The Ecology of Public Affluence: Material Politics for Low-Carbon Cities

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Abstract

As the threat of catastrophic climate change becomes ever more pressing, a growing number of cities are adopting plans to move towards carbon neutrality. But while these plans have increased in number, they rarely achieve their stated goals. Critics of existing low-carbon politics argue that this is because municipal governments repeat the same neoliberal paradigm of climate governance, reliant on market mechanisms, that has found little success on national or international scales. This thesis presents Graz, Austria, as an emerging example of an alternative model of low-carbon governance, one based on bringing the material benefits of the low-carbon city to the working class. Deploying both class politics and ecological Marxist frameworks, this thesis argues that the infrastructures of the low-carbon city are an effective grounds for collaboration across class in practice as well as in theory, and that urban decarbonization reaches its greatest potential when the representatives of the working class are in a position to set the political agenda. These observations from Graz lead to a suggestion to reframe the narrative around climate collaboration. As both strong social policy and an anti-market stance are required to move beyond neoliberal models of climate governance, this thesis argues the challenge of low-carbon politics will be to bring the professional class to support a more radical social and economic political platform rather than to convince working-class people about the threat of climate change.

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Introduction: We Need New Models

A wide banner reading "No Profit in Housing" led hundreds on a May Day march across Graz, Austria's second largest city. The crowd gathered in Mariahilferplatz, a square in a formerly working-class area of the Lend district, then set off along the wooded west bank of the Mur river, walking to the rhythm of a brass band. Onlookers sitting in an outdoor café beneath the flowing black glass walls of the Kunsthaus, a modern art museum whose 2003 construction was one of the first redevelopment projects in Lend, stood to take photos of the demonstrators chanting anti-capitalist marching songs. A second banner followed behind the first, and displayed an image of electric wires and a gas pump with the slogan "Prices Down, Wages Up." A row of marchers behind the banner waved red flags. As they swayed in the gentle breeze, gaps in those flags revealed other posters, some purple, some rainbow, some blue. A green poster held high in the center of the march's second row read "Planet over Profit." The bottom of the poster was stamped KPÖ—the initials of Austria's communist party.

In November 2021, voters in Graz ousted the longstanding conservative government and elected Elke Kahr, leader of the Graz chapter of the *Kommunistische Partei Österreichs*, mayor. Kahr is a staple of the political left in Graz, and has pushed for both public housing and traffic reduction in various positions of city government. The KPÖ, who campaigned for "a city for people, not for profit," rose to political prominence in Graz after decades of housing activism and a commitment to understanding the struggles of working people demonstrated by the party's maximum wage of 2,500 euros per month.

But while the KPÖ is primarily known for their social politics, a second line written on campaign literature advocated for a "social and ecological" city. After decades of rapid real

estate development under the former conservative mayor, their program was well-received, and the KPÖ came away from the election with 29 percent of the vote, the most of any party. The Green party also made gains in the election, coming in third behind the conservatives with 17 percent of the vote. Together, they formed a coalition with the social democrats giving the left a majority in the city. While the social left took the largest percent of the vote in Graz, their majority coalition would have been impossible without the Greens.

Victories of the ecological movement and the social left are few and far between. It is telling, then, that they occurred as a package in Graz. Through an analysis of the political landscape of the city, I will show why these two threads of political activism, each with their own history and class associations, are stronger when brought together. In an urban setting, I argue that social and ecological coalitions provide a workable pathway towards the democratic, low-carbon cities that are desperately needed if we are to mitigate climate change and adapt to life in a warmer world.

Cities are both key drivers of climate change and some of the places on earth most vulnerable to the instability brought by increasing levels of atmospheric carbon dioxide. The UN estimates that cities are responsible for 75 percent of global emissions, with transportation and climate control in buildings heavily implicated (U.N. Environment 2017). London emits roughly the same amount of greenhouse gasses as countries like Greece and Portugal (Bulkeley 2011, p. 465). At the same time, the concentration of infrastructure and the sheer density of human life in cities places them at additional risk from natural disasters made more frequent and devastating by a changing climate (Ibid., p. 465; Wamsler, Brink, and Rivera 2013) Even in the absence of dramatic weather events, extreme heat is exacerbated by pavement in cities (Rizwan, Dennis, and Liu 2008), and the exhaust from vehicles and industry impact local health as well as the global

climate (Amato et al. 2014).

As national and international actors have failed to take proportional action to stop the just-beginning climate crisis, relying on market-based solutions that have time and time again proven ineffective (Bushnell, Peterman, and Wolfram 2008; Liverman 2009; Pearse and Böhm 2014), cities have also become sites of experimentation where climate solutions are tested. Lacking adequate funding, these solutions often rely on private-public partnerships and market incentives (Bulkeley 2011), failing to escape the neoliberal paradigm that also dominates national climate action (Rice 2014). One scheme in the UK, for example, attempted to bring the carbon trading model to an urban scale through a carbon market in which households set emissions reductions targets and then traded if they exceeded them (Bulkeley 2011, p. 470). As at the national level, these local solutions have proven ineffective in reaching the emission reduction goals set by cities (Rice 2014). While urban neoliberal climate solutions have a poor track record of emissions reduction, they have a well-documented history of producing social harms (Rice et al. 2020). In response to these failings, Jennifer Rice has called for "alternative forms of urban climate governance" (Rice 2014, p. 342). In this thesis, I will argue that Graz represents just that—a model for a different kind of urban climate governance that is both more socially just and more ecologically promising than existing neoliberal forms.

Graz is, unfortunately, exceptional in today's political landscape. But while the prominence of the Communist Party in the city and collaboration across social and ecological lines are rare occurrences in the 21st century, I believe both the political strategy that brought the KPÖ to power in Graz and their current collaboration with the Greens contain valuable lessons for people interested in creating a world where just and low-carbon cities are the norm. If we want to find new models, I believe examining what is already working is a good place to start.

As my analysis is based on the case of Graz, a small city without the power to set economic policy, this means conflicts between working-class interests and ecological sustainability within the realm of production fall outside the scope of this research. While there are promising movements working to unite labor and climate struggles (Uteuova 2023), that is not the ground on which eco-social collaboration is built in Graz. Additionally, I believe there is some advantage to pursuing climate politics that bridge class divides in arenas where working and professional-class ecological interests have an easy synergy. Working at the urban scale can circumvent the fraught history of ecological movements and labor unions in countries like Austria. While that may limit the potential of urban climate politics, it also provides a workable pathway towards building the power required to implement climate responses that do not leave anyone behind on the way to ecological sustainability.

While the social and ecological left are currently in coalition in Graz, this is an exception to the historic norm in Austria. In my first chapter, I will explore the histories of the communist and environmental movements in the Austrian context with specific attention to class politics. I show that the Austrian Greens, who largely represent the professional class, have historically shown a willingness to collaborate with both right and left-wing governments, and have always been an addition to rather than leaders of coalition governments. But while ecological parties struggle to win power on their own, I argue that they are a valuable addition to a coalition with the broader, working-class left, capable of bringing professional-class people to support a more radical social and economic platform.

While conflicts over power plant construction have historically put environmentalists and unionists at odds in Austria, this point of conflict is not present at the urban scale. In my second chapter, I will argue that what Mike Davis has described as a “magnetic” attraction (Davis 2010,

p. 42) between social and ecological issues in an urban setting is an effective ground for political collaboration in practice as well as in theory. In Graz, KPÖ and Green collaboration is based on the expansion of public goods and the extension of democratic control over "life's necessities" (Huber 2020, p. 21). I argue that the working class have the most to gain from this project.

The expansion of public goods has the potential to benefit the working class most of all, but the market-based allocation of housing can result in low-carbon projects displacing the very people most in need of the health and economic benefits of those new infrastructures. In my third chapter, I will focus on the key difference between the KPÖ and Greens in Graz—public housing. While both parties support state-built housing in theory, the KPÖ pushes for it in practice. As urban greening and other low-carbon infrastructures are shown to make neighborhoods, and indeed entire cities, more desirable, longtime residents can be displaced by increased rents after those infrastructures are built. While often treated as tangential to ecological politics, I argue that public housing must be the bedrock of any low-carbon transition.

While my motivation to pursue this project was generated by what I see as a gap in the literature on climate politics–namely that while many agree that our current political strategies leave much to be desired, few have analyzed empirical examples of workable alternative models–my two months of research in Graz pushed me beyond the theoretical framework I brought to the city. In that time, I conducted 18 semi-structured interviews with 15 members of the Communist and Green parties as well as an expert interview with a local historian. I scheduled follow up interviews for the people I interviewed early on in the process so I could ask a secondary set of questions that developed during my field research. As my research time was short, and there were a limited number of party officials who would be suitable for the project, I used convenience sampling to select my interview subjects. I did, however, maintain a rough

symmetry between the official positions of my interview subjects so that I spoke to a nearly equivalent number of students, district councilors, and city councilors for both the KPÖ and the Greens. My limited German meant I was only able to conduct interviews in English, but this proved to be less of an obstacle than I anticipated. While the language barrier made one potential interview impossible, I do not believe language had an effect on my overall sampling. I use pseudonyms for all but three of my sources (Judith, Miriam, and Max), who either appear in a documentary film based on this research or preferred to be identified by name. In addition to these interviews, I attended events and rallies hosted by both the Communist and Green parties, and spent hours observing everyday life in spaces in the process of low-carbon transformation.

My time in Graz left me with a different question than the one I arrived with. I came to this project wondering if material politics could be used to expand concern for climate change among the working class. During my time in the city, my perspective shifted. What sets Graz apart is not a working-class commitment to building an ecological city, but a professional-class commitment to social issues. In Graz, environmental politics were key in bringing the professional class into coalition with the radical left, enabling a coalition able to push for a new model of low-carbon urbanism. This observation left me with a new question: Can working-class parties use climate politics to appeal to the material interests of the professional class? This thesis is an attempt to answer that question.

Chapter 1: An Ecological Bridge

1.1: Split by the Mur

Fig. 1: Drawing of Graz, Giorgio Vasari, 16th century.

Since the 15th century, those in Graz who could afford it have lived on the Mur's east bank. Back then, the walls of the inner city protected the bourgeois, who lived in the shadow of the Schlossberg castle and the hill it stood on. Across the river, on the west bank of the Mur, the districts of Gries and Lend held the workshops of craftsmen who needed more space than was available to the east and power from the river, and was home to the people who pushed boats up and down the Mur or fished its waters. When industry came to Graz, the ranks of those workers swelled by the thousands[1].

Graz's population grew fivefold during the 1800s as people moved to the city from the Austrian countryside to work the steel mills, textile factories, and train assemblies that sprung up

[1] Wolfram Dornick, interviewed by author, May 10 2023.

around the new rail yard that had been built to the west of the Mur. Industry was not constrained to the main city, and industrial workers soon outnumbered farmers in the outlying towns of Eggenburg and Gösting, now the westmost districts of Graz. When those workers moved to the growing city, they left the means of reproducing their lives through subsistence agriculture behind and fell on the mercy of the labor market. The newly-born working class shared material interests (Marx, Fowkes, and Fernbach 1981). Some of those interests, like wages and the length of the working day, were fought for on the factory floor. Others were related to the wider ecology of the city, which deteriorated as industry flourished. The river Mur, Graz's longtime center, became increasingly polluted, and workers lived beside it in dilapidated housing. The air grew hazy with factory smoke. Like low wages and long hours, the ecological conditions that plagued the working class were the offspring of capitalist production (Saito 2017). As the new century began, the influence of capital only grew, and international market forces began to shape the non-productive infrastructures of the city.

In 1938, Graz had more kilometers of tramline than it does today. After the second world war, the tram that circumnavigated the Schlossberg hill, among other lines, was removed to make space for private cars[2]. Invented in its modern form at the end of the 18th century, the automobile was promoted by capitalists as a luxury good (Laird 1996), which created a new market in expensive private transportation. To clear space for automobiles, city planners in Graz stripped away both public transportation and social space. The city center escaped most of the bombing during the war, but its thin streets had been designed in an era before privatized vehicle transport. Walking areas were removed to accommodate the movement and storage of automobiles. The streets of the inner city, which had formerly been social spaces and an arena

[2] Wolfram Dornick, interviewed by author, May 10 2023.

for children's play, became dangerous for children and unpleasant for adults. Workers, long used to walking or biking to their jobs[3], found their commutes barred by busy streets. By removing competing methods of mobility, these infrastructural changes also incentivized a wider range of society to purchase private automobiles.

While they were unable to build major roads through the dense city center, Graz urban planners had more space to work with on the west of the Mur. New roads sprung up, further degrading the air in what was already the industrial part of town. This development began to be contested in the 1970's. When the social democratic mayor approved plans for a regional highway that would have bisected Eggenburg, Gösting, and Wetzlsdorf, three working-class neighborhoods to the far west of the city, residents gathered 35,000 signatures to prevent the plan. They stopped the highway, and removed the mayor from office[4].

In the same decade as this working-class environmental victory, a victory based in defending the non-productive areas of life from capitalist urban development, a second population influx brought a new class into the Graz valley. Across Europe, the post-war economic boom and expanding welfare state brought an unprecedented number of students into the university system. Graz was no exception to this trend. By the end of the 1970's there were eight universities in Graz, and the student population had grown tenfold since the decade began. These students were drawn to professional work, becoming teachers, bankers, lawyers, and doctors. As these professionals expanded in number, they also expanded in space. While many worked in Graz, they often lived in the smaller towns in the surrounding valley, commuting by car to work each day[5].

[3] Wolfram Dornick, interviewed by author, May 10 2023.
[4] Ibid.
[5] Ibid.

As the ranks of graduates and professionals swelled, it became clear that they did not fit neatly into existing Marxist class categories. Lacking ownership over the means of production, the professionals were not bourgeois, but neither were they proletarian, occupying a different relationship to the structural forces of production than the workers who toiled on factory floors (Ehrenreich and Ehrenreich 1977, p. 8). Born in a period of economic excess, the institutions where professional academics, social workers, and cultural producers worked were largely funded by the largess of capital, and distant from the the material bases of production (Ibid., 1977, p. 15; Pichardo 1997, p. 417). This economic position was reflected in the social movements the professional class[6] formed. These movements, of which the contemporary environmental movement was just one, were largely unconcerned with the material basis of the traditional class conflict (Pichardo 1997, p. 425).

1.2: Greens and communists

Students were at the forefront of the anti-nuclear movement that was the founding struggle of contemporary environmental politics in Austria, active in a decade of mobilizations against the Zwentendorf power plant that culminated in the 1978 defeat of a nuclear power referendum (Lauber 1995, p. 314). From the beginning, this burgeoning environmental moment butted heads with trade unions, who had supported the expansion of nuclear power because of the jobs it would create (Soder, Niedermoser, and Theine 2018, p. 523). The environmental

[6] I am using professional class rather than "professional-managerial class" for two reasons. First, several of my academic sources, including Daniel Cohen and Matthew Huber, use the term. Second, because it is the professional portion of the professional-managerial class that has been the historic base of the climate and environmental movements since 1960.

movements next win, the defeat of a hydro power plant in 1984, further distanced them from labor, the historic source of social change (Ibid., p. 523).

The conflicts between the environmental movement and older forms of social activism led scholars to herald the movement, and the class that formed it, as the new protagonist of social change (Pichardo 1997, p. 412). The working class no longer seemed revolutionary, which led social scientists to announce the "new middle class" as the revolutionary actor of the day (Ibid., p. 412). Less optimistic theorists used other terms. Barbara and John Ehrenreich introduced the term "professional-managerial class" to describe the same section of the population. While the professional class was engaged in radical struggles, the Echrenreichs did not believe they had the same revolutionary potential as workers because of their distance from the productive forces of capitalism (Ehrenreich and Ehrenreich 1977, p. 7). In 1977, Ronald Inglehard described these movements, focused on issues seemingly disconnected from life's basic necessities, as "post-materialist" (Inglehart 2015). The assumption central to this claim, that these high-minded ideals are somehow inaccessible to working people who struggle daily for the material grounds of their own survival, has been convincingly contested (Bell 2020). But while the inaccessibility of environmental concern was overstated, the politics environmental movements popularized have consistently ignored the material needs of working people (Huber 2022; Bell 2020).

The Austrian Green Party emerged from the anti-nuclear movement and won their first seats in government in 1986 (Lauder 1995, p. 314). Up to that point, post-war politics in Austria had been dominated by the conservative ÖVP and the labor friendly Social Democrats. The Greens aimed to disrupt the political landscape, calling out corruption among the established parties and maintaining a commitment to grassroots democracy that they found lacking in

established politics (Lauder 1995, p. 317). The early Greens opposed both capitalism as an economic system and the liberal conventions of politics (Della Porta et al. 2017, p. 19), but as time went on they embraced a more incremental vision of change, promoting reform within capitalism rather than radical structural change (Della Porta et al. 2017, p. 190).

When the Greens gained a leadership position in the national government for the first time in 2020, it was as the junior partners in a coalition with the very conservative party they had entered politics to criticize. In the coalition, the Greens promised to prioritize public transportation and move Austria towards carbon neutrality (*BBC News* 2020). Their conservative partners have not indicated any desire to deviate from their anti-immigrant and anti-worker track record, which includes restricting Muslim dress in schools, increasing the length of the working day, and cutting both corporate taxes and social services (*Reuters* 2017). The Green coalition with the conservatives in Austria's national government lends credence to a growing critique of existing environmental politics coming from the social left. Without specific attention to social issues, environmental politics can easily fall into the post-materialist pattern in which the daily economic struggles of working people are forgotten (Huber 2022; Bell 2020).

While the national wing of the Greens is in a coalition with the conservatives that promises to "protect the climate and borders" (Petrik 2020), the Graz chapter is building public housing that is also available to people born outside of Austria. This dramatic range of partnerships both highlights the flexibility of environmental politics and indicates a distinction between ecological issues on national and urban scales. Several of the Green party officials I interviewed had worked with the national or international wings of the Green party and found their charge less complex in an urban setting. While the environmentalists in Austria have historically butted heads with labor, the laws surrounding nuclear power and the working day are

not decided in city council meetings. In a capitalist economy, there can be legitimate—although far from inevitable—contradictions between workers' need for employment and the environmental need to curb the ecological impact of industry. Beyond the workplace, that contradiction vanishes. It is those interests, focused on reproduction rather than production, that brought the KPÖ to power in Graz.

In a retrospective article on the KPÖ's success in Graz, party member and former district councilor Franz Partender recalled that the communists were in crisis in the late 1980s. With 3.1 percent of the city vote and little guidance from the national level, some wondered if the KPÖ should continue to exist (Partender 2013). Looking for a new strategy, the Austrians met with members of the Lille branch of the French communist party and learned about their eviction defense hotline. After the meeting, the Graz KPÖ started a hotline of their own, providing both legal and financial support to those that called (Weisskircher 2019, p. 154). Through this new housing strategy, the Graz KPÖ felt they could both demonstrate the material value of communist politics to the people of Graz and call attention to the contradictions present within the capitalist system. While capital required workers to create profits, the communists believed the system was not capable of providing life's essentials to the workers it required to exist (Partender 2013).

Over the next four decades, the KPÖ worked to build a public housing system in Graz that was not restricted by the market need to extract value from people's homes. In doing so, they began to lay the foundations of an urban form based on a "priority of use value" over market exchange (Lefebvre 1996, p. 158). In Graz, the housing strategy proved effective (Weisskircher 2019). In 1993, the first election after both their tactical shift and the collapse of the USSR, the KPÖ gained votes, progressing to 4.2 percent, which allowed them to appoint

future-mayor Elke Kahr as the party's second city councilor. In 1998, the party climbed to 7.9 percent of the vote, a success that former party leader Ernest Kaltenegger credited to their petition campaign calling for a cap on the percent of income Graz residents could be forced to pay for public housing (Ibid., p. 157). With a larger share of the vote, the KPÖ was entitled to lead a department within the city and was given responsibility for public housing (Ibid., p. 155). Across much of Europe, the end of the 20th century was marked by both the decline of communist politics and privatization of public housing (Pons 2010; Broulíková and Montag 2017). The Graz KPÖ combined the two issues, bringing both into the 21st century.

1.3: Crossing the river

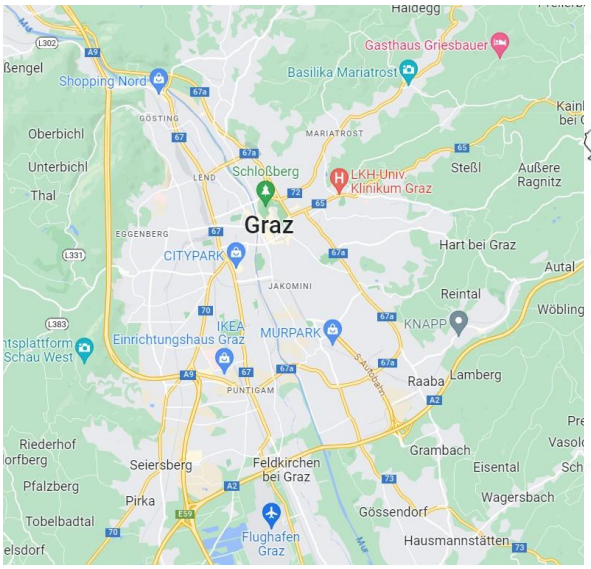

Fig. 2: Modern Graz

Fig. 3: Graz with district names

The KPÖ achieved 20 percent of the vote for the first time in the same election that brought Siegfried Nagl of the conservative party into the mayor's office he would hold for the next two decades. The same year, 2003, also saw the completion of the Kunsthaus, Graz's

modern art museum built for the city's year as the European Cultural Capital, and one of the first redevelopment projects on the west bank of the Mur. At the time, public housing units in Graz did not have their own bathrooms, which were instead located in the hall. Fighting for better sanitation, the KPÖ argued that if the government could afford the costs associated with being the cultural capital, it could also afford to renovate public housing (Weisskircher 2019, p. 158).

While the river Mur had traditionally been the boundary between the working-class west of the city and bourgeois east, the class compositions of the city began to change in the 2000s. In its early decades, the professional class had fled the environmental degradation within Graz in favor of more comfortable living in the countryside, but the class began to prefer urban living after the turn of the century (Hamnett 2003). As the 20th century came to a close, Graz had a student population of 40,000, meaning nearly one fifth of the city's 230,000 residents were enrolled in one of Graz's eight universities. When students and graduates looked for flats, they found rents were more affordable in Lend, which the city had recently rebranded as a "creative district" (Wagenröder 2016, p. 75), than the eastern districts around their universities. Internal reports show that from the beginning, Graz city planners intended the Kunsthaus to create financial opportunities in an under-valued waterfront neighborhood (Ibid., p. 62). In the redevelopment of Lend, the needs of capital found common ground with the desired lifestyles of the professional class.

Several squares in Lend were turned into pedestrian zones in the 1990s, and the central square of Lendplatz gained a farmers market (Ibid., p. 61), but the European Cultural Capital kicked off gentrification in the neighborhood in earnest. New shops and cafés catering to a wealthier clientèle sprang up around the Kunsthaus and the demographics of the neighborhood began to change. Between 2009 and 2013, the portion of residents in the section of Lend between

Lendplatz and the Kunsthaus with a graduate degree grew by 18 percent (Ibid., p. 65). In the same area and time period, households earning less than 1,000 euros a month dropped by 21 percent while households earning more than 3,000 euros per month increased by 18 percent (Ibid., p. 69). While Lend is the most dramatic example of gentrification in Graz, it is not the only neighborhood where the interests of residents conflict with capitalist development. After the 2008 financial crisis, capital began to take a more aggressive role in the city's housing market.

Between 2010 and 2019, three Austrian investment firms funneled a combined €430 million into residential real estate in Graz (Stadt Graz 2022, p. 99). A report commissioned by the city found that while the rate of new building surpassed the overall growth of the population, residents in Graz did not feel that the housing served the interests of city residents (Ibid., p. 7). The new apartment buildings were, rather, profitable sites to store capital away from the throws of more turbulent financial markets (Fernandez and Aalbers 2016). Although housing supply grew faster than demand, both property values and rents rose as a result of the new projects (Stadt Graz 2022, p. 130).

Both communists and Greens felt the destruction of urban green space to make way for luxury apartments was a key issue in the 2021 election, a sentiment confirmed by focus groups in the city commissioned housing study (Ibid., p. 116). The Greens, promoters of green space in the city, and communists, known enemies of financialized housing, both profited from the conservative disregard for the urban environment. The conservative share of the vote dropped from 38 percent in 2017 to 26 percent in 2021, putting them in second behind the KPÖ who climbed from 20 to 29 percent but ahead of the Greens who climbed from 10 to 17 percent.

While both communists and Greens jumped significantly in the 2021 election, they did not see themselves in competition for voters. The parties both have offices in Graz, but they are

on different sides of the river. The KPÖ's building is in Gries, the neighborhood in Graz with the lowest median income. The Green's building is by the City Park on the border of Innere Stadt, the city center of Graz, and Geidorf, the district home to the University of Graz and the sixth highest median income in the city. Felix, a green district councilor, told me that working-class people in Graz typically vote for the social democrats, the far right, or the communists, while professional-class academics and graduates more often go to the conservatives or the Greens. This division helped determine the Green Party's campaign strategy. Walter, a city councilor, said that the Green's targeted professional-class voters, many of whom wanted a green city: "That was the reason finally why we get this majority in the city council, because we really convinced a lot of people who voted for the conservatives before to vote Green this time."

Walter's analysis is reflected in the district level polls. While the conservative share of the vote declined in every neighborhood in Graz, they fell furthest in the city's most affluent districts—the same districts where the Greens made bigger gains than the communists. In Graz's working-class districts, the communists were a runaway first, receiving nearly 40 percent of the vote in Gries and 35 percent in Lend[7]. These class dynamics in Graz shed a new light on Mike Davis' analysis of potential pathways towards just decarbonization. He writes:

> As the UN Development Programme has emphasized, global warming is above all a threat to the poor and the unborn, the 'two constituencies with little or no political voice'. Coordinated global action on their behalf thus presupposes either their revolutionary empowerment—a scenario not considered by the IPCC—or the transmutation of the self-interest of rich countries and classes into an enlightened 'solidarity' with little precedent in history. (Davis 2010, p. 37)

[7] I draw these conclusions by comparing district level election results in Graz, available through the province of Steiermark (Wahlen (stmk.gv.at)), with income data from Statistik Austria compiled by the statistics department of Graz and sent to me directly upon request.

In Graz, the empowerment of the working-class, while not revolutionary, was one factor that brought the communist-Green coalition to power. The second factor was the professional-class drift from the center right to the center or far left. In Graz, this change was not based on an unprecedented "enlightened solidarity," but rather because the material interests of the professionals—a desire to live in a green and healthy city—were threatened by the investor friendly politics of the conservatives. When it came time for the new coalition to divide departmental responsibilities, the Greens took the environmental sectors, and gained responsibility for public transportation, street level planning with the power to alter car and pedestrian use and building codes for new development. The communists took the social issues, responsible for public housing, public health, and the city budget. Both communists and Greens emphasized that while the coalition is divided along a line between the ecological and the social, those issues cannot be truly separated.

Chapter 2: Low-Carbon Materialism in Practice

2.1: Trees and tramlines

The light from the afternoon sun filtered through the wide green leaves on a row of trees separating Graz's City Park from the asphalt of the surrounding neighborhood as I walked south from the 58 bus stop towards Zinzendorfgasse. I followed a pathway that weaved in and out of the park, and heard birdsong and the rumble of traffic in opposite ears. Growing things were beginning to emerge after a long winter. Flowers bloomed purple and yellow in the low grass. Small green buds began to unfurl on the rows of bushes alongside the park's many pathways.

I reached the intersection of Zinzendorfgasse and the four-lane boulevard of Glacisstrasse and joined a group of pedestrians and cyclists waiting for the light to turn green by the bus stop for the 39, one of four bus lines that run along or adjacent to the street. The light changed and the car traffic stopped. The cyclists shot out first, moving from the separated bike lane that runs along the park onto the shared space of the city street. Cars turning right off Glacisstrasse followed, waved along by a man in a reflective vest and hard hat. A backhoe to his left dug through the asphalt in a steady path along a long section of the street that had been cordoned off. A few weeks before, the space had been devoted to parking. Soon, it would be filled with benches and trees. Under the new design, Zinzendorfgasse will favor pedestrians, cyclists, and buses over private cars. It is the first of several such projects the KPÖ and Green coalition hope to implement before the next election cycle, expanding public transportation and green space on both sides of the Mur.

After the 2021 election, the KPÖ and the Greens began approving projects that had long been talked about but never acted on, working towards the twin goals of making Graz carbon

neutral by 2040 and adapting the city to a warmer world. A local butcher told me the plan to make Zinzendorfgasse a green pedestrian zone had been discussed off and on since 1985. Shortly after the 2021 election, the coalition government began a year-long planning process to gauge resident's opinions, and, finding the large majority supported the plan, brought in backhoes and began tearing up asphalt. Miriam, a KPÖ city councilor who chairs the city's environmental working group, said their climate work is often as simple as letting people implement ideas they already had, ideas that had long been resisted by the conservative government. Miriam felt the urban planners in the city were excited to work with political parties committed to climate action that goes beyond green washing and is attentive to the social dimensions of climate policy.

> For me and for the KPÖ, to work on environmental and climate change issues is the same thing as to work on social issues because we think it's our *aufgabe*, it's our duty to fulfill these goals. Because it's always the poorest people who suffer the most from climate change. And it's the same thing in the city. So if you are not able to flee the city, if it's very hot, if you live in a house that's very old and the roof is leaking or something, you are the first to suffer from these climate change symptoms that we are already experiencing here in Graz.

In contrast to the Greens' history of post-material environmental politics, the coalition in Graz is aligned over an eco-social platform in which material benefits to urban residents and ecological action are one and the same. I argue that the coalition in Graz shows that materialist urban ecological politics are effective in practice, adding empirical weight to Matthew Huber's suggestion to prioritize the material needs of the working class as a pathway to ecological change (Huber 2022).

Writing from the Marxist tradition, Huber argues that outside of the realm of production, the material interests of the working class are inherently ecological. As the separation from the ecological provision of life's essentials was a fundamental part of creating the urban proletariat (Marx, Fowkes, and Fernbach 1981, p. 878), urban workers must turn to a market that prioritizes

profit for the food, shelter, energy, and transportation needed to survive. By extension, Huber argues: "A working-class ecological politics is an effort to assert democratic control over life's necessities" (Huber 2022, p. 21). In practice, this means removing the profit motive from things like housing, energy, and transportation and putting them under state ownership. While commodities sold on a market must be profitable to justify their production, Huber argues those same systems can be directed towards decarbonization under public control (Ibid., p. 106). Huber's vision of working-class ecological politics finds symmetry in the KPÖ's election promise to create "a city for people, not for profit," and Lefebre's vision for a future urban form in which the needs of working people are prioritized over value-creation in accordance with international markets (Lefebvre 1996, p. 158).

In an urban context, the material interests of the working class are hindered by a paradigm of urban space creation that prioritizes profit over the needs of residents (Harvey 1981). In Graz, transportation, social space, and housing have historically been built to facilitate profit making through market exchange rather than to fulfill the needs of residents. While many low-carbon urban projects have exacerbated these trends rather than counteracting them (Cohen 2017; Rice et al. 2020), Graz shows that this is a choice rather than a necessity. In prioritizing the material needs of working people over the market forces that have defined neoliberal climate governance, Graz hints at an alternative model of climate mitigation and adaptation, one in which the affinity between social and ecological urbanism is mobilized to bring about a just, low-carbon future. For Mike Davis, this affinity hinges on the expansion of public goods. He argues: "The cornerstone of the low-carbon city, far more than any particular green design or technology, is the priority given to public affluence over private wealth" (Davis 2010, p. 43).

Davis does not distinguish between forms of public affluence, but urban forests,

tramlines, and public housing all have distinct political histories and material consequences that make the implementation of low-carbon programs based on public affluence more complex when embedded in the local contexts of municipal governance. But while local histories of green redevelopment have given some low-carbon infrastructures negative associations in specific contexts, I argue that there is nothing inherent to any form of low-carbon public affluence that conflicts with the material interests of the working class. Graz is proof that political organizations promoting professional and working-class interests can find common ground in low-carbon material politics.

2.2: A topography of public affluence

In his 2017 paper "The Other Low-Carbon Protagonists," Daniel Aldana Cohen introduced a pair of oppositions that he uses to create contrast within the wider category of public affluence. The first opposition distinguishes between the "green ecologies" like tree lined streets, city parks, and other green spaces typically associated with ecological urban design and the "gray ecologies" of public transportation and housing, which he argues are equally important for a low-carbon project (Cohen 2017, p. 142). Cohen's second opposition contrasts "luxury ecologies," designed to cater to professional-class lifestyles and create value through real estate markets, against "democratic ecologies," designed to benefit a city's working-class residents (Ibid., p. 143).

After introducing this framework, Cohen suggests democratic gray infrastructures as a "strategic" site of alignment where the interests of social movements working to further the interests of working people and the climate goals of professional-class green policy makers overlap (Ibid., p. 157). His argument is primarily based on financial needs of the working class

as well as a desire to live close to the city's core, but a second mechanism connects the gray ecologies needed to mitigate climate change with the material interests of urban workers. In her 2020 book "Working Class Environmentalism," Karen Bell proposes health as the material and conceptual ground where working-class interests are most explicitly environmental (Bell 2020, p. 202). She argues that because polluted environments harm working-class people more than anyone else, efforts to improve health in working-class neighborhoods are inherently good for local ecologies and the planet as a whole (Ibid., p. 9, 160). Tactically, Bell suggests emphasizing health as a way to build multi-class coalitions for ecological change.

I argue that Cohen's second distinction is far more impactful than his first. My work in Graz shows that the theoretical alignments Cohen and Bell propose between the material interests of working people and the infrastructures of the low carbon city also hold in practice—for both green and gray ecologies. Urban forests do little to reduce emissions on a global scale but are a crucial component of helping city residents cope with urban life in a warmer world (Aram et al. 2019). Public transportation has the potential to supplant private cars, removing one of the two main factors driving urban emissions and degrading local air quality (U.N. Environment 2017).

In Graz, communists and Greens agree that the city's current system of transportation infrastructure that treats the car as primary is a direct threat to both the global climate and the health of city residents. Graz, surrounded by a ring of hills on all sides but the south, is also prone to winter temperature inversions which prevent air, including the exhaust fumes and dust contained within it, from escaping the valley. Walter, a city councilor for the Greens, expressed a sentiment common among both Greens and communists. For him, the coalition's focus on traffic reduction had as much to do with local health as climate change:

> If you have more car traffic, you have a lot of noise, a lot of dust, you have the danger of accidents, you need a lot of space for that. So these are all social questions in the end, that's because it harms people's health. It also costs money for the people. And if we have an infrastructure that people can use, for walking, for cycling, using the public transport, that's socially fair, that's something that also helps to reduce these health problems, to reduce the emissions. And, of course, it also helps to reduce the climate emissions. So it's all going in one direction.

For the coalition in Graz, expanding public transportation also allows for the reclamation of public space previously devoted to the storage of private automobiles. During our interview, Green Party Vice-Mayor Judith Schwenter emphasized that Graz has a finite amount of space to work with, and removing cars from the streets could make room for bike lanes, trees, and consumption-free social areas. Zinzendorfgasse, the street where I started this chapter, connects the University of Graz and the City Park. By greening the street, the coalition will complete the first "green mile" within the city. Zizendorfgasse is in Geidorf, a wealthy neighborhood to the east of the Mur River. While Zinzendorfgasse itself lacks significant green space and is prone to near misses as cyclists, pedestrians, cars and buses travel down the narrow street, there are parks on either end. This prevalence of green space is uncommon in Graz's working-class districts, a discrepancy the coalition hopes to address. One priority of the Green program in Graz is to expand the number of "green miles" both east and west of the Mur. All of the KPÖ members I spoke with supported this vision for a greener urban landscape.

The coalition in Graz demonstrates that Cohen's reluctance to extend the "strategic site" (Cohen 2017, p. 157) beyond gray ecologies to green ones may be due to the specifics of the case of São Paulo rather than an inherent contradiction between working-class interests and urban greening. While gray ecologies are one point of communist-Green collaboration in Graz, they are not the only one. Both parties also share an interest in expanding the social and green public spaces traditionally associated with professional-class green urbanism to the working-class parts

of the city. Trees and other plants help disperse the heat that accumulates in heavily paved urban areas (Aram et al. 2019), making green space an important factor in urban health, one that is only becoming more crucial as summer temperatures rise.

The health connection of urban green space was explicitly cited by both KPÖ and Green party members as a crucial measure for climate adaptation, one which would primarily benefit working-class people currently living in neighborhoods without much plant life. Many of my interview subjects from both the Greens and the KPÖ emphasized that putting resources into the public goods of the city was especially important for working-class people who could not afford to buy their way out of degraded public spaces and into luxurious private ones. Urban greening was the topic where this was expressed most explicitly.

> The rich people have huge gardens [and] do not really actually suffer from climate change, or at least don't suffer so much from climate change as the poor people in small apartments [do]. So I think actually social politics and climate politics, it is definitely related. And I feel that as a political party, we have a responsibility for the poor people, the middle class people also, we have to provide them with green areas, not in the middle of private property, but public space. We need to create public space, a green public space. (Frieda, Green Party District Councilor)

> Poor people [are] even more affected by climate change issues than the upper class people. If you have 40 degrees in summer and you live in a house where you are easily able to afford air conditioner, and have no problem in getting out of town and to have a little house out in the suburbs where it's green and even cool, climate change is no problem for you. But for the normal people, they are affected even more by it, because they can't afford to get around the phenomenon. (Karl, KPÖ District Councilor)

In the coalition's vision of a low-carbon Graz, all areas of the city have spaces that are green, cool, and served by fast and affordable public transportation. As these infrastructures bridge the green and gray distinction Cohen proposes, my observations from Graz lead me to believe that all of the infrastructures of low-carbon urbanism can serve as grounds for collaboration between parties representing working and professional-class interests. Indeed, as

working-class people are not able to retreat from public space with the ease of the wealthy, an urban climate program based on promoting public affluence has the potential to benefit working-class people most of all. But the benefits both green and gray low-carbon projects can bring to working people are largely dependent on who the infrastructures of the low-carbon city are designed to serve.

2.3: New priorities

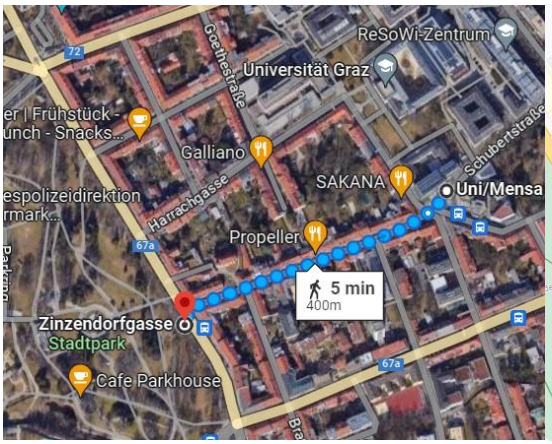

Fig. 4: Zinzendorfgasse in satellite view

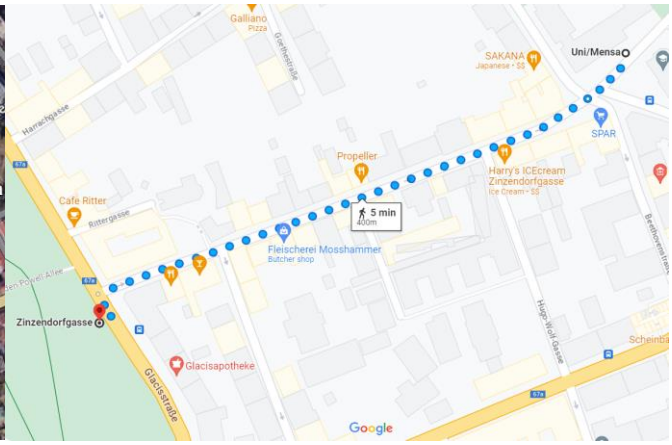

Fig. 5: Zinzendorfgasse

A single tree grows in the well-kept grass lawn of the sole small park on Zinzendorfgasse. A staircase of tiered wooden benches rises from the grass and connects the street to a field surrounding the university church, built in the 13th century. Eight people sat on the benches as I approached the park on a cool spring day, some eating food from nearby restaurants, others simply chatting in the pleasant warmth of the sun. Shortly after I sat down, a pair of kids, who looked no older than 10, burst out from the door of a café that abuts the small park with a single scooter between them. They had matching haircuts, dark curls on top fading

quickly into a close shave, and matching jackets. They tossed a small toy car around the park, following behind to pick it up after each throw. The pair looked unattended, but after 15 minutes, a middle-aged woman stuck her head out of the same door and called out "Rafael, *ven acá.*" The boys grabbed the car and walked back to their mother, who I later learned had immigrated from the Dominican Republic more than a decade before, and now works at the café. Presumably, she did not have to pay a babysitter that day. Instead, her kids were able to play in the green public space by her workplace, space that will be expanded when parking is removed from Zinzendorfgasse and become safer for children with less cars on the street.

There is a clear theoretical overlap between low-carbon climate infrastructures and social policies designed to benefit the working class. In Graz, that overlap is the basis for political collaboration between the communists and the Greens. But the implementation of these projects is where Cohen's second distinction, between democratic and luxury ecologies, is most apparent. Cohen writes: "Increasingly, the key axis of urban ecological politics will not be the opposition between social and ecological, or economic and ecological, but between different class-structured versions of the green city project—between luxury ecologies and democratic ecologies." (Cohen 2017, p. 157) While green and gray ecologies can both fit into a neoliberal framework, democratic ecologies cannot. Cohen's categories have clear parallels with the Marxist literature concerned with the commodification of urban space (Lefebvre 1996). From this perspective, luxury low-carbon projects reinforce the paradigm of urban design where space is planned to facilitate commodity exchange. At their best, democratic low-carbon projects work to promote the "priority of use value" (Ibid., p. 158) through the expansion of public goods.

While many cities have set ambitious carbon reduction targets and professed the social benefits of a low-carbon form, few have acted in accordance with those high-minded goals. For

Cohen, the process of implementation, where low-carbon goals move from rhetoric to reality, is the moment in which the authenticity of these social claims are revealed (Cohen 2017, p. 147). In Graz, I argue that the priority given to use values is the thread that connects the coalition's work on housing, transportation, and social space. As the coalition begins to implement projects, all signs indicate these commitments are authentic. While most of the businesses on Zinzendorfgasse support the move to make the street car reduced, as they would gain more seating in the street as a result, the plans for new "green miles" around Graz include what the coalition calls "consumption-free zones." Like the park by Zinzendorgasse's church, these spaces would encourage people to get out into the streets and use the space previously devoted to parking private cars without premising that social experience on the price of a coffee.

The emphasis on use value also undergirds the coalition's work on public transportation. Rather than the sale of automobiles as a commodity, or increased shareholder value through market-rate ticket sales, the goal of Graz's expanding public transportation is quick, affordable and decarbonized mobility. The coalition's projects thus far have directly worked towards these goals. Currently, every one of Graz's seven tram lines run through a single city square, and six continue to the city hall. The upper limit of tram frequency throughout much of the city is determined by how many trams can traverse a two-block-long stretch of the city center where only one tram can travel in each direction at a time. If a tram breaks down in that section, the entire system is brought to a standstill. Shortly after the election, the coalition government broke ground on a bypass to untangle the choke point. But while the city center is congested, the neighborhood squares in some working-class districts have no tram lines at all. The coalition's second major public transportation project will create a tram line to Griesplatz on the Mur's west bank which, despite being the central square of one of the city's core districts, is serviced only by

bus. The coalition has also passed legislation to keep public transportation affordable. When Graz Holding, the semi-public company that owns the transport system in Graz, raised the price of the city pass, the coalition voted to subsidize the price of the regional pass by 100 euros per resident, allowing Graz residents to take public transportation anywhere in the province for the same price as the city pass.

This commitment to a low-carbon program in which use values are put first unites the coalition's work across the green and gray distinction proposed by Cohen. This suggests that both green and gray ecologies can serve as political ground for collaboration between working and professional-class parties—if those professional-class parties are committed to a democratic vision of the low-carbon urban form. In Graz, a consensus on the material shape of the future low-carbon city has been the basis for an effective collaboration between the Greens and communists. While the parties are working towards different visions of the future, and come from distinct political backgrounds, each of the 15 people I interviewed reported a good working relationship in city government. Together, I argue that the communists and Greens have sketched the outline for a new model of low-carbon politics that moves beyond existing neoliberal forms and works to bring the material benefits of low-carbon infrastructures directly to residents rather than relying on private partnerships and market incentives.

But while the Graz coalition shows the political potential of collaboration around the infrastructures of low-carbon change, there is a more essential piece of Graz's political landscape without which the coalition's moves towards decarbonization could indirectly displace the working class through rising rents. In the next chapter, I argue that the KPÖ commitment to public housing is the fundamental factor that separates Graz from neoliberal models of low-carbon urbanism.

Chapter 3: Diffusing the Eco-Social Paradox

3.1: The cause of a paradox

I met Felix, a councilor for the Lend district, at a pop-up bike repair station flying Green Party banners. It was Earth Day, a Saturday, and three hired mechanics worked almost constantly, pumping up tires, examining chains, and adjusting brakes. The free repair service was popular, serving more than 70 people in a few hours. Felix and several other Green politicians spoke with passersby and people getting their bikes fixed. They handed out fliers with an image of green bikes riding over a watercolor Earth seen from the vantage of space. Behind a pop-up shade awning with the party logo, several rows of curved bars used for bike parking were full. A man slept on a concrete bench between the bikes and the trunk of a tall tree, a thin blue blanket spread over the cement.

Felix and I crossed a small street, where drivers moved slowly and waved pedestrians on, and walked through a weekend farmers market that bustled with energy on one of the first warm days after weeks of rain. We sat at a little café in the middle of Lendplatz, one of several along a pedestrian pathway. I could not see any cars, just rows of still-growing herbs, vegetables for sale, and people enjoying late morning coffees or spritzes. For Felix, this square is evidence that people want to live in low-carbon cities once they see them in practice. But while that shows the promise of rooting environmental politics in urban space, he recognizes that it can also drive displacement. “We want to plant the tree. But the side effect is the apartment behind the tree is normally getting more expensive,” he said. “Actually, we didn’t find the solution yet how to prevent gentrification while still planting the trees.”

Andrej Holm termed the process Felix describes the eco-social paradox, a widespread trend where urban environmental gains tend to produce social harm (Holm 2011). Greening was not the sole, or even the primary, cause of gentrification in Lend, but it was an inextricable part of making the neighborhood desirable: resident income, median rent, and green space have all increased since the Kunsthaus was built in 2003 (Wagenröder 2016, p. 69, 92, 74). As new residents moved into the neighborhood, people with more modest incomes left (Ibid., p. 69).

I argue that failing to address displacement makes low-carbon projects both unjust and partially self-defeating on ecological terms. When working-class people are forced into peripheral neighborhoods that lack the transportation infrastructure built as part of the low-carbon transition in the urban core, they are incentivized to commute by car, which at least partially counteracts the emissions reductions that result from the infrastructures responsible for their displacement. While Greens and communists are both aware of this eco-social paradox, they propose different solutions: The Greens advocate for more widespread greening, and the communists work to expand public housing. While the Green solution has some promise, I argue that it fails to account for regional dynamics of demographic change. The communist solution, on the other hand, gets to the root of the problem—the market distribution of housing. These observations lead me to the conclusion that social politics are the soil in which low-carbon change must grow if we are to move away from neoliberal climate mitigation models and toward a just and low-carbon future.

While the Greens and the communists I spoke with both emphasized the health benefits of urban greening and car-reduction, the Greens consistently raised the issue of making neighborhoods “more attractive” and promoting ecological behavior through the appeal of a low-carbon lifestyle. Frieda, a district councilor for the Greens, said that most of the park projects

they were able to pursue in her district were more about how to make existing parks "more attractive" so that more people would use them. Felix said ecological changes already made in Graz, of which Lendplatz is one example, have improved air quality and public space. For Felix, these ecological changes to the urban environment both made the space of the city "more attractive" as a physical space and enabled a "more attractive" way of living. Riding a bike through a tree-lined street, he explained, was nicer than sitting in traffic.

The appeal of a low-carbon lifestyle is central to the Greens political strategy. Once the infrastructures of the low-carbon city are implemented, many of the Greens I interviewed believe that people will learn to like the new ways of living those infrastructures promote. Paul, a Green city councilor, explained that the changes the Green Party hoped to make in Graz would help show people the appeal of living at a slower pace:

> Most of the younger generation is already living this kind of lifestyle. And the trends are going this direction. So they are like, we don't need this suburban home. We are very happy with our 60 square meters city apartment. It's not so much to clean, it's not so much effort. They like to be outside doing stuff, having adventures, being independent. I don't have a car, if I need a car, I share it. I got a bike, I got a transportation bike to get my stuff around, and my kids around, and maybe I don't work like, 60 hours a week anymore. Rather, you know, both parents do 32 hours or 25 hours, they're good if they have a lot of free time. And they're living a very environmentally friendly life. They're living a very active life.

The lifestyle Paul describes is not available to the working class, and his emphasis on choice demonstrates who he sees as the protagonist of low-carbon change. For Paul, adopting a low-carbon lifestyle is a decision to be made by people who have the ability to work less so as to have more free time, and for whom restraint from expensive purchases like cars and suburban homes indicates virtue rather than necessity. The emphasis on choice also highlights the danger of gentrification—if a low-carbon lifestyle promoted through urban infrastructure can draw

wealthy people from the suburbs into the city, those new residents may be willing to pay more in rent.

In their 2012 paper "The Environmental Injustice of Green Gentrification," Kenneth Gould and Tammy Lewis argue the same urban ecological changes that make neighborhoods "more attractive" to city residents also make them "more valuable" to investors (Gould and Lewis 2012, p. 121). Because markets, left to their own devices, provide the most desirable goods to the people with the most wealth (Ibid., p. 116), ecological improvements can launch neighborhoods on a trajectory that makes them healthy and green but also replaces longtime residents with more affluent ones. Gould and Lewis write: "Neighborhoods may be environmentally rehabilitated, but for newcomers with resources, not for those who currently live with the degraded amenity" (Ibid., p. 121).

The social outcomes of urban greening projects have resulted in some academics warning against creating too much green space in low-income neighborhoods for fear of the social consequences (Ibid.). Both communists and Greens in Graz are aware of the eco-social paradox, but are unsatisfied with reserving the material benefits of low-carbon urbanism for the rich out of a fear of rising rents.

> We have areas in the west of the city, where we do not have enough green area, we do not have enough trees. And we know that if we build this area, and we make it better and more pretty that, of course, we have the danger that it's pushing people away from this area. But anyway, we have to take care for people living in these areas, because it's too hot, there's not enough trees. (Judith, Green Party Chair and Vice Mayor)

> We do want to improve the living conditions of everyone. It's not just like, let's just let Gries rot in hell because then the rent stays cheap. I mean, that's not a perspective that we should have. Obviously, we do want to improve the quality of the air. We want to diminish traffic, which increases the quality of air and also noise, which is a huge issue in some parts of the city. And it's not those parts of the city where rich people live. And heat in summer, actually. (Max, KPÖ City Councilor)

While both communists and Greens were mostly concerned with the more documented trend of green gentrification, gray ecologies can also drive displacement. Bouzarovski, Frankowski and Tirado Herrero introduced the term "low-carbon gentrification" to describe displacement that followed energy retrofits to housing in urban Poland (2018). Rice et al. apply the term to a wider range of cities and expand its scope. As low-carbon lifestyles in dense cities that prioritize pedestrians, cyclists, and public transportation over cars become increasingly desirable to the professional class, the urban areas made climate friendly have begun to show signs of the same eco-social paradox (Rice et al. 2020).

The centrality of the gray ecologies of low-carbon urbanism to global decarbonization makes diffusing the eco-social paradox more urgent than ever. While "just green enough" (Curran and Hamilton 2018) solutions have been proposed as a way to bring the material benefits of urban greening to working-class neighborhoods without the aesthetic transformations that can attract higher income residents and investors, a "just gray enough" counterpart makes little sense. In order to constitute a viable alternative to private automobiles, public transportation needs to be fast, far reaching, and affordable. Withholding the benefits of a low-carbon transition from the working class out of fear of gentrification is not a promising pathway towards democratic and low-carbon cities. Low-carbon infrastructures, both green and gray, remain some of the most promising methods to avert the worst of climate change while allowing people to lead healthy lives in a warmer world.

While Greens and communists see the same danger in low-carbon projects, they diverge on solutions. For the Greens, the answer to green gentrification is to expand the green, and thus desirable, area of the city until it is the standard rather than the exception. For the communists,

the answer is public housing. These two solutions have different relationships with the wider market forces that seek to create value in moments of urban change. The Green solution to the eco-social paradox can be incorporated into a wider program of value creation through urban space, but the communist solution directly confronts capital's control over the housing market by prioritizing the use-values working people derive from affordable housing over the exchange-values needed for financialized real estate. This divergence makes the class positions of the two parties' respective bases evident. In an urban setting, the professional class is often an instrumental part of the capitalist valorization processes, but the needs of the working class are fundamentally incompatible with the market allocation of life's essentials.

3.2: Pulling out the roots

The central square for Graz's second historic working-class district has little of the green or social infrastructures present in wealthier parts of the city. Half of Griesplatz is a road. The other half is a hub for neighborhood bus connections with a handful of benches scattered among the terminals. Transforming Griesplatz is a priority for the Greens, and a step towards spreading green space across the entirety of the city. If the Green's plan is implemented, Griesplatz will look more like Lendplatz, serviced by a tram line, and with more green social space and less car traffic.

Judith Schwentner, the vice-mayor of Graz, told me that if green spaces were spread across the entire city, they could avoid the issue of gentrification. Several other Greens and communists expressed support for this position. Karl of the KPÖ, for example, saw previous urban greening projects, like the one at Lendplatz, as part of a wider neighborhood transition

promoting a “young urban hipster lifestyle.” By extending green space to neighborhoods without the presence of other gentrifying projects, he felt the rents could be kept down.

As examples of citywide greening not accompanied by redevelopment initiatives are rare if not unprecedented, there is little academic literature to turn to for insight. There is, however, one assumption the officials in Graz make that I believe indicates a limitation of a citywide greening approach. When I asked both communists and Greens about gentrification and displacement, several officials assumed people priced out of neighborhoods like Lend moved to other areas within city limits. This perception does not reflect an expert consensus. While some of Lend’s former residents likely found affordable pockets in other parts of Graz, Gries being a primary candidate, others moved farther afield. Wolfram Dornick, a historian who runs the Graz city archive, said the working class have begun to move beyond city limits since the professional class expanded across the Mur. Graz is not a bounded entity with a finite number of residents who move to more or less desirable neighborhoods when their income allows. The city is immersed in wider regional processes that affect both rent and emissions.

Contemporary research into gentrification is based on an underlying premise that the movements of people and capital involved in neighborhood change are part of processes that extend far beyond city limits (Lees, Slater, and Wyly 2013, p. xvii). In recent years, a number of publications have built on that premise by linking the gentrification of neighborhoods within the urban core with increased poverty in the suburbs (Lawton 2020; Hochstenbach and Musterd 2021). While it is notoriously difficult to track the movement of individuals displaced by gentrification, these papers make a clear connection—working-class people are forced to the periphery of the urban landscape when there is no affordable housing in the urban core. As these population distributions affect commuting patterns, this correlation has climate significance.

Urban climate planning typically lacks the awareness of wider flows of both people and capital present in gentrification studies, and focuses on what individual cities can do to reduce emissions produced within their limits (Reckien et al. 2014). Arguing that emissions can hide in the interface between urban and regional scales, a number of recent papers on urban sustainability have called for expanding the lens through which we view urban emissions. In their 2015 paper "Sustainability in One Place?" Samuel Mössner and Byron Miller analyze the case of Freiburg, Germany, a city of 230,000, and argue that the suburbanization of poverty has undercut the cities often lauded low-carbon transition (Medearis and Daseking 2012; Buehler and Pucher 2011; Barber 2020). Just as gentrifiers can move into a city from beyond its limits, people displaced by gentrification may move outside of the urban core. As urban emissions tallies end at the city limits, this regional exchange can serve to obscure emissions that have been displaced but not removed (Wachsmuth, Cohen, and Angelo 2016).

In Freiburg, Mössner and Miller argue that gentrification does more than hide emissions, and actually results in regional emissions increases that partially counteract emissions reductions in the dense urban core. When working people, unable to afford rent close to their jobs in the city, are pushed into areas outside city limits with less developed public transportation infrastructures, they are given few options but to commute by car. This can result in an overall increase in car commuters, the primary drivers of vehicle emissions in a city (Aguiléra and Voisin 2014). Rice et al. build on this research and make the case that a more just form of urban decarbonization would also be more effective on ecological terms.

Because gentrifiers can move into a city from beyond its limits, processes of gentrification can extend across wide swaths of a city (Lees, Slater, and Wyly 2013, p. 171), meaning a citywide greening approach could result in more gentrified districts rather than an

extension of the benefits of urban greening to the working class. With the exception of the pandemic, which kept students at home, Graz has experienced steady population growth since the turn of the century. A 2021 study on housing in Graz found that the largest group in this influx was professional-class people ages 18-30. The study found that one of the main barriers stopping further in-migration from this group was a lack of hip neighborhoods with suitable amenities and reasonable rent (Stadt Graz 2022, p. 51). If these amenities are expanded to working-class neighborhoods through the infrastructures of a low-carbon city, there is nothing stopping more professionals from moving in, or keeping a larger percent of Graz's 60,000 students[8] from staying in the city after completing their degrees.

While establishing causal connections between gentrification in Graz's urban core and expanding poverty on the periphery of the city is beyond the scope of this research, I believe there are enough warning signs in Graz to call into question the assumption that a citywide greening approach would stop gentrification. The sizable student population and consistent population growth in the cities surrounding Graz indicate the potential for a similar ecological trajectory to Freiburg. While designed with more charitable intentions than green redevelopment plans, the citywide greening approach does nothing to mitigate the influence of the housing market in Graz. In this crucial aspect, the communist solution to the eco-social paradox stands apart.

While KPÖ members support the Green's proposed changes to Griesplatz, they also have something to add. During a conversation at the Volkshaus, the KPÖ's main office which is itself in Gries, city-councilor Max told me he thought the changes to the square would push out locals if the coalition did not build additional public housing.

[8] Based on numbers available from unidata.gv.at, as well as the websites of several universities not listed on that site.

> If Griesplatz changes a little bit, at least, that might be good… On the other hand, obviously, if you make it more attractive there, if you have public transport, more green, what's going to happen? I mean, students, and people with higher income might move there as well and drive out the local population. And I think the only antidote to this is to increase public housing. If you do not combine those two, you have a huge problem.

Many of the KPÖ officials I interviewed felt that public housing had the potential to counteract the financial pressures that can push working people out of healthy and attractive neighborhoods. As those financial pressures stem from the market distribution of housing, the uniting thread behind KPÖ's housing work is an effort to mitigate the role of the housing market in determining where people live. While there are several components to the KPÖ platform, including keeping rents low across Graz and promoting mixed-income neighborhoods, the expansion of publicly owned housing within the city is the foundation on which these wider interventions are built. The KPÖ reports that Graz has completed or begun construction on 1,000 new city-owned flats since they assumed control of the housing department in 1998. Max identified these units as both a direct means of preserving space for working-class people in Graz and a mechanism by which the city could reign in the housing market.

In Austria, rent control is a matter of national rather than local policy. Since the center right and Green coalition was elected to the Austrian national government in 2022, they have allowed landlords to raise the rents by 24 percent (*Vienna.At* 2023). While the KPÖ could not directly counter these rent increases on the private market as a city government, they undercut that market by only raising rents by 2.2 percent in the flats owned by the city. By keeping affordable housing available in the city, they hope to influence the wider market, making it harder for landlords to raise the rent in private housing because people can switch to the public

system. Increasing the number of public flats available will only make this strategy more effective.

The location of new public construction gives the coalition a second pathway towards diffusing the eco-social paradox. While preventing displacement in working-class neighborhoods undergoing greening is one way to bring the material benefits of low-carbon urbanism to working people, a second way is to construct public housing in areas that already have those amenities. Gold and Lewis argue that the founding disparities of environmental justice, where environmental bads are found in poor neighborhoods and environmental goods in rich ones, is only possible because neighborhoods are segregated by income (Gould and Lewis 2012, p. 116). This segregation, they continue, is orchestrated through the housing market (Ibid., p. 117). Proposing a program of public housing that prioritized mixed-class neighborhoods as a way to address those disparities at the source is a natural extension of that argument. Many of the KPÖ officials I interviewed described mixed-class neighborhoods as a guiding principle in their approach to housing. Karl, a district councilor, told me: “We're trying not to make ghettos, just working-class districts, but to build the new homes also in some bourgeois districts like Geidorf.”

In contrast to a citywide greening approach, for which there is no available data, public housing has been shown to reduce gentrification pressure (Ley and Dobson 2008). While the area between Lendplaz and the Kunsthaus has seen significant demographic changes in the last two decades, the same trends have been notably absent in the area to the north of Lendplatz, a part of town where housing cooperatives are common. While the percentage of non-Austrians, mostly Turkish and Syrian immigrants, decreased between Lendplaz and the Kunsthaus between

2009 and 2013, the same percentage grew in the north of Lend (Wagenröder 2016, p. 71-72). In the areas with non-market housing options, the rent did not go up.

By acting against the market distribution of housing, the KPÖ-led coalition hints at a path towards diffusing the eco-social paradox, providing the material benefits of a low-carbon city to working-class people without the threat of displacement. I argue that these interventions into the housing market are, fundamentally, the factor that sets Graz apart from neoliberal models of climate governance. They are also the issues championed by the communists. The social and ecological fallout of working-class displacement means that the social element of a low-carbon transition cannot be an afterthought. It must be the foundation of low-carbon change. Because of this, I argue that future attempts at democratic low-carbon transitions have the potential to be more effective if they are implemented by the social left.

3.3: Balancing the budget

The KPÖ members I spoke with all had good things to say about working with the Greens, but also felt they did not have the same commitment to preserving space for working-class people in the city. This was, I was told, not a moral failing on the part of any individual, but rather because the Greens represented the professional class, a group that does not fear displacement. While the discussion so far has largely been about political priorities in the abstract, these conversations result in real consequences in Graz when it comes time to set budget priorities. Throughout Europe, the finances of municipal governments significantly limit what they are able to accomplish without help from national or international institutions (Bulkeley 2011). Graz is no exception to this challenge. In many of my interviews, but most commonly when speaking to Green party members, budget decisions were cited as the main

point of friction in the coalition. As we sat at the outdoor café in Lendplatz, surrounded by farmers market stands and new expensive apartments, Felix told me: “If we would have all the money in the world, we wouldn’t have any problems. We still think that what they are doing in terms of housing is not bad at all. But we also think that investing in public transport is at least as important. So then we talk about priorities.”

While some members of the KPÖ also felt this tension, others did not. For Max, the challenge with infrastructures like tramways is that they cost far more than even the most expensive social programs like constructing new public housing. This difference of opinion is further evidence that at an urban scale, social policy should be the first step in any low-carbon change. The Greens’ understandable urgency to act on climate change, combined with the expense of the low-carbon infrastructures Graz requires to become carbon neutral, could lead to public housing falling by the wayside. In Graz, the KPÖ controls the mayor's office, the finance committee of the city, and three of the seven total votes in the city senate. While the KPÖ needs the Greens’ vote in the senate to make their budget decisions law, the political power of the KPÖ in Graz means housing is a central issue rather than an afterthought.

Far from representing a drift away from the coalition's goal to become carbon-neutral by 2040, I argue that the focus on housing is precisely the coalition's strength. By prioritizing public housing in the city and acting to curtail market influence, the coalition government in Graz hints at an alternative model of urban climate politics—a model that puts the interests of the working class first and is more ecologically effective as a result. By diffusing the eco-social paradox, this still-emerging model has the potential to be both more socially just and more effective on ecological terms than the neoliberal model of climate governance that has so far caused tremendous social harm and done little to stop the climate crisis.

Conclusion: Ecology as Addition

The May Day march ended at a square behind Graz's city hall. Played along by a brass band, the marchers filled the street, forming a semi-circle around a platform with two loudspeakers. Tired but still energized, the crowd spread out across tram tracks and around flower beds that filled the space between the tall buildings of the city center. Elke Kahr, the KPÖ mayor, took the small stage as the music ended and spoke into a microphone. She talked about housing, energy costs, and the rising threat of the far right. Kahr mentioned climate change, but only briefly. It was an addition to, rather than the subject of, her speech.

The looming threat of climate change has led some to assume environmental politics must be at the center of a movement capable of preventing ecological collapse (Latour, Schultz, and Rose 2022; Barca 2015). My research in Graz has led me to a different conclusion. In an urban setting, I believe ecological politics are most valuable as an addition to a social platform. This change in emphasis has led me to a new question than the one which initially inspired this research. I came to Graz to learn if material environmental politics could bring working-class people into the climate movement. I left wondering if the threat of climate change can bring the professional class into coalitions pushing for more radical economic and social change.

This new outlook would imply a shift in how we approach urban environmental politics. Despite their differences, many post-materialist and materialist environmental scholars share a core assumption—that environmental issues should be at the center of political struggle. In their pamphlet "On the Emergence of an Ecological Class," Bruno Latour and Nikolaj Shultz argue that, in order for ecological politics to become an organizing principle of politics, a new class must emerge, one that "cuts across" (Latour, Schultz, and Rose 2022, p. 5) other class conflicts, and rejects the socialist tradition in favor of a "more rational" relationship with the natural world

(Ibid., p. 25). For Latour and Schultz, old class forms cannot address the current ecological crisis.

But this conclusion is based on the assumption that the ecological crisis should be the center point around which coalitions gather. Other environmental scholars with a more conventional understanding of class politics hint at a wider crisis, but still hold to climate issues as a uniting topic. In her book "Working Class Environmentalism," Karen Bell makes the case that working-class people already have a coherent ecological politics, one that can be integrated into the wider climate struggle by connecting local material concerns with global processes (Bell 2020). Bell suggests putting working class people in a leading role, and calls for more radical tactics and anti-capitalist rhetoric from the climate movement as it stands today (Ibid., p. 201), but the book is still premised on the idea that environmental struggles, a political arena historically dominated by the professional class, will be what unites us. Stefania Barca, an economic historian working on labor and environmental justice, writes: "In order to become the subject of this ecological revolution to come, labour organisations should profoundly transform themselves in a way that puts ecology center stage in their political visions and strategies." (Barca 2015, p. 2). Barca assumes that the revolution will be ecological.

Climate change is the greatest single threat facing humanity today, but that does not mean the movement to overcome it must be an ecological one, at least not entirely. In fact, professional-class ecological movements have a long history of failing to get to the root of the problem—the capitalist economic system. The climate is not changing itself. Following the ecological Marxist tradition, I argue that the health of the planet is fundamentally incompatible with an economic system premised on infinite growth, growth that always comes with a material cost. As Nancy Fraser emphasizes, this is not the only material base that capitalism is in the

process of melting away. Care work, ecological systems, and democratic governments are all undermined by structural contradictions present within the capitalist system (Fraser 2022). As a result, Fraser's call to action is distinctly different from her counterparts working in the environmental tradition. For Fraser, the capitalist antagonist, not any single issue, has the most promise for building a movement capable of confronting the mutual cause of these disparate crises (Fraser 2022, p. 152).

My research in Graz supports Fraser's basic point, but with some alterations that come from an urban perspective. In Graz, the KPÖ's history of public housing activism is what allowed the left to gain political power, creating the possibility of a coalition that could move the city towards a just and low-carbon future. In addition, I argue that the changes to urban space that confront capital most directly, and therefore hold the largest promise for the sustained ecological health of the planet, are those that directly benefit the working class. Rather than a single issue among many, I believe Graz makes a strong case that working-class issues should be at the center of a left coalition.

Placing working-class issues at the center of low-carbon politics reverses the direction of material appeals. Rather than an outreach project in which the material interests of working people are used to bring them into alliance with climate activists, this alternate conception frames climate politics as a way for working-class movements to appeal to the professional class through their shared need for a habitable planet. Cohen writes: "For movements of the poor to take up the low-carbon cause would require few changes to those movements' objectives; it could, meanwhile, grow their alliances and broaden their messages' appeal" (Cohen 2017, p. 157).

The history of urban ecological politics shows that professional-class movements concerned with solely ecological issues both fail to escape the neoliberal paradigm of climate solutions that have a long track record of producing social harm while doing little to stop ecological crises (Rice et al. 2020). In Graz, a different model of ecological change distinct from neoliberal and market-based models has begun to emerge. It is based not on the working class becoming environmentalists, but on the environmentalists joining the working-class left in a push for solutions that run contrary to the interests of capital. The uniting point of this coalition's material environmental politics is the priority given to use over exchange values in the expansion of public transportation, social space, and housing.

Graz shows that climate issues can create new alliances in the class struggle, but not in the manner Latour and Schultz propose. In an urban setting, working-class care for the environment is not the barrier to a low-carbon future. The barrier is the lack of professional-class support for truly transformative social and economic policy. Climate change presents an opportunity to move the professional class to the left. For the first time in recent memory, large portions of the professional class are recognizing that capitalism is undermining the material conditions of their existence. In short, climate change can show the professional class what has always been obvious to leftist working-class movements—capitalism is a threat to human life.

Bibliography

Aguiléra, Anne, and Marion Voisin. 2014. “Urban Form, Commuting Patterns and CO2 Emissions: What Differences between the Municipality’s Residents and Its Jobs?” *Transportation Research Part A: Policy and Practice* 69 (November): 243–51. https://doi.org/10.1016/j.tra.2014.07.012.

Amato, Fulvio, Flemming R. Cassee, Hugo A.C. Denier Van Der Gon, Robert Gehrig, Mats Gustafsson, Wolfgang Hafner, Roy M. Harrison, et al. 2014. “Urban Air Quality: The Challenge of Traffic Non-Exhaust Emissions.” *Journal of Hazardous Materials* 275 (June): 31–36. https://doi.org/10.1016/j.jhazmat.2014.04.053.

Aram, Farshid, Ester Higueras García, Ebrahim Solgi, and Soran Mansournia. 2019. “Urban Green Space Cooling Effect in Cities.” *Heliyon* 5 (4): e01339. https://doi.org/10.1016/j.heliyon.2019.e01339.

Barber, Kat. 2020. “Freiburg: Germany’s Futuristic City Set in a Forest.” June 2020. https://www.bbc.com/travel/article/20200715-freiburg-germanys-futuristic-city-set-in-a-forest.

Barca, Stefania. 2015. "Labour and climate change: towards an emancipatory ecological class consciousness." *Refocusing resistance to climate justice: COPing in, COPing out and beyond Paris*: 74-78. https://www.iparhegoa.eus/images/argitalpenak/talaia/Stefania.pdf

BBC News. 2020. “Austria’s Greens Get Used to a Share of Power,” February 6, 2020, sec. Europe. https://www.bbc.com/news/world-europe-51383838.

Bell, Karen. 2020. *Working-Class Environmentalism: An Agenda for a Just and Fair Transition to Sustainability*. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-29519-6.

Bouzarovski, Stefan, Jan Frankowski, and Sergio Tirado Herrero. 2018. “Low-Carbon Gentrification: When Climate Change Encounters Residential Displacement: BOUZAROVSKI, FRANKOWSKI AND TIRADO-HERRERO.” *International Journal of Urban and Regional Research* 42 (5): 845–63. https://doi.org/10.1111/1468-2427.12634.

Broulíková, Hana, and Josef Montag. 2017. “Housing Privatization in Europe: An Overview of Policies and Outcomes.” *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2899928.

Buehler, Ralph, and John Pucher. 2011. “Sustainable Transport in Freiburg: Lessons from Germany’s Environmental Capital.” *International Journal of Sustainable Transportation* 5 (1): 43–70. https://doi.org/10.1080/15568311003650531.

Bulkeley, Harriet. 2011. *Cities and Subnational Governments*. Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199566600.003.0031.

Bushnell, James, Carla Peterman, and Catherine Wolfram. 2008. “Local Solutions to Global Problems: Climate Change Policies and Regulatory Jurisdiction.” *Review of Environmental Economics and Policy* 2 (2): 175–93. https://doi.org/10.1093/reep/ren007.

Checker, Melissa. 2011. “Wiped Out by the ‘Greenwave’: Environmental Gentrification and the Paradoxical Politics of Urban Sustainability: Wiped Out by the ‘Greenwave.’” *City & Society* 23 (2): 210–29. https://doi.org/10.1111/j.1548-744X.2011.01063.x.

Cohen, Daniel. 2017. “The Other Low-Carbon Protagonists: Poor People’s Movements and Climate Politics in São Paulo.” In *The City Is the Factory: New Solidarities and Spatial Strategies in an Urban Age*, 140–57.

Curran, Winifred, and Trina Hamilton, eds. 2018. *Just Green Enough: Urban Development and Environmental Gentrification*. Routledge Equity, Justice and the Sustainable City Series.

Abingdon, Oxon ; New York, NY: Routledge.

Davis, Mike. 2010. “Who Will Build the Ark?” *New Left Review*, no. 61 (February): 29–46.

Della Porta, Donatella, Joseba Fernández, Hara Kouki, and Lorenzo Mosca. 2017. *Movement Parties against Austerity*. Cambridge, UK ; Malden, MA: Polity.

Dooling, Sarah. 2009. “Ecological Gentrification: A Research Agenda Exploring Justice in the City.” *International Journal of Urban and Regional Research* 33 (3): 621–39. https://doi.org/10.1111/j.1468-2427.2009.00860.x.

Ehrenreich, Barbara, and John Ehrenreich. 1977. “The Professional-Manegerial Class.” *Radical America* 11 (2): 7–32.

Fernandez, Rodrigo, and Manuel B Aalbers. 2016. “Financialization and Housing: Between Globalization and Varieties of Capitalism.” *Competition & Change* 20 (2): 71–88. https://doi.org/10.1177/1024529415623916.

Fraser, Nancy. 2022. *Cannibal Capitalism: How Our System Is Devouring Democracy, Care, and the Planet - and What We Can Do about It*. London ; New York: Verso.

Gould, Kenneth A., and Tammy L. Lewis. "The environmental injustice of green gentrification: the case of Brooklyn’s Prospect Park." *The World in Brooklyn: Gentrification, immigration, and ethnic politics in a global city* 2, no. 1 (2012): 113-146.

Hamnett, Chris. 2003. “Gentrification and the Middle-Class Remaking of Inner London, 1961-2001.” *Urban Studies* 40 (12): 2401–26. https://doi.org/10.1080/0042098032000136138.

Harvey, David. 1981. “The Urban Process under Capitalism: A Framework for Analysis*.” In *Urbanization and Urban Planning in Capitalist Society*. Routledge.

———. 2008. “The Right to the City.” *New Left Review*, no. 53 (October): 23–40.

Hochstenbach, Cody, and Sako Musterd. 2021. “A Regional Geography of Gentrification,

Displacement, and the Suburbanisation of Poverty: Towards an Extended Research Agenda." *Area* 53 (3): 481–91. https://doi.org/10.1111/area.12708.

Holm, Andrej. "Ein ökosoziales Paradoxon : Stadtumbau und Gentrifizierung." [An Eco-social Paradox: Urban Redevelopment and Gentrification]. *Politische Ökologie* 29, no. 124 (2011): 45-52.

Huber, Matthew T. 2022. *Climate Change as Class War: Building Socialism on a Warming Planet*. London ; New York: Verso.

Inglehart, Ronald. 2015. *The Silent Revolution: Changing Values and Political Styles Among Western Publics*. Princeton University Press.

Klein, Naomi. 2014. *This Changes Everything: Capitalism Vs. The Climate*. Simon and Schuster.

Laird, Pamela Walker. 1996. "'The Car without a Single Weakness': Early Automobile Advertising." *Technology and Culture* 37 (4): 796. https://doi.org/10.2307/3107098.

Latour, Bruno, Nikolaj Schultz, and Julie Rose. 2022. *On the Emergence of an Ecological Class - a Memo: Subject: How to Promote the Emergence of an Ecological Class That's Self-Aware and Proud*. Cambridge ; Hoboken: Polity Press.

Lauber, Volkmar. 1995. "The Austrian Greens." *Environmental Politics* 4 (2): 313–19. https://doi.org/10.1080/09644019508414203.

Lawton, Philip. 2020. "Unbounding Gentrification Theory: Multidimensional Space, Networks and Relational Approaches." *Regional Studies* 54 (2): 268–79. https://doi.org/10.1080/00343404.2019.1646902.

Lees, Loretta, Tom Slater, and Elvin Wyly. 2013. *Gentrification*. 0 ed. Routledge. https://doi.org/10.4324/9780203940877.

Lefebvre, Henri. 1996. *Writings on Cities*. Edited by Eleonore Kofman and Elizabeth Lebas. 1st

edition. Cambridge, Mass, USA: Wiley-Blackwell.

Ley, David, and Cory Dobson. 2008. “Are There Limits to Gentrification? The Contexts of Impeded Gentrification in Vancouver.” *Urban Studies* 45 (12): 2471–98. https://doi.org/10.1177/0042098008097103.

Liverman, Diana M. 2009. “Conventions of Climate Change: Constructions of Danger and the Dispossession of the Atmosphere.” *Journal of Historical Geography* 35 (2): 279–96. https://doi.org/10.1016/j.jhg.2008.08.008.

Marx, Karl, Ben Fowkes, and David Fernbach. 1981. *Capital: A Critique of Political Economy*. V. 1: Penguin Classics. London ; New York, N.Y: Penguin Books in association with New Left Review.

Medearis, Dale, and Wulf Daseking. 2012. “Freiburg, Germany: Germany’s Eco-Capital.” In *Green Cities of Europe: Global Lessons on Green Urbanism*, edited by Timothy Beatley, 65–82. Washington, DC: Island Press/Center for Resource Economics. https://doi.org/10.5822/978-1-61091-175-7_3.

Milman, Oliver. 2023. “Revealed: Exxon Made ‘Breathtakingly’ Accurate Climate Predictions in 1970s and 80s.” *The Guardian*, January 12, 2023, sec. Business. https://www.theguardian.com/business/2023/jan/12/exxon-climate-change-global-warming-research.

Mössner, Samuel, and Byron Miller. 2015. “Sustainability in One Place? Dilemmas of Sustainability Governance in the Freiburg Metropolitan Region.” *Regions Magazine* 300 (1): 18–20. https://doi.org/10.1080/13673882.2015.11668692.

Partender, Franz. 2013. “Die Wohnungsfrage in der Politik der KPÖ Graz.” [The housing question in the politics of the KPÖ Graz]. KPÖ Steiermark. September 2013.

https://www.kpoe-steiermark.at/der-stellenwert-der-wohnungsfrage-in-der-politik-der-kpoe-graz.phtml.

Pearse, Rebecca, and Steffen Böhm. 2014. "Ten Reasons Why Carbon Markets Will Not Bring about Radical Emissions Reduction." *Carbon Management* 5 (4): 325–37. https://doi.org/10.1080/17583004.2014.990679.

Petrik, Teresa. 2020. "How Austria's Greens Became the Right's Best Ally." *Jacobin*, January 22, 2020. https://jacobin.com/2020/01/austria-greens-peoples-party-sebastion-kurz-coalition.

Pichardo, Nelson A. 1997. "New Social Movements: A Critical Review." *Annual Review of Sociology* 23 (1): 411–30. https://doi.org/10.1146/annurev.soc.23.1.411.

Pons, Silvio. 2010. "The Rise and Fall of Eurocommunism." In *The Cambridge History of the Cold War,* edited by Melvyn P. Leffler and Odd Arne Westad, 1st ed., 45–65. Cambridge University Press. https://doi.org/10.1017/CHOL9780521837217.004.

Reckien, D., J. Flacke, R. J. Dawson, O. Heidrich, M. Olazabal, A. Foley, J. J.-P. Hamann, et al. 2014. "Climate Change Response in Europe: What's the Reality? Analysis of Adaptation and Mitigation Plans from 200 Urban Areas in 11 Countries." *Climatic Change* 122 (1–2): 331–40. https://doi.org/10.1007/s10584-013-0989-8.

Reuters. 2017. "Factbox: Key Policies of Austria's Conservative/Far-Right Coalition," December 18, 2017, sec. Europe News. https://www.reuters.com/article/us-austria-politics-coalition-policies-f-idUSKBN1EC1CD.

Rice, Jennifer L. 2014. "Public Targets, Private Choices: Urban Climate Governance in the Pacific Northwest." *The Professional Geographer* 66 (2): 333–44. https://doi.org/10.1080/00330124.2013.787011.

Rice, Jennifer L., Daniel Aldana Cohen, Joshua Long, and Jason R. Jurjevich. 2020. "Contradictions of the Climate-Friendly City: New Perspectives on Eco-Gentrification and Housing Justice." *International Journal of Urban and Regional Research* 44 (1): 145–65. https://doi.org/10.1111/1468-2427.12740.

Rizwan, Ahmed Memon, Leung Y. C. Dennis, and Chunho Liu. 2008. "A Review on the Generation, Determination and Mitigation of Urban Heat Island." *Journal of Environmental Sciences* 20 (1): 120–28. https://doi.org/10.1016/S1001-0742(08)60019-4.

Saito, Kohei. 2017. *Karl Marx's Ecosocialism: Capital, Nature, and the Unfinished Critique of Political Economy*. New York: Monthly Review Press.

Soder, Michael, Kathrin Niedermoser, and Hendrik Theine. 2018. "Beyond Growth: New Alliances for Socio-Ecological Transformation in Austria." *Globalizations* 15 (4): 520–35. https://doi.org/10.1080/14747731.2018.1454680.

Stadt Graz. 2022. "Studie Grazer Wohnbau 2021." [Study of Graz housing 2021]. Graz, Austria. https://www.graz.at/cms/beitrag/10404157/10621891/Studie_Grazer_Wohnbau.html.

U.N. Environment. 2017. "Cities and Climate Change." UNEP - UN Environment Programme. September 26, 2017. http://www.unep.org/explore-topics/resource-efficiency/what-we-do/cities/cities-and-climate-change.

Uteuova, Aliya. 2023. "New York Takes Big Step toward Renewable Energy in 'Historic' Climate Win." *The Guardian*, May 3, 2023, sec. US news. https://www.theguardian.com/us-news/2023/may/03/new-york-renewable-energy-public-utilities.

Vienna.At. 2023. "Erneute Erhöhung Der Kategoriemieten: 24 Prozent Höhere Mietkosten in 15 Monaten," ["Rising Category Rents Again: 24 Percent Higher Rental Costs in 15

Months,"] June 6, 2023, sec. Österreich. https://www.vienna.at/erneute-erhoehung-der-kategoriemieten-24-prozent-hoehere-mietkosten-in-15-monaten/8119654.

Wachsmuth, David, Daniel Aldana Cohen, and Hillary Angelo. 2016. "Expand the Frontiers of Urban Sustainability." *Nature* 536 (7617): 391–93. https://doi.org/10.1038/536391a.

Wagenröder, Eva Maria. 2016. ""Gentlification" - Soft Gentrification in the Lend District." Graz, Austria: Karl-Franzens Universität Graz.

Wamsler, Christine, Ebba Brink, and Claudia Rivera. 2013. "Planning for Climate Change in Urban Areas: From Theory to Practice." *Journal of Cleaner Production*, Special Issue: Advancing sustainable urban transformation, 50 (July): 68–81. https://doi.org/10.1016/j.jclepro.2012.12.008.

Weisskircher, Manès. 2019. "The Electoral Success of the Radical Left: Explaining the Least Likely Case of the Communist Party in Graz." *Government and Opposition* 54 (1): 145–66. https://doi.org/10.1017/gov.2017.14.