the *Index* to be democracies. 18 countries meet this criteria, in addition to the EU 27. To this I added 6 mid-sized emitters that I consider the *Index* to have rather dubiously classified as "hybrid regimes" rather than democracies: Mexico, Turkey, Pakistan, Nigeria, Ukraine, and Bangladesh. With these 6 countries included, a total of more than 50% of global emissions is reached.

The *Index* is quite opaque about its methodology, and although the democratic failings of these six countries are evident, they all have multiparty elections, and it is unclear what makes them less democratic than Singapore, which Reporters Without Borders considers to be one of the most countries with the lowest degree of press freedom in the world ("Singapore," *Reporters Without Borders*, <https://rsf.org/en/country/singapore> [accessed 11 July 2023]), or Israel, which exercises sovereignty over 5.5 million Palestinians it does not grant the right to vote. Whatever the flaws of these countries' democracies, they have competitive elections and not a categorically different level of citizen input into their governance than a country such as India does, and for the purposes of this discussion of the impact of public attitudes towards climate change on government action on climate change there is no good reason to exclude them. There are a number of other multi-party countries whose rating as non-democracies could be disputed, such as Peru, Ecuador, Bolivia, Paraguay, and Nepal, but since none of these countries count for more than a quarter of a percent of global emissions, they have been left out for simplicity's sake.

⁸⁶ Climate Action Tracker, "USA," 6 July 2022, <https://climateactiontracker.org>, (accessed July 11 2023).

world's largest democracy, India, which is "highly insufficient."⁸⁷ Not even in the supposedly near-perfect democracy Norway,⁸⁸ which is "almost sufficient" only because Climate Action Tracker excludes the enormous Norwegian oil and gas exports from its calculations, emissions from which dwarf total domestic emissions⁸⁹ and production of which are growing, with an expected increase of oil output of 7% in 2023 alone.⁹⁰

A Stepwise Approach is No Longer An Option

What has the political and media response to these warnings by climate experts been? Largely, nothing. World leaders have continued to act as if they are doing something to combat climate change, while still being woefully off track. In the Western press there have some recent suggestions that the 1.5°C target should be abandoned. *The Economist* ran an

⁸⁷ Climate Action Tracker, "India," 6 July 2023, <https://climateactiontracker.org/countries/india/> (accessed July 11 2023).

⁸⁸ Norway is given the world's highest democracy rating of 9.81/10 in the *Economist Democracy Index*.

⁸⁹ Climate Action Tracker, "Norway," 1 December 2022, <https://climateactiontracker.org/countries/norway/> (accessed July 11 2023).

⁹⁰ N. Adomaitis, "Norway expects jump in oil output and gas near record highs," *Reuters*, 9 January 2023, <https://www.reuters.com/business/energy/norway-oil-output-seen-rising-7-2023-gas-steady-record-levels-2023-01-09/> (accessed August 23 2023).

astonishing cover story in November 2022 calling the 1.5°C target “lofty” and saying it’s “time for some realism.”⁹¹ The subheading: “Global warming cannot be limited to 1.5°C.”⁹²

Global warming *can* be limited to 1.5°C, and, as we have seen in this chapter, it *must* be. The planet cannot afford an overshoot. That is the realistic position. Radical, systemic change, is needed. Iger Anderson, Executive Director of the UNEP, writes in the Emissions Gap Report 2022:

A stepwise approach is no longer an option. We need system-wide transformation. [...] Is it a tall order to transform our systems in just eight years? Yes. Can we reduce greenhouse gas emissions by so much in that timeframe? Perhaps not. But we must try.⁹³

As we have seen, the public is very much aware of the extent of the crisis, and the inadequacy of the political response. The science is clear, the public is aware, and yet, still not enough is being done. Governments remain virtually inactive, when compared to the scale of the change that is needed. And this is just as true in the supposedly democratic, highly educated West.

⁹¹ “The world is missing its lofty climate targets. Time for some realism,” *The Economist*, 3 November 2022, <https://www.economist.com/leaders/2022/11/03/the-world-is-missing-its-lofty-climate-targets-time-for-some-realism> (accessed 23 August 2023).

⁹² It is worth noting that The Economist is 43% owned, it is worth noting, by the Agnelli family, who made their fortune through Fiat and Ferrari and are now the largest shareholders of Stellantis, the world’s fourth largest car manufacturer. K. West, “The Economist becomes a family affair,” *The Guardian*, 15 August 2015, <https://www.theguardian.com/media/2015/aug/15/economist-becomes-a-family-affair-agnellis> (accessed 23 August 2023).

⁹³ UNEP, Emissions Gap Report 2022, p. XV.

Chapter 2: Sustainable Urbanism in the Face of the Climate Crisis

Having established the basic facts of the climate crisis the world now faces, we can now turn to the place of sustainable urbanism in a rapidly warming world. Sustainable urbanism is not a unified field. Rather, I use the term in a loose sense to refer to the fields of urban practitioners who aim to (or at least claim to be aiming to) reform our cities as part of the broader struggle to mitigate climate change and to adapt to its effects. The professions I am grouping under this label are diverse. Architects, urban planners, urban designers, and urban policymakers are the core ones, although there are many more related fields, and the boundaries between these different professions are not rigid and often differ between countries. There is also a diversity in what urban professionals who use the word “sustainability” and claim to be “combatting the climate crisis” mean with those words. “Sustainability” has become such an empty signifier that it can more or less mean anything, to the point where oil company TotalEnergies can claim with a straight face to “place sustainable development in all its dimensions at the heart of its strategy,”⁹⁴ or arms manufacturer Lockheed Martin to “integrate sustainability throughout [its] business strategy.”⁹⁵ Some practitioners of sustainable urbanism are similarly insincere and pay lip service to climate concerns only because they are fashionable, but even among those whose commitment to sustainability we can interpret as genuine mean different things by it. Some see their main goal as reducing the carbon emissions of cities, whereas others see it more as

⁹⁴ “Sustainable development at the heart of our strategy,” TotalEnergies, <https://totalenergies.com/sustainability> (accessed 23 August 2023).

⁹⁵ “Leadership Perspectives,” *Lockheed Martin ESG Report*, Lockheed Martin, <https://sustainability.lockheedmartin.com/sustainability/sustainability-program-overview/leadership-perspectives/> (accessed 23 August 2023).

building “resilient” cities that can adapt to increasing temperatures, sea levels, and intensity of weather, although these two goals are not mutually exclusive.

This diverse array of professions and sustainable intentions are all facing the same climate crisis, and most find themselves in the same professional situation as actors in an urban economic machine where the protagonists of the city — the real estate developers and the financial capital behind them — do not necessarily have the same sustainability goals as they do. Let us first examine the situation the urban professional finds themselves in, and then the diverse ideological responses to it. First, the sources of emissions that the practitioners of sustainable urbanism could hope to address.

The Scope of Climate Action for Sustainable Urbanism

The most obvious source of emissions for sustainable urbanism to target is emissions from buildings. The IPCC estimates the total global CO₂ emissions from buildings to have been 12 Gt CO₂ in 2019. That is 31% of global CO₂ emissions, or 21% of total greenhouse gas emissions when other greenhouse gases such as methane are accounted for. Of this, 82% are from the operational energy use of buildings (50% residential and 32% non-residential), and the rest are embodied emissions from construction materials. Building emissions are up 50% since 1990.⁹⁶

Buildings are not the only source of emissions that urbanists can target. One of the largest sources of emissions globally is transport, which at 15% of total GHG is the fourth

⁹⁶ IPCC, *Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, Cambridge University Press, Cambridge, UK and New York, NY, USA, 2022, p. 963.

largest category of emissions after electricity, industry, and agriculture.⁹⁷ Transport is the biggest source of GHG emissions in the EU, at 25%,⁹⁸ and the US, at 29%.⁹⁹ However, only a third of transport emissions are from urban transport, or about 5% of total global GHG emissions.¹⁰⁰ Urban transport emissions are trending strongly in the wrong direction, with the percentage of trips made in private cars globally growing from 39% in 2015 to 44% in 2020.¹⁰¹

These two important sources of emissions add up to over a quarter of global GHG emissions, but there are other areas in which urbanism has the potential to act. Most significantly, in emissions from land use change due to urbanization. Although urban areas cover only 0.69% of the Earth's land area, the area covered is over triple what it was in 1992.¹⁰² One attempt to forecast growth of urbanized land over the next 30 years predicts between a 78% and 171% expansion, depending on which of the IPCC's scenarios are considered.¹⁰³ The emissions effect of increasing urbanization and the mitigation potential of reducing it through designing more compact cities and protecting greenfield land from

⁹⁷ IPCC, *Climate Change 2022: Mitigation of Climate Change*, pp. 1054-1055.

⁹⁸ "Transport and Mobility," European Environment Agency, 16 August 2023, <https://www.eea.europa.eu/en/topics/in-depth/transport-and-mobility> (accessed 23 August 2023).

⁹⁹ "Fast Facts on Transportation Greenhouse Gas Emissions," United States Environmental Protection Agency, 13 June 2023, <https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions> (accessed 23 August 2023).

¹⁰⁰ IPCC, *Climate Change 2022: Mitigation of Climate Change*, p. 1059.

¹⁰¹ S. Boehm et al, *State of Climate Action 2022*, Berlin and Cologne, Germany, San Francisco, CA, and Washington, DC, Bezos Earth Fund, Climate Action Tracker, Climate Analytics, ClimateWorks Foundation, NewClimate Institute, the United Nations Climate Change High-Level Champions, and World Resources Institute, 2022, p. 75.

¹⁰² M. Zhao et al, "A global dataset of annual urban extents (1992–2020) from harmonized nighttime lights," *Earth System Science Data*, vol. 14, 2022, pp. 517-534.

¹⁰³ K. Huang et al., "Projecting global urban land expansion and heat island intensification through 2050," *Environmental Research Letters*, vol. 14, article 114037, 2019, p. 3.

development is difficult to estimate, but the expansion of urbanized areas is itself modeled to increase surface air temperature by at least half a degree across urban areas, and in some parts of the globe up to 3°C.¹⁰⁴

The scope of climate action of urbanism could be extended beyond these three emission sources. The urban environment has a significant effect on the consumption habits of city dwellers, and urban planning has tools at its disposal to influence the carbon impact of emission sources not directly related to the built environment, such as agriculture or consumer-goods tied industrial and transportation-related emissions. For example, by promoting the sale of local and organic produce in municipally owned food markets, as Barcelona has done.¹⁰⁵

The Professional Situation of Urbanists and Architects

Even though a high percentage of global GHG emissions fall within what could be considered the remit of urban professionals, the actual ability to reduce emissions that the work of planners, designers and architects has is much lower. In the built environment, the designers are not the protagonists. The real estate industry is.

The global real estate industry is a behemoth. Global real estate was estimated to be worth a staggering \$326.5 trillion in 2020, almost 80% of the value of which was residential real estate. This is more than four times global GDP, and residential real estate alone is worth

¹⁰⁴ Huang et al, pp. 5-7.

¹⁰⁵ “Green Food,” *Sustainable Food* [website], Ajuntament de Barcelona, <https://www.alimentaciosostenible.barcelona/en/what-we-do/green-commerce> (accessed 23 August 2023).

more than all financial securities and equities combined.¹⁰⁶ The real estate market is deeply integrated with and dependent on the global financial system, and the financial system relies on mortgage markets as sources of tradable debt and directly on real estate markets as an absorber of surplus capital.¹⁰⁷ The core important of real estate to 21st century financialized capitalism was demonstrated dramatically in 2008, and could be seen again soon with the ongoing real estate crisis in China.¹⁰⁸

With the key role of real estate in the global economy and the staggering amounts of money involved in it, what can the architect or designer hope to do? Unable to stop the voraciousness pace of construction or affect the forces that incentivize rapid construction using cheap, unsustainable materials, all the architect or designer can hope to do is to try to convince their client that better materials should be used, or the project should be made more energy efficient. In general, urbanists and architects committed to sustainability will only be hired by projects that are already aiming for sustainability or at least the claim to it, usually because they are targeting higher end customers who sustainability can be marketed too. The bulk of construction continues to be built without sustainability in mind, because the industry has no incentive to spend more than it needs to. Given the anonymous circuits of financial capital involved in much large-scale construction, no “appeal to the climate” can be made, because the developer has obligations to the bank, and the bank has obligations to shareholders, and so on.

¹⁰⁶ Tostevin, “The total value of global real estate.”

¹⁰⁷ M.B. Aalbers, *The Financialization of Housing: A political economy approach*, New York, Routledge, 2016.

¹⁰⁸ F. Tang, “As China’s property crisis plagues its economy and financial system, is a ‘Lehman Moment’ looming?” *South China Morning Post*, 23 August 2023, <https://www.scmp.com/economy/china-economy/article/3231900/chinas-property-crisis-plagues-its-economy-and-financial-system-lehman-moment-looming> (accessed 29 August 2023).

Even when sustainable urbanists can make construction more sustainable at scale, the problem remains that it is the massive pace of construction itself that it is harmful.

Implementing sustainable building practices on a scale that reduced a country's construction industry emissions by 10% would be a huge achievement, but would be dwarfed by the continued frenzied pace of construction globally.

Urbanists who work for public bodies have more leeway, but the amount of construction that is done by public entities is dwarfed by private construction. When it comes to other avenues of reducing city emissions, such as reducing car usage, cities have more room for action. However, attempts by municipalities to reduce car usage slightly in several European cities has shown the problem with treating these issues as solutions to be imposed from above by urban planners, rather than as political issues with bases of support. Barcelona's mostly car-free *superilles* (superblocks) have generated a lot of interest internationally,^{109 110} but have been unable to convince locals, 45% of whom oppose them, compared to 37% who support the initiative.¹¹¹ Berlin, whose previous state government had

¹⁰⁹ D. Roberts, "Barcelona's superblocks are a new model for 'post-car' urban living," *Vox*, 11 April 2019, <https://www.vox.com/energy-and-environment/2019/4/11/18273896/barcelona-spain-politics-superblocks> (accessed 29 August 2023).

¹¹⁰ J. Castaño, "Las 'superilles' de Barcelona se convierten en referente internacional para humanizar las ciudades y reducir las emisiones," *Público*, 11 March 2023, <https://www.publico.es/espana/superilles-barcelona-convierten-referente-internacional-humanizar-ciudades-reducir-emisiones.html> (accessed 29 August 2023).

¹¹¹ Y. Colás, "Encuesta Barómetro: Valoración actuaciones municipales," *GESOP*, 13 February 2023, <https://gesop.net/es/2023/02/13/encuesta-barometro-valoracion-actuaciones-municipales/> (accessed 29 August 2023).

implemented some car-reduction measures, has experienced a pro-car backlash and elected a conservative mayor committed to extending an inner city highway.¹¹²

These should serve cautionary tales. Sustainable reforms will in most cases antagonize powerful interest groups, and without a base of popular support behind them, public opinion can easily be turned against them by the powerful interest groups' grip over the media and the public discourse. This further limits the ability of urban professionals — divorced from a mass political movement — to implement meaningful change. Overall, the situation of sustainable urbanists as mere bit players in the built environment renders them impotent when it comes to making a meaningful dent in the 12 Gt of carbon emitted by the building sector, or in the emissions from urban transport and from increasing urbanization.

Sustainable Urbanism as an Ideology

The result of the tension between the real concern of many urban professionals about climate change and their systemic impotence is the ideology, or rather the ideologies, of sustainable urbanism. A brief aside on the nature of ideology may be useful here. Architects and urbanists are for the most part practitioners, not theorists. Few of them would identify as subscribing to any ideology. But an ideology is not just a defined, highly theoretical group of political beliefs, in the way for example Marxism is commonly conceived of as being. Every individual has a personal ideology that structures the way they interpret and interact with the world.

¹¹² C. Latz, “Berliner Ingenieurbüro mit Planung beauftragt: Bund will A100 bis 2035 nach Prenzlauer Berg verlängern,” *Tagesspiegel*, 10 January 2023, <https://www.tagesspiegel.de/berlin/berliner-ingenieurburo-mit-planung-beauftragt-bund-will-a100-bis-2035-nach-prenzlauer-berg-verlangern-9155604.html> (accessed 29 August 2023).

For an architect or urbanist, that ideology is inseparable from the practice of their work,. They develop a set of beliefs to justify what they are doing, both to themselves and to others. In the case of a sustainable urbanist, their ideology justifies how their work is making a meaningful contribution to the fight against climate change. Given that their work is necessarily constrained by the place of their profession within the economic and social system, their ideology is also necessarily constrained.

Their ideology might be implicit, not even fully articulated to themselves, but is expressed in how they interact with the world. As theorist of ideology Slavoj Žižek describes, “belief, far from being an 'intimate', purely mental state, is always materialized in our effective social activity: belief supports the fantasy which regulates social reality.”¹¹³ It is therefore of no use to ask whether someone truly believes in what they are doing; in Žižek’s conception, the belief is *in* what they are doing. They may think we are not being guided by an ideology, because they are aware of the ideological framework in which they are operating and believe that this awareness makes them immune to it. But they are mistaken, because they are in the grip of the ideology at a level deeper than conscious belief, at the level of social reality, “at the level of what the individuals are doing, and not only what they think or know they are doing [...] They know very well how things really are, but still they are doing it as if they did not know.”¹¹⁴

The diverse ideological tendencies of sustainable urbanism can be divided into two broad categories, which I will call bright green urbanism and dark green urbanism. The terms bright green and dark green were coined to describe different strands of the environmental

¹¹³ S. Žižek, *The Sublime Object of Ideology*, 2nd edition, London and New York, Verso, 2008, p. 33.

¹¹⁴ Žižek, *The Sublime Object of Ideology*, pp. 28-30.

movement by environmentalist writer Alex Steffen.¹¹⁵ Bright green environmentalism refers to tendencies that embrace technological progress as the path out of the climate crisis. The term is used to categorize those who believe we can innovate our way out of the problems we have created, and can continue to raise living standards through sustainable economic growth. Dark green environmentalism, on the other hand, sees our current societal system as incompatible with sustainability, and sees climate change as an inherent problem of variously consumerism, capitalism, industrialization, modernity or even humanity. The various environmentalist trends that can be categorized as dark green include deep ecology and the degrowth movement. In the following two sections I look at how various tendencies within sustainable urbanism fall into these categories, how all these ideologies can be understood as naturally resulting from the place of architects and urbanists in the urban economic machine, and why none of them are adequate reactions to the climate crisis.

¹¹⁵ A. Steffen, “Bright Green, Light Green, Dark Green, Gray: The New Environmental Spectrum,” *Worldchanging*, 27 February 2009, <https://web.archive.org/web/20160112194947/http://www.worldchanging.com/archives/009499.html> (accessed 23 August 2023).

Chapter 3: Bright Green Urbanism

Bright green environmentalism refers to the embrace of growth and technological progress as the solution to the climate crisis. Put simply, its adherents believe either that business as usual will solve climate change on its own, or that with certain nudges from the state the forces of business as usual — private capital and market mechanisms — can be harnessed to solve the crisis. Within sustainable urbanism, three major versions of this ideology can be identified.

The first version is what could be called greenwashed urbanism, and is simply an extension into the construction and real estate world of the corporate sustainability trend that sees oil companies boasting about their sustainability. The goal of greenwashed urbanism is simply to provide an ideological cover — however thin — for the continued functioning of industries dependent on rapid urban growth. Slapping terms like “sustainability” on every project assuages the climate guilt of investors, buyers, and architects, and taps into the burgeoning world of “green finance.” It also functions as part of a larger ideological apparatus designed to make the concerned consumer feel as if “something is being done” about climate change. The brand new greenfield development they live in is sustainable, their take-away coffee in a disposable plastic cup is sustainable because it no longer comes with a straw,¹¹⁶ and the airline they take to vacation is “carbon neutral;”¹¹⁷ in short, they can keep consuming in peace.

¹¹⁶ “Starbucks to Eliminate Plastic Straws Globally by 2020,” *Starbucks Stories & News* [website], Starbucks, 9 July 2018, <https://stories.starbucks.com/press/2018/starbucks-to-eliminate-plastic-straws-globally-by-2020/> (accessed 23 August 2023).

¹¹⁷ P. Greenfield, “Delta Air Lines faces lawsuit over \$1bn carbon neutrality claim,” *The Guardian*, 30 May 2023, <https://www.theguardian.com/environment/2023/may/30/delta-air-lines-lawsuit-carbon-neutrality-aoe> (accessed 23 August 2023).

It is hard these days to find a large real estate development that doesn't in some way claim to be green. Perhaps the most ludicrous example is NEOM, the Saudi government's \$500 billion project to build a megacity of 9 million inhabitants in the country's barren northwestern desert.^{118 119} The centerpiece of NEOM will be a 170 km long, 500 meter tall and 200 meter wide city called THE LINE (the all-caps spelling appears to be mandatory, judging from their website). It will be complimented by a floating industrial port city called Oxagon, the ski resort Trojena, and the island resort Sindalah.

This may sound like the peak of environmentally destructive oil-fueled hubris, but actually, the reader may be surprised to learn, NEOM is all about sustainability. In fact, it will be "introducing a new model for urban sustainability"¹²⁰ According to Crown Prince Mohammed bin Salman, "We cannot ignore the livability and environmental crises facing our world's cities, and NEOM is at the forefront of delivering new and imaginative solutions to address these issues."¹²¹ The exact nature of these new and imaginative solutions has not yet been fully publicly detailed, but NEOM's website does tell us that THE LINE will, remarkably, have no emissions. How a city of glass, steel, and concrete will be built from scratch in the middle of a waterless desert with no emissions remains to be seen.

¹¹⁸ J. Scheck, R. Jones, and S. Said, "A Prince's \$500 Billion Desert Dream: Flying Cars, Robot Dinosaurs and a Giant Artificial Moon," *The Wall Street Journal*, 25 July 2019, <https://www.wsj.com/articles/a-princes-500-billion-desert-dream-flying-cars-robot-dinosaurs-and-a-giant-artificial-moon-11564097568> (accessed 23 August 2023).

¹¹⁹ "About us: A vision of what a new future might look like," NEOM, <https://www.neom.com/en-us/about> (accessed 23 August 2023).

¹²⁰ "NEOM," *Vision 2030* [website], Government of the Kingdom of Saudi Arabia, <https://www.vision2030.gov.sa/v2030/v2030-projects/neom/> (accessed 23 August 2023).

¹²¹ "THE LINE: a revolution in urban living," NEOM, <https://www.neom.com/en-us/regions/theline> (accessed 23 August 2023).

NEOM is of course the most extreme example, but a million more could be given of clearly unsustainable urbanism making claims to the contrary. Manhattan's Hudson Yards, a forest of ultra-luxury skyscrapers, is "a model for sustainable neighborhood development."¹²² The Bentley Residences Miami, a skyscraper in Miami built by the eponymous luxury car manufacturer may be equipped with elevators to bring your Bentley directly into your penthouse, but that doesn't mean it doesn't "feature sustainable, locally sourced materials."¹²³

These claims are clearly not sincere. It is difficult to imagine that the Saudi Crown Prince is pushing NEOM because he truly believes it is a solution to climate change. It's difficult to imagine that anyone writing the websites or working as sustainability officers for any of these projects really believes what they are writing. It is marketing, nothing more.

The second strain of bright green urbanism is the ideology of the true believers. That is to say, those who firmly believe that capitalism will innovate itself out of the climate crisis. A paradigmatic example of this conviction is a story told by the prophets of popular economics and creators of the best-selling *Freakonomics* franchise, who in a 2009 book tell the story of how at the 19th century, New York and London were drowning in horse dung left by all the horsecars. Politicians at the time thought this was an impossible problem to solve, and the situation seemed hopeless, until within a matter of years the problem completely disappeared due to the invention of the motorcar. Their point is that the same will happen with climate change: "Just as equine activity once threatened to stomp out civilization, there

¹²² "Earth Day 2022: Hudson Yards Sustainability, by the Numbers," Hudson Yards, 13 April 2022, <https://www.hudsonyardsnewyork.com/stories/earth-day-2022-hudson-yards-sustainability-numbers> (accessed 23 August 2023).

¹²³ "Bentley Residences Miami," *The Bentley Collection* [website], Bentley Motors, <https://shop.bentleymotors.com/blogs/partnerships/bentley-residences> (accessed 23 August 2023).

is now a fear that human activity will do the same. [...] Technological fixes are often far simpler, and therefore cheaper, than the doomsayers could have imagined.”¹²⁴

The solution to the problems created by capitalist growth is more capitalist growth. Things will work themselves out. It is the ideology of the YIMBY (“Yes In My Back Yard”) movement in the United States, whose advocates claim that removing all restrictions on urban growth will miraculously lead to sustainable cities. It is the ideology of those who think that the electric car will solve climate change.

It is also the ideology of architect Bjarke Ingels, who justifies his role in the urban growth machine — including his firm’s new lucrative gig as master planner of NEOM’s Oxagon¹²⁵ — with his concept of “Hedonistic Sustainability.” “Sustainability was always spoken in the context of stopping growth or giving up some of the quality of life that we have now... I think that’s just like a hard selling point,” he says. “The right answer is to make like the Tesla Model S, which is the best car ever produced ... it’s not only more sustainable, it’s also more enjoyable. Clean technology comes with positive social side effects.”¹²⁶

The basic position of this ideology is that we, or rather, the wealthiest parts of the world, can continue to live as we have, building rapidly, driving cars, and so forth, and the market will figure out how to do it all sustainably. This is simply a position of pure faith in the market, and there’s really no way to argue with it other than to point at the overwhelming

¹²⁴ Cited in E. Kolbert, “Hosed,” *The New Yorker*, 8 November 2009, Books, <https://www.newyorker.com/magazine/2009/11/16/hosed> (accessed 23 August 2023).

¹²⁵ S. Utkum Ikiz, “Big Announced As Masterplanner Of Neom’s Floating Mega Project, Oxagon,” *Parametric Architecture*, 21 May 2023, <https://parametric-architecture.com/big-announced-as-masterplanner-of-neoms-floating-mega-project-oxagon/> (accessed 23 August 2023).

¹²⁶ B. Ingels, “Hedonistic Sustainability,” *urbanNext*, 29 June 2016, <https://www.youtube.com/watch?v=d69an-z8QsY> (accessed 23 August 2023).

evidence that the market is not fixing things. For all the green technologies, electric cars, and LEEDS-certified buildings (most of which only exist because of government subsidies¹²⁷), the world is still careening towards 2°C and beyond.

The third version of the bright green ideology, and perhaps the one that deserves to be taken the most seriously, says that although it is the capitalist growth machine that caused the current crisis, it is not currently possible to escape this system, and we must therefore try to harness its power.

A paradigmatic example is German physicist and climatologist Hans Joachim Schellnhuber and the organization he founded, Bauhaus Earth. Schellnhuber believes he has found a quick fix for climate change: turning the voracious appetite of the global construction industry towards theoretically carbon-negative timber construction. “Everyone says there are no silver bullets but I guess we found one,” he says.¹²⁸ Instead of focusing on reducing emissions, the capitalist growth machine can be used to absorb the carbon we continue to emit. This would require turning large swathes of the Earth into timber plantations that are not allowed to mature into healthy forests, but are instead constantly harvested, replanted, and turned into more and more buildings. Schellhuber calls this the “forestry-construction pump.” The number of trees he calculates would be needed to accomplish this is enormous: 500 billion, and the number of buildings as well, but the construction industry has certainly

¹²⁷ C. Isidore, “Here’s how Elon Musk’s fortune has benefited from taxpayer help,” *CNN*, 14 November 2021, CNN Business, <https://edition.cnn.com/2021/11/14/investing/elon-musk-wealth-taxpayer-support/index.html> (accessed 23 August 2023).

¹²⁸ C. Foges, “The ‘silver bullet’ for climate change: interview with Bauhaus Earth founder Hans Joachim Schellnhuber,” *RIBAJ*, 5 September 2022, <https://www.ribaj.com/culture/profile-joachim-schellnhuber-bauhaus-earth-climate-emergency-trees> (accessed 23 August 2023).

shown that it has the endless appetite to consume endless resources, and could likely consume 500 billion trees without blinking.

This is classic bright green ideology. It presents a sustainable future that will have *more* growth and abundance, not less, and it presents an easy solution. The Global South can develop rapidly and reach the same wealth as the West, and with Schellnhuber’s solution them doing so will actually stop climate change: “If they build as we have done [at Bauhaus Earth], it’ll be the end of our climate story.” The end of our climate story, and we will no longer have to worry about cars, planes, or any of that.

The problems with this “silver bullet” should be evident. It is seen as more realistic and even more desirable to *expand* the urban growth machine and *further* the subjugation of all Earth systems to the necessities of capital than to transform the system that brought us to this crisis point into one that has a more harmonious relationship with the planet.

The full submission of these environmentalists to the capitalist logic of resource extraction can be seen clearly in the writings of the director of Bauhaus Earth’s Innovation Labs, Alan Organschi. The forests of northern New England — some of the last wilderness in the eastern United States — are described as “New England’s underused forests.”¹²⁹ Or consider this paragraph, from a paper Organschi co-authored:

Current reports estimate the global consumption of wood at an annual volume of 3.4 billion cubic meters. Meanwhile, increased awareness of forest management practices has encouraged retention of existing forests and encouraged afforestation in developed countries, resulting in a net annual forest growth rate between 6 and 17

¹²⁹ “Northern Forests to Timber Cities,” Gray Organschi Architecture, https://grayorganschi.com/research/initiatives/northern_forests_to_timber_cities (accessed 23 August 2023).

billion cubic meters per year. The 2.6 billion cubic meters of unutilized wood fiber growth—based on conservative global growth estimates—represent both an oversupply of a natural resource commodity and an enormous opportunity to integrate forest products into global carbon markets, specifically through the development of durable, industrially produced mass timber structural members and the buildings they can form.¹³⁰

Land that remains in its natural state is “underused.” Wood not being harvested is “unutilized” and an “oversupply.” And the goal is of course to integrate everything into the global market. Concern for natural ecosystems is always an afterthought, and dismissed with assurances that this timber will be harvested “sustainably.” It is worth noting also that while Schellnhuber talks about his 500 billion trees being planted on “degraded land,”¹³¹ when Organschi does the work of drawing supply lines of where the timber would come from for his proposed timber buildings in New Haven, he identifies already forested lands in Maine.

Schellnhuber must be given credit for doing the analysis and coming up with a “solution” that would at least in theory have a real impact on carbon levels in the atmosphere, unlike the true believer Bright Green urbanists or the greenwashers. But ultimately, Bauhaus Earth, and other urbanist ideologies which fall within the same vein, share with the other types of bright green urbanism a lack of ability or desire to imagine a future beyond the capitalist growth machine that has brought us to the brink of climate apocalypse.

¹³⁰ A. Organschi et al, “Timber City: Growing an Urban Carbon Sink with Glue, Screws, and Cellulose Fiber,” *World Conference on Timber Engineering*, Vienna, Austria, 2016.

¹³¹ Foges, “The ‘silver bullet’ for climate change.”

The appeal of bright green urbanism to architects and urbanists is evident. As discussed earlier, their role within the urban development system leaves them at the mercy of the client. They may well have a vision for a more sustainable world, but they are in no position to implement that vision on a meaningful scale. They cannot convince the client to go against their material interests, to not build on greenfield land, to not build luxury condos, to not build in areas only accessible by car. But they may be able to convince their client to make their buildings slightly more energy efficient and put some plants on the edges of it, especially if that allows their clients to slap marketable labels like “sustainable” and “ecological” on it. An ideology that tells them that this is combatting climate change will therefore allow the designers involved to feel they personally are making a difference. Similarly, an ideology like Schellnhuber’s presents a future where the place of the developer and the architect are central to combatting climate change, is one that allows both to feel like they are fixing the world while more or less keeping doing what they have been doing: building large buildings at the behest of financial capital, and luxury homes for wealthy individual clients.

Chapter 4: Dark Green Urbanism

The term dark green urbanism covers a range of ideological reactions to the role of architects and urbanists within the capitalist urban development machine that are quite different to those described in the previous section. Where bright green urbanism sees our current societal and economic system as providing the way out of the climate crisis, dark green urbanism identifies the climate crisis and economic system as inextricably linked. Capitalism — or at least its current corporatist, consumerist form — is seen as the root of the problem. Sometimes, the problem is seen as going back further than contemporary capitalism and industrial society, modernity, or humanity itself are seen as the deeper root cause. Climate change is seen as a systemic problem, and capitalism cannot be harnessed to create a better future for all. It may not even be possible to harness industrialization for good, and a return to simpler, premodern solutions is often seen as the solution.

Citing examples of dark green urbanism to illustrate the tendency is less useful than citing examples of bright green urbanism was in the previous chapter. Many of the urban and architectural projects guided by the dark green ideology are quality designs that reduce resource consumption, improve habitability, and make cities more resilient to climate change. These projects also do not make sweeping claims about being silver bullets for climate change, à la Schellnhuber. Rather, they focus only on the local impact of their project. This is a defining feature of dark green urbanism: the privileging of the local. Larger scales are usually not addressed in the discourse of dark green urbanism.

The central approach of dark green urbanism is to focus only on local solutions. Global solutions on the scale of Schellnhuber's are seen as undesirable or unrealistic. Instead,

dark green urbanists preach that we must focus on making local communities and individual lives more sustainable. There are three common justifications for this privileging of local solutions over global ones.

The first is the “every drop counts” argument. This argument says that, while of course broader systemic change is desirable, in the absence of such change, all an individual professional can hope to do is to reduce emissions in their own small way.

The next two justifications are closely related. They are not commonly expressed publicly, but have become common observable sentiments in the field, and are increasingly seen in the broader environmental movement as well.

The first version says that changing the world as a whole is impossible. Capitalism is too powerful, too vast, and too complex for there to be any hope of overthrowing it. All we can hope to do is change our community.

The second version is the belief that catastrophic climate change is now unstoppable, and that all we can hope to do is shelter our local community from its effects. Andreas Malm has termed this view within the environmentalist movement “climate fatalism,” and from a scientific standpoint it is flatly incorrect.¹³² There is still time to prevent catastrophic climate change, and even if there were not, climate action would still matter. As Malm says:

Every gigaton matters, every single plant and terminal and pipeline and SUV and superyacht makes a difference to the aggregate damage done, and this is just as true above 400 ppm and 1°C as it is below. It won't lose its truth at 500 ppm or 2°C or

¹³² A. Malm, *How to Blow Up a Pipeline: Learning to Fight in a World on Fire* [ebook], London and New York, Verso, 2021, ch. 3.

higher still. The totality of global heating will always be a function of the totality of emissions – less of the latter, less of the former.¹³³

The claim of course not necessarily that it is too late to prevent catastrophe from a scientific perspective, but that the catastrophe is already a foregone conclusion, that we have no hope of changing the world in time.

This fatalist justification is the most grim of the three. It is embracing defeat, giving up the world to those who are destroying it. As Malm notes, it is a position that can only be held by those who have the luxury of living in privilege in the Global North:

Climate fatalism is for those on top; its sole contribution is spoilage. The most religiously Gandhian climate activist, the most starry-eyed renewable energy entrepreneur, the most self-righteous believer in veganism as panacea, the most compromise-prone parliamentarian is infinitely preferable to the white man of the North who says, ‘We’re doomed – fall in peace.’ Within the range of positions this side of climate denial, none is more despicable.¹³⁴

The other two justifications end up in a very similar position. Saying there is no hope in the struggle to change our global economic system amounts to another form of climate fatalism. But the first justification, that every drop counts, does too. The UNEP continuously emphasizes that “every fraction of a degree matters,”¹³⁵ and from a scientific perspective that

¹³³ Malm, *How to Blow Up a Pipeline*, ch. 3, para. 16.

¹³⁴ Malm, *How to Blow Up a Pipeline*, ch. 3, para. 24.

¹³⁵ UNEP, *Emissions Gap Report 2022*, p. XV.

is true. Every single ton of CO₂ emitted makes the future consequences of climate change worse, and so preventing even a single ton is never useless.

Yet there is a practical sense in which these local solutions are irrelevant. If we content ourselves with acting locally and hoping that others are doing the same in a handful of cities around the world, then optimistically all those local efforts together may prevent some small fraction of a degree of warming, and under the catastrophic scenarios we are headed for maybe some hundreds of thousands of lives will be saved by the individual efforts of sustainable urbanists and architects across the world. That will certainly be a better outcome than if we had not done anything at all. But if that same scenario is one in which *hundreds of millions* die from the effects of climate change, as may well be the case, then this scenario is not one we should even consider allowing to come to pass. By saying “I am doing the best I can, and I hope everyone else will do the best they can too,” then we are implicitly accepting this apocalyptic scenario as unavoidable, and saying there is nothing we can do to prevent it.

The dark green urbanist would perhaps protest that they are just being pragmatic in accepting the apocalypse, the fight against which seems hopeless, and we must accept our likely future in order to make our communities resilient to climate change before it is too late. Malm again has a response to the idea that we must act according to what we believe the most probable outcome to be:

If someone seeks to affect the ways of the world by acting in one way rather than another, it must be because she holds an outcome to be desirable and wants to contribute to its realisation. If she merely wished to confirm the most probable outcome on account of its high probability, she would have no reason to act at all. Her

behaviour would have no normative substance. It would have no strategic charge. She would simply be floating, and she would be floating just for the sake of it. To act politically is to reject probability assessment as a ground for action.¹³⁶

When it comes to make our communities resilient to climate change, this may be wishful thinking. Any climate action will necessarily involve adaption to higher temperatures, rising seas, and more extreme weather, because these effects are already happening at the current level of warming, and they will unavoidably get worse. Urban planning and architecture has a major role to play in these adaptations. However, if we are talking about the levels of warming predicted from our current trajectory, *adaption may not be possible*. No city can be built resilient enough to shelter its population adequately from some of the potential future scenarios explored in Chapter 1. No amount of passive cooling will allow us to live sustainably in Mediterranean cities, no amount of restored urban wetlands will prevent catastrophic flooding, no coastline can be made resilient enough to avoid coastal cities from being swallowed by the waves if sea levels rise by a meter or more.

Even if it is possible to make a city in the global north into a sustainable, resilient city that is sheltered from the effects of 2 degrees of warming and has a circular resource metabolism, only consuming the resources it itself produces, this is not an outcome we should desire. However wonderful and liveable this sustainable future metropolis may look at first glance, if we zoomed out in this hypothetical future we would see that a few hundred kilometers south of our sustainable European, American, or East Asian city is an ultra-militarized border where sustainably militaries massacre the millions fleeing the uninhabitable wasteland that much of the world has been turned into. As Mike Davis put it,

¹³⁶ Malm, *How to Blow Up a Pipeline*, ch. 3, para. 12.

“embedded in the center of the current trajectory of global politics is the threat of genocide on an unimaginable, massive scale.”¹³⁷ A genocide both through the direct effects of climate change, and through the violence that will be perpetrated by wealthy states to bar the door of entry to those fleeing the effects. Fleeing, of course, from countries that have no responsibility for climate change.¹³⁸ The blueprint is already in place: over 26,000 migrants have drowned in the Mediterranean trying to reach Europe since 2014.¹³⁹ 800 died in 2022 alone trying to cross the Mexican-US border.¹⁴⁰ If we continue on our current climate trajectory, these numbers will soon seem low.

To abandon the rest of the world because we want to focus on making our communities more resilient is unacceptable. It does not matter if we plan to become autarkic and cease to burn fossil fuels or extract resources from the rest of the world. Rich countries have created this situation, and have impoverished the rest of the Global South while doing so. Us in the Global North have a responsibility not to abandon the rest of the world to the consequences of our actions.

None of this is to cast any moral judgement on individual urban planners and architects. As individuals, many of them are indeed doing the best they can. And all actions

¹³⁷ Mike Davis interviewed in B. Belden and L. Franczak, “Episode 104: Everything is Bad,” *TrueAnon* [podcast], 2 October 2020, min. 40.

¹³⁸ S. Evans, “Analysis: Which countries are historically responsible for climate change?” *Carbon Brief*, 5 October 2021, <https://www.carbonbrief.org/analysis-which-countries-are-historically-responsible-for-climate-change/> (accessed 5 September 2023).

¹³⁹ “UN rights chief calls for action to address Central Mediterranean Sea migrant crisis,” *UN News*, 13 April 2023, <https://news.un.org/en/story/2023/04/1135612> (accessed 31 August 2023).

¹⁴⁰ J. Rose and M. Peñaloza, “Migrant deaths at the U.S.-Mexico border hit a record high, in part due to drownings,” *NPR*, 29 September 2022, <https://www.npr.org/2022/09/29/1125638107/migrant-deaths-us-mexico-border-record-drownings> (accessed 31 August 2023).

are done ultimately by individuals, and all interventions are ultimately local. But it is the fitting of these individual actions and local interventions into a broader framework of collective action that gives them the power to change the world on a large scale, and for a global problem like climate change, large scale action is imperative. The only current framework that the climate actions of sustainable urbanism fit into are national (or EU-level) plans of climate action on issues such as energy efficiency or heat pump installation, but as discussed in Chapter 1, the current national plans are highly inadequate. A new strategy of collective action is needed.

Chapter 5: The Impasse and a Way Forward

Bright green and dark green urbanism have quite different approaches to sustainable urbanism, but both share a striking similarity: neither see any possibility of a future beyond the current economic system. This is hardly unique to sustainable urbanism; as has often been observed, it is easier today to imagine the end of the world than the end of capitalism.¹⁴¹ Both the environmental movement and the broader left seem to be at an impasse globally. The left — the collection of movements that seek to change the world — are at a historical nadir, right when global change is the most needed to prevent climate catastrophe

As discussed in Chapter 1, serious concern about climate change is widespread across the globe. And yet this concern is not translating into political change. Although there has been a growing climate movement, it is hard to point to any major victories they have had, and their numbers don't even come close to the amounts of people expressing serious climate concern in the surveys cited in Chapter 1.

In the Yale Program on Climate Change Communication/Meta survey, respondents were asked if they were participating in or willing to participate in an organized group to pressure their governments into climate action. The results across the Western world were dismal. The percentages who answered that they were involved or were “definitely willing” to get involved was below 30% in the USA, Canada, Japan, Australia, New Zealand, and nearly every single country in Europe. A quarter said they “definitely wouldn't” get involved in the US, the Netherlands, and all of Scandinavia. Majorities also said no in every country in Latin America and North Africa. The only major exceptions were India, Pakistan, and

¹⁴¹ It is unclear who originally said this well-known phrase, but Mark Fisher describes it as “attributed to Fredric Jameson and Slavoj Žižek.” M. Fisher, *Capitalist Realism: Is There No Alternative?* Ropley, UK, O Books, 2009, p. 2.

Bangladesh, where slight majorities said yes, and in the majority of countries in Sub-Saharan Africa, especially the Great Lakes region, with more than 70% saying they were involved or would get involved in Zambia, Malawi, and Kenya.¹⁴²

In these results we can identify the same tendency that underlies the left's current weakness. In the wealthy countries especially, collective action seems to have largely disappeared as a mechanism for changing the world. Trade union membership has steadily declined for decades. In 1970 at the peak of trade union membership, 30% of American workers were members of a trade union, as were 35% of Japanese workers, 50% of Australian workers, 70% in Austria, 22% in France.¹⁴³ Today, only 10% of workers are unionized in the US, 17% in Japan, 14% in Australia, 26% in Austria, and 11% in France.¹⁴⁴ In the 1980s, 96% of workers in Sweden were unionized, as were 90% in Finland, 61% in Italy, 56% in Britain, and 44% in West Germany.¹⁴⁵ By 2019, this had fallen to 65% in Sweden, 59% in Finland, 33% in Italy, 24% in Britain, and 16% in Germany.¹⁴⁶

In the former Eastern Bloc, the privatization of the economy has left trade union density even lower, at 6% in Estonia, 8% in Hungary, 11% in Czechia, and 13% in Poland.¹⁴⁷ Most developing countries have very low unionization rates below 20%, with some notable

¹⁴² Leiserowitz et al, *International Public Opinion on Climate Change*, p. 20 and pp. 115-120.

¹⁴³ J. Visser, "Trends in Trade Union Membership," *Employment Outlook 1991*, Paris, OECD, p. 101.

¹⁴⁴ Most recent data available from the OECD, which is from 2019 for the US, Austria and Japan, 2018 for Australia, and 2016 for France. OECD, "Trade Union Density," *OECD.Stat* [website], <https://stats.oecd.org/Index.aspx?DataSetCode=TUD> (accessed 25 August 2023).

¹⁴⁵ Data from 1988 for Sweden and Finland, 1980 for Italy and Britain, and 1985 for West Germany. Visser, "Trends in Trade Union Membership," p. 101.

¹⁴⁶ OECD, "Trade Union Density."

¹⁴⁷ 2019 data for Estonia, 2018 for Czechia and Hungary, and 2017 for Poland. OECD, "Trade Union Density."

exceptions such as Cuba, Vietnam, and China (all still run by nominally communist parties).¹⁴⁸

The decline of trade unionism in the West since the 1970s has been mirrored by the decline of mass membership parties. The French Communist Party, once one of the standard bearers for mass party politics has declined from 800,000 members at its peak in 1946¹⁴⁹ to less than 44,000 today.¹⁵⁰ It is not just far-left parties that have seen their membership collapse. The German Social Democratic Party (SPD) has seen its membership halve since 1990.¹⁵¹ The British Labour Party's membership has declined by almost two thirds from its peak at over a million members in the 1950s, and its rival Conservative Party has fallen from

¹⁴⁸ "Statistics on Social Dialogue," *ILOSTAT* [website], Geneva, International Labour Organization, <https://ilostat.ilo.org/topics/industrial-relations/> (accessed 1 September 2023).

¹⁴⁹ H. Timmermann, "National Strategy and International Autonomy: The Italian and French Communist Parties," *Studies in Comparative Communism*, vol. 5, no. 2/3, 1972, p. 260.

¹⁵⁰ I. Zamichiei, "Le PCF propose la candidature de Fabien Roussel à l'élection présidentielle de 2022," *Site Internet du PCF* [website], Paris, Parti communiste français, https://www.pcf.fr/le_pcf_propose_la_candidature_de_fabien_roussel_l_lection_pr_sidentielle_de_2022 (accessed 1 September 2023).

¹⁵¹ Statista Research Development, "Number of SPD party members in Germany from 1990 to 2019," *Statista*, 14 November 2022, <https://www.statista.com/statistics/957247/spd-membership-development-germany/> (accessed 1 September 2023).

almost three million members to less than 200,000.¹⁵² ¹⁵³ ¹⁵⁴ As one expert put it, “the days of mass party membership are over.”¹⁵⁵

The causes of this situation are several. They include deindustrialization in the West brought on by globalization, which has shattered the organizational base of the trade union movement and the traditional leftist parties, as well as the fall of Eastern European communism and the (at least partial) embrace of capitalism by China and Vietnam. Even if the “actually existing socialism” of the Eastern Bloc was not particularly popular with the Western left in the last decades of European communism, its disappearance has created the sense that there is no possible alternative to Western capitalism. A third and not insignificant cause is the increasing delegation of political decisions away from sovereign states to undemocratic institutions such as the European Union and the World Trade Organization.

An in-depth examination of these historical developments is outside of the scope of this work, but the important takeaway is this: the central problem of the climate movement is that the conditions for collective action have disappeared, at least in the West. Climate change is a problem that can only be tackled through collective action, collective *political* action. Viewed from the perspective of this broader impasse, it should become clear that the central problem of sustainable urbanism in both its bright green and dark green forms is that it is trying to

¹⁵² G. Thompson et al, *Olympic Britain: Social and economic change since the 1908 and 1948 London Games*, London, House of Commons Library, 2012, pp. 141-142.

¹⁵³ A. Robertson, “Labour Party lose 10k members in just two months,” *The National*, 27 July 2023, <https://www.thenational.scot/news/23683781.labour-party-lose-10k-members-just-two-months/> (accessed 1 September 2023).

¹⁵⁴ B. Wheeler, “Tory membership figure revealed,” *BBC News*, 5 September 2022, <https://www.bbc.com/news/live/uk-politics-62760180> (accessed 1 September 2023).

¹⁵⁵ P. Delwit, “Still in Decline? Party Membership in Europe,” in E. Van Haute (ed.), *Party Membership in Europe: Exploration into the anthills of party politics*, Université Libre de Bruxelles, 2011, p. 41.

tackle a political problem in a non-political way. Sustainable urbanism seeks to provide technical, design solutions to climate change, while being embedded in a capitalist system that is structurally committed to the continuation of business as usual in the face of climate change — or at least to business as usual with a slightly green coat of paint. Since business as usual is currently showing no signs that it can provide adequate solutions to climate change, this system must be resisted, reformed, or overthrown. Again, only through collective political action is this even thinkable.

What can sustainable urbanism do in a world where collective political action no longer seems imaginable to large segments of the population? The solution should be clear: *make* it imaginable. Depoliticization and the dissolution of mass movement politics is not a passive historically mandated phenomenon, but a situation that we can and must reverse in order to have any hope of keeping climate below 1.5°C. The only sustainable urbanism is an urbanism of repoliticization.

Chapter 6: Towards an Urbanism of Repoliticization

Is there a role for urbanists and architects in this repoliticization? It may seem that this is a societal problem too broad for the design professions can hope to tackle. No building design, however well thought out, is going to on its own reshape and empower the community that uses the space, although it may play a role.

But urbanists and architects should not limit themselves to only thinking about the design of spaces. Designers are accustomed to looking at a city street and focusing on the physical buildings and infrastructure they see in front of them. Good designers also see the people who use those buildings and infrastructure. The more astute observers may be aware of the flows of energy, water, and waste that keep the built environment running. Yet what most miss, because it is there in only a fictional, socially constructed sense, is perhaps the most important flow of all: capital. The built environment plays a crucial role in our economic system as a key part of the process of capital accumulation.¹⁵⁶ For capital, it does not matter how well-designed the building or the neighborhood is, nor how sustainable it is. As long as it is plugged into the financial mainframe of the global real estate investment system, the role the building plays is the same: a number on a balance sheet.

Urbanists and architects should expand their horizon of imagination, and in their proposals go beyond conceiving different ways of *building* the city, and conceive different ways of *owning* the city. It should be clear that the targets of these proposals cannot be private capital. The aim of changing ownership structures and repoliticizing and empowering the working class is fundamentally at odds with the aims of capital. Other than private

¹⁵⁶ D. Harvey, "The urban process under capitalism: a framework for analysis," *International Journal of Urban and Regional Research*, vol. 2, no. 1-3, 1978, pp. 101-131.

capital, the only actors with the means to intervene in the city at a large scale are governments. Of course, bourgeois governments are no allies of the working class, but they are susceptible to pressure from popular mobilizations, and, especially at the local level, to electoral takeovers from leftwing movements.

In an era where trade unions and mass parties have virtually disappeared as meaningful political forces across the developed world, the goal of the left should be to reconstruct the sort of mass working class movements that posed a real threat to capital across Europe in the first three quarters of the 20th century. With the conditions of mass industrial workplaces that created these movements gone, a new basis of mass organizing is needed. Perhaps the city can provide this, but only if organized around real bases of power, as the trade union movement was. The fantasy that spontaneous urban protest movements such as Occupy Wall Street in the United States or 15-M in Spain could have revolutionary potential was shown to be just that, a fantasy. Yet this does not mean that “urban issues” such as housing cannot be a base of working class power.

From Municipal Communism to Municipalism

A precedent from the era of mass working class parties is the so-called *ceinture rouge* or “red belt” of Paris, where the French Communist Party (PCF) built up local bases of support in the working class suburbs around Paris, largely through housing politics, and used these as one of its staging grounds (along with the factories, of course) for a takeover of national politics. Manuel Castells describes how the Communists role in fighting for better housing in Sarcelles, 16 kilometers north of Paris, allowed them to unite groups that did not share a workplace, and win the city hall in 1965:

The experience of collective motivation based on housing questions seems to explain the change of political attitude of a middle class and lower middle class notable until then for their separation from the working class, an expression of the social distance between the two groups in the workplace. It was based on this transformation of attitude that the left (lead by the Communists) was able for the first time to take control of a suburban local government in a non-working class city.¹⁵⁷

The PCF never achieved the national power it hoped for, and steady lost control of most of the *ceinture rouge* over the course of the subsequent 50 years, including Sarcelles in 1983. But the failures of French communism are another subject.

In the 2015 Spanish municipal elections, in the aftermath of the 15-M protests, municipalist left¹⁵⁸ candidates managed to win the mayorship of most of major Spanish cities on the back of (mostly) newly formed political parties. Manuela Carmena in Madrid, Ada Colau in Barcelona, Joan Ribó in Valencia, and Pedro Santisteve in Zaragoza meant that the mayorships of four of Spain's five largest cities were in the hands of the municipalist left. At the next municipal election in 2019, only Colau was reelected, with a large decline in vote share. Four years later in 2023, she lost the mayorship of Barcelona at the same time as Kichi, the other remaining mayor of the Spanish municipalist wave, lost the mayorship in Cádiz.

¹⁵⁷ M. Castells, *La ciudad y las masas: Sociología de los movimientos sociales urbanos*, Madrid, Alianza, 1986, p.132.

¹⁵⁸ E. Forman, E. Gran, and S. van Outryve, "The Municipalist Moment," *Dissent*, Winter 2020, <https://www.dissentmagazine.org/article/the-municipalist-moment/> (accessed 5 September 2023).

The achievements of these political movements is up for debate, but it can be safely said that none of them were able to turn the wave of popular mobilisation that swept them to power into mass movements, or even to accomplish enough as mayors to convince those who put them in power to do so again. Contrast this with Sarcelles, where the PCF held the mayorship for 18 years continuously, or remaining PCF strongholds like La Courneuve, just north of Paris, which has had an uninterrupted string of communist mayors since 1959.¹⁵⁹

Why this so-called New Municipalist wave failed is a matter of debate, and part of it can be blamed on the fact that none of these parties actually won a majority of city council seats in 2015, the hostile media environment they faced, and the conservative national government during the first three years of their terms. They also suffered from the lack of a mass movement to back them up. As Colau's then-deputy mayor Gerardo Pisarello said in 2018:

It seems to me that the debate is above all about what to do when mobilization outside is not sufficiently intense. We have not had [such mobilization]. We have had moments of intensity and others without [but] we have not had a mass movement for the “right to the city” which we had hoped for. Why has this mass movement against speculation not been produced? Well, what is certain is that it has not existed on the scale which we would need to stop such processes.¹⁶⁰

¹⁵⁹ “Anciens maires de la Courneuve,” *Annuaire Mairie* [website], Mairie de la Courneuve, <https://www.annuaire-mairie.fr/ancien-maire-la-courneuve.html> (accessed 23 August 2023).

¹⁶⁰ Quoted in E. Gilmartin, “The Mayors and the Movements,” *Jacobin*, 19 October 2018, <https://jacobin.com/2018/10/fearless-cities-review-ada-colau> (accessed 5 September 2023).

The municipalist movements seem to have had no idea what to do to shore up a base of support when the 15-M movement waned, and to have made no attempt to use their political gains to build a mass movement.

There is no real model for what an insurgent left wing party can do when it wins power over a major Western city in the 21st century. The goal of sustainable urbanists and architects — among others — should be to develop a model of what a city by and for the working class should look like, so that whenever an opportunity like Spain in 2015 arises again, the proposals are already there and the moment can be seized. Of course, there is no reason to wait around for such an opportunity, and such proposals can also be used as a basis for organizing mass movements.

There are many possibilities for what these proposals could look like, but to illustrate one possible way forward I will present an example that I developed during the 2023 spring semester design studio of the Master's degree in Sustainable Intervention in the Built Environment (MISMeC) at the Vallès School of Architecture (ETSAV) together with my classmates Che Fall, Rola Dalloul, Jasper Kik, and Henrique Muniz in a project we titled *A New Model of Sustainable Community Building: Organization of Besòs for Eco-Social Regeneration*.¹⁶¹

The Besòs Organization for Eco-Social Regeneration

We were tasked with developing a proposal to make the Sud-Oest del Besòs neighborhood of Barcelona more sustainable. Besòs is a typical 1950s modernist housing

¹⁶¹ L. McNiff et al, *A New Model of Sustainable Community Building: Organization of Besòs for Eco-Social Regeneration* [unpublished].

project composed largely of mid- and high-rise apartment blocks. It was built out of second-rate material to cut costs, and many of the buildings are now suffering from serious structural issues, which the Barcelona Municipal Institute of Urbanism (IMU) is currently embarking on a series of interventions to treat.

Sud-Oest del Besòs is a working class and heavily immigrant neighborhood, and includes the lowest income census tract in the city. In common with many working class neighborhoods across Spain, it had a very high rate of abstention in the 2023 general elections.¹⁶² We determined that it made little sense to tell a working class neighborhood to become more sustainable, when the consumption of the poorest fifth of European households are only responsible for 8% of European emissions, compared to 37% percent for the richest fifth.¹⁶³ Instead, using the same logic as above, we argued that repoliticization and community empowerment was the sustainable solution for the neighborhood, and that a new model of ownership of the city was the means to that end.

The new model of ownership we proposed was based around a hypothetical organization we called the Besòs Organization for Eco-Social Regeneration, or OBRES (from the Catalan name Organització del Besòs per la Regeneració Eco-Social). The acronym means both “works” and “you open” in Catalan. OBRES would be an independent organization democratically controlled by the residents of the neighborhood tasked with the mission of bringing spaces and resources into the common ownership and management of the neighborhood.

¹⁶² R. Sánchez and V. Oliveres, “¿Qué votaron tus vecinos el 23J? Los resultados de las elecciones generales, calle a calle,” *elDiario.es*, 24 July 2023, https://www.eldiario.es/politica/votaciones-elecciones-generales-23j-por-calles_1_10377837.html (accessed 23 August 2023).

¹⁶³ M. Sommer and K. Kratena, “The Carbon Footprint of European Households and Income Distribution,” *Ecological Economics*, Vol. 136, June 2017, pp. 62-72.

Under our proposal OBRES would be initially capitalized by the municipal government, which would use public funding to acquire and renovate spaces in Besòs, and then lease those spaces to OBRES, which would manage and maintain them. We identified a lack of ground-floor non-residential activity in the neighborhood, and therefore proposed that the municipality buy ground floor apartments and turn them into spaces whose use was not predetermined by the designers and could be easily adapted by OBRES to whatever use the community sees fit. We called these “espais d’OBRES,” which is simply Catalan for “OBRES spaces” but again plays on the meaning of the OBRES acronym. The specific design solutions we proposed are not relevant here, but the core feature was that the espais d’OBRES should be adaptable using tools available in OBRES-run workshops we proposed be built in the neighborhood’s underused commercial centers, which we reimagined as community centers. The role of the city government is limited to building the long-lasting skeleton of the neighborhood, and the flesh and skin are the purview of the neighborhood itself, via OBRES.

OBRES would be a democratic organization, with membership free and open to all residents (legal or otherwise) of Sud-Oest del Besòs. It is important that OBRES truly be run by the neighborhood, and not just by an activist minority with time on their hands. It must be an organization truly of the neighborhood, and not just another non-profit organization that claims to represent a community while really only representing a small clique of activists. We discuss how to achieve this in our proposal:

The goal should be that as high a percentage of the neighborhood as possible are members of OBRES, ideally above 90%, so that the organization represents the neighborhood as a whole and not just an activist minority. To achieve this, it is

important that the barriers to entry are non-existent, and even a small membership fee can constitute a significant mental barrier to people joining a new, unproven organization.

[...]

It is important not just that nominal membership be high, but that engagement in the governance of the organization be high too. This means making involvement in the decisions-making process not require too much time of people, by means of representative democracy, transparent decision making structures, and online referendums, rather than time-consuming consensus-based assemblies.

Ultimately, the aspect of OBRES that will get people involved is not the posters and door-to-door canvassing, but the perhaps gradual realization by the residents of the neighborhood that they have the power to change the way OBRES runs its spaces or the way it allocates its funds.

Individuals and groups will get involved in OBRES's decision making not out of altruism or a feeling of belonging to a community, but to contest the decisions that are being made by others, and to advocate for their needs and wants. This is why it is important that OBRES start with as much space as possible under its control, because it needs to be an important enough organization that its contestation becomes a necessity for everyone in the neighborhood, whether they have a band that needs a practice space, or a large family that needs a space to use for weekend gatherings, or an club that needs a place to meet, or a small business that needs a cheap space it can

rent. In that way, OBRES would bring together the individual needs of the residents and force them to think about how they fit into the needs of the neighborhood as a whole, and to negotiate and compromise with their neighbors, not just within the formal decision-making processes of OBRES but also in Besòs's streets, cafés, workplaces, and homes. In this way, a real, political community is formed from a neighborhood. To quote Richard Sennett: 'The most direct way to knit people's social lives together is through necessity, by making men need to know about each other in order to survive.'¹⁶⁴ Although in this case not to survive, but to thrive.¹⁶⁵

OBRES would fund itself off the use of the espais d'OBRES, and receive no ongoing funding from the city. As we explain:

How OBRES concretely would fund its activities is up to the community to decide, but the most obvious way is to rent some of its spaces out to private businesses. This is a suggestion that may strike some readers as strange; why should OBRES ever give a space that could be used as a community-space over to a commercial, for-profit use? But there are commercial uses that are as important a part of a community as any public space: cafés, bars, restaurants, shops and music venues are all vital organs of any community.

¹⁶⁴ R. Sennett, *The Uses of Disorder: Personal Identity & City Life* [ebook], New York, Alfred A. Knopf, 1970, ch. 6, sec. 2, para. 1.

¹⁶⁵ McNiff et al, *A New Model of Sustainable Community Building*, pp.34-35.

One of the problems the financialization of the city creates is that commercial rents become so high that restaurants and bars for the working class become priced out and are replaced by ones for the rich or for tourists, or else are forced to raise their prices to the point where these places cease to be spaces for everyday socialization.

OBRES's involvement would fight against this. That is not to say that it wouldn't be better for these cafés and shops to be cooperatively run, and the community may well decide that OBRES should prioritize renting to those types of businesses. But OBRES renting to a private business is not a loss for the community. Rents that are normally siphoned out of the community into the hands of private landowners or financial institutions would instead be brought into the commons and put in the service of the community as a whole.

[...]

If OBRES started with ten ground-floor spaces and chose to rent out half of them, then in the short term that would mean half the number of spaces for the community to use. But it would allow those community spaces to be much better funded, and in the long run would allow OBRES to acquire more spaces, put solar panels on the neighborhood's roofs, build urban gardens, and overall build the community's power in a much more effective way.¹⁶⁶

A key feature of OBRES is its independence. The right to determine the use of these publicly built spaces would function as the capitalization of OBRES. In a way, the spaces built by the city government would function analogously to a bank loan does to a new

¹⁶⁶ McNiff et al, *A New Model of Sustainable Community Building*, p.34

business. The lease of the spaces would be an opportunity for OBRES to generate value for the community, knowing full well that it may someday have to “pay back” (give back the use of) those spaces if the political winds change in the city government, or if the relationship between the neighborhood and the government becomes conflictual. Much like a private business has obligations to the bank that loaned it the money to get started, OBRES would have to make commitments to the city government in return for the use of the spaces, but just as the business seeks to grow to the point where its existence is not dependent on the continued support of the bank, so would OBRES seek to grow well beyond being a manager of spaces for the government. Because OBRES would not be a governmental body, but a different type of organization altogether: a Common Association. Rather than being an arm of the state, OBRES would form a limited partnership with the state, contingent on the continued willingness of the state and the community behind OBRES to work together: a Public-Common Partnership.

Public-Common Partnerships

The term public-common partnership (PCP) was coined by political theorists Keir Milburn and Bertie Russell to describe their theory of “a new institutional framework for a transformative socialist politics.”¹⁶⁷ PCPs are “models of joint ownership and governance, in

¹⁶⁷ K. Milburn and B. Russell, *Public-Common Partnerships: Building New Circuits of Collective Ownership*, Common Wealth, 2019, p. 2.

which the two principal parties are a state agent (such as a municipal council) and a Common Association (such as a mixed cooperative or community interest company).”¹⁶⁸

Our OBRES proposal does not fully fit the PCP model sketched out by Milburn and Russell. The most important difference is that they conceive of a PCP of being a “joint enterprise” with its own governance structure, separate from the Common Association’s, which would have one third of its governing board formed by representatives from the public body involved, one third by the Common Association, and one third by other stakeholders involved in the project and independent experts.¹⁶⁹ Under our proposal, there is no such joint enterprise, and no stakeholders or experts with any more authority in OBRES than any individual member of the community. We by no means exclude other stakeholders or the local government from having consultative roles in OBRES’s decision making, but they would have no formal power over its governance. Perhaps part of this comes from us writing our proposal in Barcelona while Ada Colau was mayor, whereas Milburn and Russell work on case studies in Britain, which has a political climate much less amenable to this sort of proposal.

However, there is also perhaps a real disagreement here. Milburn and Russell emphasize networks of different actors, decentralization of control, and design one of their PCP proposals, the Wards Corner Community Benefit Society, as “an interface between different interests and institutional logics” with “different membership types with different rights and obligations.”¹⁷⁰ We instead emphasize OBRES as a larger, more centralized

¹⁶⁸ Milburn and Russell, *Public-Common Partnerships*, p. 13.

¹⁶⁹ Milburn and Russell, *Public-Common Partnerships*, pp. 13-15.

¹⁷⁰ B. Russell, K. Milburn, and K. Heron, “Strategies for a new municipalism: Public–common partnerships against the new enclosures,” *Urban Studies*, vol. 60, no. 11, p. 2145.

organization based on the democratic principles of trade unions or the mass workers' parties of the 20th century:

Spaces and resources should be managed to the greatest extent possible by the people using them. The users of a space know better what it needs than any centralized body can, and can maintain and adapt it better as long as they have the tools, resources, and skills to do so. A guiding principle of OBRES should therefore be to decentralize control of spaces and resources. However, a strong, central OBRES body is needed both to provide democratic oversight of the use of OBRES-owned spaces, to provide services that are most efficiently provided centrally such as technical expertise and costly equipment, and to gather together community resources to invest on a larger scale than any individual entity in the community can.

The governing authority of OBRES would be the community as a whole, who would exercise their direct control over OBRES during an annual General Assembly, and by electing a Coordinating Council that makes everyday decisions. Important decisions can be put to a community vote, either by the Council's initiative or that of a required number of OBRES members. In this way, OBRES would be run much like any traditional democratic organization such as a trade union. The central OBRES offices would ideally be located in a prominent location and open to all who wish to come in and discuss OBRES's decisions.¹⁷¹

¹⁷¹ McNiff et al, *A New Model of Sustainable Community Building*, p.35.

In the same way, Milburn and Russell talk about networks of interlocking PCPs, whereas we focus on OBRES as the only Common Association that would be active in the neighborhood (I will come back later to how this could extend beyond a single neighborhood), and takes on a much greater importance than the Public-Common Partnership itself.

In my view, the network of different interest groups and associations described by Milburn and Russell too much resembles the miasma of activist organizations and non-profits that have come to replace trade unions and workers' parties as the representatives of progressive politics in Europe and North America. These networks of groups represent a much smaller section of society than the old parties or unions did, and the complexity of their dispersed networks renders them difficult to navigate and time consuming to be involved in, leading their membership to skew towards the academic, media and professional classes, and away from the working class. Furthermore, their decentralized nature renders them unable to compete with the large, centralized giants of financial capital. As argued in Chapter 5, the goal should be to reconstruct mass movement politics. A diverse coalition of small organizations has only the power to try to locally resist capital, but a mass movement would be able to stand up and fight back, on the national and the international stage. I will return shortly to the role I see for Common Associations like OBRES in constructing a mass movement.

Despite these disagreements with Milburn and Russell, I see the basics of their framework as a very valuable theoretical tool. Crucially, Milburn and Russell have developed a proposal for how to act locally while escaping from the trap of localism. They do not just see a local PCP proposal in the way the dark green urbanists do, as a small bastion of prefigurative politics or an attempt to holdout against capitalism. Rather, they see PCPs as a *strategic* tool in a broader fight against capitalism: "We argue that the commons can provide

a direction of travel – a process, rather than an end-point, of socialist institutional transformation.”¹⁷²

They correctly see something that the localists miss, which is that the only way to fight back against the constantly expanding circuits of capital and its unending growth is to fight back the same way, with constantly expanding counter-circuits that de-privatize assets and bring them into the control of the working class. As Marx demonstrated a century and a half ago, the value in the ever-expanding circuits of capital is produced by labor, not by capital. It is therefore perfectly possible for labor to remove that value from those circuits and bring it back into the commons. As David Harvey says:

The collective laboring that is now productive of value must ground collective not individual property rights. Value—socially necessary labor time—is the capitalist common, and it is represented by money, the universal equivalent in which common wealth is measured. The common is not, therefore, something that existed once upon a time that has since been lost, but something that is, like the urban commons, continuously being produced. The problem is that it is just as continuously being enclosed and appropriated by capital in its commodified and monetized form, even as it is being continuously produced by collective labor. The primary means by which it is appropriated in urban contexts is, of course, through the extraction of land and property rents.”¹⁷³

¹⁷² Milburn and Russell, *Public-Common Partnerships*, p. 11.

¹⁷³ D. Harvey, *Rebel Cities: From the Right to the City to the Urban Revolution* [ebook], London and New York, Verso, 2012, ch. 3, par. 24-25.

PCPs provide the beginning of a roadmap to take those land and property rents back.

The core feature of PCPs is the “distributed democratic control of surplus value,” where a substantial portion surplus produced from the operation of a PCP is transferred to the Common Association to use to capitalize other PCPs, creating a “centrifugal finance dynamic” and transforming surplus value into “common use value.”¹⁷⁴ This is not just a secondary goal of PCPs, but the primary goal, as Milburn and Russell say that PCPs must actually *seek out* surplus value: “The ability to trigger the self-expansive dynamic of the commons will require the capitalisation of projects most likely to produce a surplus (with energy, water, housing, and transport infrastructure being obvious starting points) and thus allow the capitalisation of further PCPs.”¹⁷⁵ In this depiction we see PCPs acting almost like financial institutions here, seeking out sources of profit in the city to invest in; this would make many dark green urbanists shudder. Yet the difference is key, because these PCPs would be using this profit and land rents to bring yet more resources into the commons, and away from the capitalist financial system that siphons the profits off to the City of London and Manhattan. Finance itself is not something we should be afraid of, the private ownership of capital is.

In our OBRES proposal we envision such a centrifugal finance dynamic taking place in the neighborhood of Sud-Oest del Besòs. Beginning from its base of income from renting out some of the espais d’OBRES, OBRES would reinvest its surpluses into acquiring more ground floor spaces, this time directly owned by the organization without the city government being involved. From this it could expand further into full-on real estate development, buying

¹⁷⁴ Milburn and Russell, *Public-Common Partnerships*, pp. 15-16.

¹⁷⁵ Milburn and Russell, *Public-Common Partnerships*, p. 20.

empty apartments and building housing in underused land at the edge of the neighborhood,¹⁷⁶ to be rented out as community housing at an affordable, below-market rate that still generates surpluses for OBRES to expand further. From there we envisioned OBRES expanding into other resources such as energy, by adding solar panels to rooftops, creating OBRES-run food provisioning systems to bypass the price gouging of the large supermarket chains, and opening a community bank that could both provide commercial and consumer loans, as well as issue bonds to give neighborhood residents a way to invest their savings in their own neighborhood, while also contributing to the further capitalization of OBRES projects.

The result of all this would be a well-resourced and powerful organization that could be a tool for the inhabitants of this working class neighborhood to wield influence on a citywide scale, being able to make demands on the city government, whatever its current political composition. OBRES would be able to wield its money to influence city politics in the same way as large private developers do, but would also be able to wield a resource those private interests cannot: the thousands of people behind OBRES, who would constitute OBRES. They could use OBRES to collectively act, whether that be as a powerful voting bloc, or through street protests, or through industrial action.

But it is essential at this point that OBRES or any similar Common Association does not rest on its laurels and keep the wealth the neighborhood is generating to itself. The risk that a Common Association would focus on its own community at the expense of others is one that Milburn and Russell identify, and they propose that a solution be built into the

¹⁷⁶ We identified a number of underused lots on the northeastern edge of the neighborhood around Parc del Besòs, most of which are parking lots owned by the city government of the neighboring city of Sant Adrià de Besòs. The municipal ownership is likely why they have so far not been privately developed. OBRES could potentially either buy those lots from the municipality, or reach an agreement with the city hall of Sant Adrià to form a Public-Common Partnership to develop them. See McNiff et al, *A New Model of Sustainable Community Building*, p. 52.

structure of PCPs, in order to “balance the needs and desires generated from within a Commons Association with the wider responsibility to tend the social and planetary commons.”¹⁷⁷ They say that this is “not something we can simply hope will happen, like some form of weak corporate social responsibility,” but necessitates the joint governance structure they propose for PCPs involving governments, outside experts, and stakeholders.

Our OBRES proposal does not contain such a joint governance structure, as previously addressed, because we do not believe that it is necessary. The purpose of OBRES is to empower the working class of Sud-Oest del Besòs, and that commitment necessarily means trusting in class and neighborhood to manage its own affairs. The phrase “some form of weak corporate responsibility” used by Milburn and Russell draws an inaccurate comparison between working class and capital, as if the only difference between a Common Association and a corporation was its structure of governance. The key difference is rather who controls it. The problem with capitalism is not the “fake efficiencies via accounting tricks” that Milburn and Russell seek to avoid with joint governance structures,¹⁷⁸ the problem is the dominance of all society by one minoritarian social class.

The particular governance of OBRES and how it would relate to other Common Associations is therefore less relevant than that it becomes a vehicle for the residents of the neighborhood. Sharryn Kasmir, in her analysis of the Mondragón cooperative system *The Myth of Mondragón*, describes the cooperativist ideology of the managers and ideologues of Mondragón:

¹⁷⁷ Milburn and Russell, *Public-Common Partnerships*, p. 19.

¹⁷⁸ Milburn and Russell, *Public-Common Partnerships*, p. 19.

In both the literature and managers' framing of conflict, the business form, rather than class actors, emerges as the agent of social change. The cooperative system, complete with its seemingly innate ability to solve problems, is the model for social change, and the cooperative structure is replicated, not the qualities of activism of a particular group or class of people. (Hence local politics are irrelevant.) According to this conception of social change, workers are insignificant. This insight may provide a second lesson to those of us who became interested in Mondragón because we thought cooperatives provided a better alternative for workers: to be skeptical of models that make business forms rather than people the agents of social change.¹⁷⁹

We must not fall into the trap that Kasmir describes, and should instead stick to the old Marxist view of the working class as the agent of social change. If our OBRES plan were implemented, and became a run-away success, creating great wealth for the neighborhood, we should not fear that OBRES would suddenly turn into a wealth-hoarding corporation, intent on keeping it away from the residents of other working class neighborhoods.

Socialism in One Neighborhood is Impossible

If OBRES were a success, we would propose that it capitalize other projects, as Milburn and Russell describe. To start, OBRES could expand its borders to include surrounding working class neighborhoods like La Mina and La Pau, buying land in those neighborhoods and opening its membership to their residents. It could capitalize new

¹⁷⁹ S. Kasmir, *The Myth of Mondragón: Cooperatives, Politics, and Working-Class Life in a Basque Town*, Albany, State University of New York Press, 1996, p. 196.

Common Associations in other parts of the city, either on its own, or, if the municipal government were amenable, creating further PCPs on the model of OBRES. Eventually, the city could be divided up between OBRES and the other Common Associations, following borders agreed to by the Associations and the residents of the neighborhoods. The best geographical and population size for each Association would have to be determined by trial and error.

It is worth commenting that Common Associations would almost certainly not be created for wealthy neighborhoods. For one thing, there would be much less of a need and desire for such organizations in those neighborhoods, which are often already well-equipped with community facilities, and where the wealthy are likely to be much less willing to socialize resources. Higher real estate prices also creates less of an opportunity for an OBRES-like organization to acquire space. Furthermore, OBRES's purpose is working class empowerment, which necessarily means the *disempowerment* of the class that is in power; that is to say, the bourgeoisie. Even though OBRES's membership would be open to all residents of Sud-Oest del Besòs, including the wealthy ones, it should not be mistaken for an organization that is trying to smooth over class conflict. Avoiding class conflict is not possible under capitalism except by the surrender of the working class. OBRES's activities will necessarily antagonize real estate interests, private power companies, and all other capitalist interests its activities take power away from. It is best that OBRES acknowledge this and embrace it. Should a Common Association appear representing the residents of a very wealthy neighborhood like Les Corts, it would likely be viewed with deep suspicion by OBRES and its allies.

The local Common Associations across the city could join together in a federal structure at the municipal level or level of the metropolitan area, which could jointly run

institutions that are more efficiently run on a large scale. These city-level associations could then create federal structures on a Catalan scale, a Spanish scale, a European scale, and an international scale. They would thereby create a structure of power that runs directly from working class neighborhoods to scales where state power can be contested, much in the same way that large trade unions or socialist Internationals did in their heyday.

This is a quite different vision than the anarchic “overlapping patchwork of institutions” envisioned by Milburn and Russell.¹⁸⁰ It is much more structured, and “traditional,” so to speak. Overlapping patchworks have their advantage, but the problem, again, is that the capitalist system operates on a very large scale. Capitalism pretends not to be centralized, and indeed in some ways has dispersed decision making, but it is dependent on large scale systems and powerful centralized institutions such as the European Union, the United States government, NATO, the World Trade Organization, the International Monetary Fund, and so on. The working class is obliged to try to challenge those institutions and systems at scale, and to do so, coordination is needed, and that implies centralized structures. The important thing is to make sure that these structures are controlled by a truly democratic structure, and that is why the rigid accountability structures of local, regional, and national federations is needed, rather than overlapping networks of control, which can often be opaque.

Remaining truly democratic is of course a constant challenge for any large working class organization, as can be seen throughout the 20th century with the history of the Soviet Union and the calcification of bureaucracy in unions and workers’ parties in the West. Nevertheless, it is a challenge that cannot be retreated from, and it is a mistake to write off

¹⁸⁰ Milburn and Russell, *Public-Common Partnerships*, p. 20.

large-scale structures and bureaucracies as necessarily evil, or as necessarily concentrating all power within themselves. Inspiration can be taken from this passage from Richard Sennett:

We also need to explore how a centralized state apparatus can be made compatible with decentralized ends. There is no reason why centralized resources, like taxes, fire and police services, health and welfare benefits, have to be destroyed in order to decentralize power in essence. The community leaders who advocate this make a mistake: it is not the existence of centralized structures which is per se the evil, but the machinelike uses to which these structures are so easily directed. Conceivably through social experiment we can learn how to distribute centralized resources to create decentralized, uncontrolled social situations. The essence of bureaucracies, Simmel wrote, is the use to which they are put; these impersonal structures are corrupting only when they are taken as ends in themselves, when the processes by which they work most efficiently are taken to be an image of how society itself ought to function. By breaking this machine image, and removing from massive bureaucracies the power to regulate conflict, we may be able to invent new activities for them in which they help create diversity and disorder rather than stifle it.¹⁸¹

Centralizing the resources that need to be centralized, turning decentralized control into centralized political power, and keeping as much decision making as local as possible: this is a major challenge. Yet it is one that Common Associations can and must grapple with, taking inspiration from the successes and failures of the mass working class that came before.

¹⁸¹ Sennett, *The Uses of Disorder*, ch. 6, sec. 7, para. 20.

Perhaps we are getting ahead of ourselves here, envisioning the progression from a community organization in a small neighborhood of Barcelona to a global working class organization. Should we not be focused on what OBRES can do for its neighborhood? Of course, the main task of OBRES will not be fighting capitalist power, it will be organizing community theaters, discussing whether a space it has acquired should be turned into a community theater or a music studio, and deciding how much to charge its residents for the energy it is producing from its rooftop solar farms. But the end goal is important, and it is what separates Milburn and Russells ideas from the dark green localist fantasies critiqued in Chapter 4. Something like OBRES can only be achieved if it is approached with a clear-eyed view of how it fits into the larger capitalist system. It cannot escape that system, it cannot exist peacefully within it, so it must fight it. Lenin's 1907 critique of municipal socialism still holds water today:

The bourgeois intelligentsia of the West, like the English Fabians, elevate municipal socialism to a special "trend" precisely because it dreams of social peace, of class conciliation, and seeks to divert public attention away from the fundamental questions of the economic system as a whole, and of the state *structure* as a whole, to minor questions of *local self-government*.¹⁸²

We must not fall into the dark green trap of thinking that a local project can subvert capitalism on its own, nor that it can unite a local "community" across class boundaries. It is

¹⁸² V.I. Lenin, "The Agrarian Programme of Social-Democracy in the First Russian Revolution, 1905-1907," in *Lenin Collected Works* [ebook], Moscow, Progress Publishers, 1972, ch. 6, sec. 7, para. 5, <https://www.marxists.org/archive/lenin/works/1907/agrprogr/index.htm> (accessed 24 August 2023).

not just undesirable, it is impossible, if the project wishes to go beyond minor questions. As Lenin says, “so long as the bourgeoisie rules as a class it cannot allow any encroachment, even from the ‘municipal’ point of view, upon the real *foundations* of its rule.”¹⁸³ And those real foundations must be encroached, if there is to be any hope of preventing catastrophic climate change. There is no local intervention that can make Sud-Oest del Besòs resilient to the levels of warming it will experience if the working class everywhere retreats into dark green localism. A community garden and community owned solar panels are all well and good, but on their own they will change nothing. Socialism in one neighborhood is impossible.

Rather, we must see these local actions as tools in a larger struggle. After several criticisms of Milburn and Russell, we are back to the greatest strength of their argument: they see PCPs not as local ends in themselves, but as “one part in a wider system of socialist transformation.”¹⁸⁴ They are also not seen as prefigurative politics: “Neither utopian, nor a final model of post-capitalism, these new institutional arrangements fit with a proper definition of socialism - a transitional phase that moves us in the direction of a world after capitalism.”¹⁸⁵ And most importantly, they recognize that this transition to a world after capitalism will necessarily involve class struggle:

¹⁸³ Lenin, “The Agrarian Programme of Social-Democracy in the First Russian Revolution, 1905-1907,” ch. 6, sec. 7, para 6.

¹⁸⁴ Milburn and Russell, *Public-Common Partnerships*, p. 20.

¹⁸⁵ Milburn, K. and Russell, B., “What can an institution do? Towards Public-Common partnerships and a new common-sense,” *Renewal: A journal of social democracy*, vol. 26, no 4, 2018, p. 54.

PCPs are but one part in a wider system of socialist transformation, however, and there are several ways in which they could help limit the power of capital. Firstly, the expansion of the commons intrinsically involves the decommodification of life, therefore shrinking both the market and public sector. Reducing people's reliance on capital for their basic social reproduction helps strengthen our hand in more direct antagonistic forms of struggle. Strikes, for instance, become eminently more winnable when many of our life-support systems – such as energy, water, housing and transport – are commonly owned and governed resources. As the commons circuit grows and encompasses more and more of the vital infrastructure upon which our lives depend, then the ability of capital to exercise leverage through disruption becomes significantly undermined.

[...] “PCPs will also act as training in political analysis and strategic planning on a mass scale, facilitating an ever-widening portion of the population to engage in discussion of political strategy.”¹⁸⁶

The connection may seem tenuous between a local project initially controlling only a handful of commercial spaces such as OBRES, or a project in a single market in London like the Wards Corner project discussed by a Russell, Milburn and Kai Heron,¹⁸⁷ and class struggle on a scale large enough to tackle an issue like climate change. But the important point is that there *is* a strategic connection. As discussed in Chapter 5, the left finds itself at an impasse, where one segment has surrendered to capitalism and accepted that only small, local change is possible, while the segment that still believes in class struggle and the

¹⁸⁶ Milburn and Russell, *Public-Common Partnerships*, p. 20.

¹⁸⁷ Russell, Milburn, and Heron, “Strategies for a new municipalism,” pp. 2142-2146.

overthrow of capitalism has lost its weapons of mass mobilization and industrial action to the 21st century's deindustrialization and societal atomization. Public-Common Partnerships and the model we designed for OBRES provide a framework for using the concrete possibilities of local change to rebuild a base of power for a global struggle against capitalism, and a way through the impasse.

PCPs also provide a model for what urbanists and architects committed to sustainability can do in their professional lives to help construct an urbanism of repoliticization. Any PCP proposal like OBRES necessarily include a large design component, but beyond just the physical design, urbanists and architects should approach urban intervention holistically, focusing not just on the physical spaces but on the ownership structures and social reality the physical spaces are inseparable from. The interplay between physical design elements and the organizational and social design of Common Associations is an important topic for future research. Overall, public-common partnerships and the new kind of thinking they represent can provide one way of moving past the impasse that sustainable urbanism finds itself in.

Conclusion

“The era of global warming has ended,” declared UN Secretary-General António Guterres in July 2023, and “the era of global boiling has arrived.”¹⁸⁸ Climate change is here, and its severe effects are already being felt. Yet the planet has only warmed 1.09°C above pre-industrial temperatures. We are on track even with current mitigation efforts to go well beyond the 1.5°C of warming limit set by the Paris Agreement, and likely up to 3°C. The effects of climate change at these temperatures will be much more severe than anything we’re experiencing now. It is impossible to overstate just how urgent preventing this warming is. As Chomsky says:

Every single journal should have a shrieking headline every day saying we are heading to total catastrophe. In a couple of generations, organized human society may not survive. That has to be drilled into people’s heads constantly. After all, there’s been nothing like this in all of human history. The current generation has to make a decision as to whether organized human society will survive another couple of generation.¹⁸⁹

But as we careen towards the precipice, nothing is done, and no one is making a decision. The global population is extremely concerned about climate change. Young people especially are despairing. We looked in Chapter 1 at a study of climate anxiety among young people in

¹⁸⁸ “Hottest July ever signals ‘era of global boiling has arrived’ says UN chief,” *UN News*, 27 July 2023, <https://news.un.org/en/story/2023/07/1139162> (accessed 6 September 2023).

¹⁸⁹ Hackett, “Noam Chomsky: ‘In a couple of generations, organized human society may not survive.’”

11 countries. Majorities of those surveyed agreed with the statement “humanity is doomed” in five of the countries surveyed — India, Brazil, the Philippines, Portugal, and Australia. And in the other six countries, at least 43% said the same.¹⁹⁰

And yet this concern is not being translated into sufficient climate mitigation. Neither by democratic governments, nor by effective mass movements. The world is at an impasse. Sustainable urbanism is stuck in the heart of this impasse, as we saw in Chapters 2. Architecture and urbanism, fields which since the time of Le Corbusier and Bauhaus have prided themselves in being at the avant-garde of radical social change, find themselves unable to affect any real change at all when it comes to climate change mitigation. Sustainable urbanism has reacted to this situation by either embracing the urban growth machine, as discussed in Chapter 3, or by retreating from it into the comforting but impotent embrace of localism, as we explored in Chapter 4.

There is only one way pass the global impasse. The global population is deeply concerned about climate change, but find themselves powerless to enact change when the fate of the world is in the hands of those who have every incentive not to stop burning fossil fuels. Collective action is necessary to defeat the forces of fossil capital. Mass, global movements, of the kind that seem unimaginable in today’s world are the way forward.

The West has experienced decades of politics designed to make those collective political action and radical change seem impossible. This politics of depoliticization must be reversed, and that includes the urbanism of depoliticization. Cities have been turned into places for real estate speculation and individual consumption, with the spaces and structures that once made collective action imaginable steadily degraded. Urbanism and architecture can

¹⁹⁰ Hickman et al, “Climate anxiety in children and young people and their beliefs about government responses to climate change,” p. e868.

be used to fight against these trends and to expand the social base of mass movements: to create an urbanism of repoliticization. This can help the disciplines escape from what Antonio Miranda calls the “intrinsic corruption” of architecture (which is equally that of urbanism): its “commitment and eternal contract with the ruling ideology — or with the ruling class — and with global, neoliberal power.”¹⁹¹

There are many ways to create this urbanism of repoliticization, but Milburn and Russell's concept of public-common partnerships and my own work on the OBRES proposal explored in Chapter 5 can perhaps provide a promising direction. More work on the concept is needed, more proposals are needed, and more action is needed. New visions of urban futures are necessary. The idea of mass politicization leading to a radical restructuring of our society seems unimaginable because we have had decades of being told that radical change is unimaginable, and that climate change mitigation must be done gradually so as not to disrupt the global economy. Anything else is unrealistic, or so we are told. This is a self-fulfilling prophecy; as Malm says, “the more people who tell us that a radical reorientation is ‘scarcely imaginable’, the less imaginable it will be.”¹⁹² If there is one thing that architecture and urbanism knows how to do, it is to imagine. Now is the time for them to put pencil to paper and imagine an urbanism of repoliticization.

Is it really possible to use urban interventions to rebuild mass movement politics? Perhaps not. But with the ticking time bomb of apocalyptic climate change hanging over all our heads, and the alternatives being the full-throttle embrace of capitalism offered by bright green urbanism or the fatalism tended towards by dark green urbanism, we must try.

¹⁹¹ A. Miranda, “Prólogo: No hay bancos en Wall Street,” in M. Delgado, *El Espacio público como ideología*, 2nd edition, Madrid, Catarata, 2015, p. 10.

¹⁹² Malm, *How to Blow Up a Pipeline*, ch. 3, para. 12.

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