

– TOWARDS A DEGROWTH CRITIQUE OF AEROMOBILITIES: An Urban Political Ecology Perspective on the Airport Expansion Resistance in Barcelona

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Abstract

Aeromobilities—socio-technical systems that lock in dependence on fossil fuel-based mobilities—contribute substantially to climate change and uneven geographies. They represent paradigmatic capitalism-driven forms of metabolism, permeated by logics of efficiency and growth. While existing literature has examined resistance to airport expansion, it has overlooked opposition to the metabolic dimensions of aeromobility. Using an urban political ecology (UPE) lens, this paper explores resistance to aeromobility through the case of the Stay Grounded movement against the expansion of Barcelona airport. We analyse airport resistance as a critique of capitalism-driven metabolization of nature, emphasizing the interplay of material flows, territorial subjectivities and degrowth-inspired imaginaries in opposing aeromobilities and constructing alternative visions. Using semi-structured interviews and a review of activist materials, we illustrate how the Stay Grounded movement forged discursive and strategic alliances that reterritorialized opposition to airport expansion by integrating critiques of carbon emissions with broader struggles over livelihoods and ecological preservation. We highlight how degrowth principles, combined with territorial and metabolic analyses, enabled resistance to transcend localized NIMBYism and articulate transformative visions of mobility and urban-nature relations. This article contributes to UPE scholarship by providing a critical example of infrastructure politics in the context of climate emergencies and degrowth debates.

Introduction

Private cars, and increasingly airplanes, constitute the cardinal points of worldwide transport systems. Their proliferation is linked to the predominance of automobilities (and aeromobilities) as expanding, self-reinforcing systems of socio-techno-political practices. These include technological and infrastructural developments, land use patterns, resources extraction and modes of production and consumption, which together lock in fossil-fuel dependency. Auto(aero)mobilities are a salient feature of neoliberal and socially uneven geographies and a major contributor to climate change (Paterson 2007; Freund 2014). Aeromobility represents a highly unequal and ‘pervasive regime of exacting infrastructural arrangements, resource supply chains and (non)human mobilisations’ that inevitably reproduces human exploitation and ecological destruction (Lin and Harris 2020: 615).

We would like to thank all the research participants for their time and insights, and our funder for making this project possible. We would also like to thank the students of the Urban Nature course at the School of Geography and the Environment, University of Oxford, who gave us an opportunity to think about this work from new perspectives. Finally, we sincerely thank Jens Portinson Hylander, Lindsay Bremner and our anonymous reviewers for their comments, which truly helped improve the manuscript. This work was supported by the Regional Studies Association (Early Career Grant Scheme, 2020 round).

There has been a growing focus on understanding the various forms of resistance to the expansion of aeromobilities, particularly in the context of protests against airport construction and expansion (Oosterlynck and Swyngedouw, 2010; Hayden, 2014; Hilbrandt, 2017; Griggs, 2023). The existing literature has considered the ways in which such resistance is informed by citizens' concerns related to airport noise (May and Hill, 2006), citizen science (Andre, 2004; da Schio and van Heur, 2022) and challenges to developers' and governments' narratives justifying airport expansions, including pursuing public enquiries and legal cases (Griggs and Howarth, 2004; Griggs, 2023). Scholars have also reflected on tensions related to forms of NIMBYism and generalized post-political discourses surrounding airport projects (Oosterlynck and Swyngedouw, 2010; da Schio and van Heur, 2022).

These studies offer important insights on the political economy of aeromobility and its governance, and how it is resisted and contested in its material expression of airport construction and expansion. However, with some exceptions (see Hayden, 2014), they offer limited exploration of how aeromobilities are contested as an encompassing paradigm of mobility whose material expression is rooted in a logic of efficiency, acceleration and growth (Schwanen, 2019). They also rarely address alternatives proposed to such a paradigm. In this article, we argue that this oversight is partly due to the limited attention given to the metabolic aspects of aeromobilities and how they are resisted by social movements. We propose that utilizing an urban political ecology (UPE) analytical lens to analyse airport resistance can help us better understand and develop more comprehensive critiques to aeromobility as a mobility paradigm rooted in specific multiscalar material and discursive metabolizations of nature.

UPE analyses how power relations, material flows and social struggles shape urban environments as socio-natures. Its interdisciplinary approach advances our understanding of capitalism-driven urbanization, by uncovering the socio-political, economic and ecological 'metabolic' processes by which 'nature' is appropriated and transformed to produce cities as socio-natural hybrids (Heynen, 2014; 2016; 2018). It also highlights the political and contested nature of such processes, and how they are shaped by power and resistance. Particularly in its post-structuralist-influenced versions, UPE bridges such focus on struggles over metabolism with embodied, situated experiences, examining how subjectivities and discourses shape the conflictual formation of urban social-ecologies in their interaction with flows of nature, people, goods, technologies, energy, materials and information (Gabriel, 2014).

Following Nevins *et al.*'s (2022) suggestion to consider aeromobility as contexts with the potential to reveal new urban-nature configurations, we argue that UPE can help us better understand resistance to airport expansion as a part of broader resistance to processes of capitalism-driven metabolization of nature. We consider UPE as helpful in uncovering resistance, particularly given its commitment to radical 'advocacy', including connections to degrowth debates (Desvallées *et al.*, 2022; Swyngedouw, 2023) as part of an emerging political ecology of degrowth (Demaria *et al.*, 2013; D'Alisa *et al.*, 2014). This is significant especially given recent suggestions that, by challenging growth as a social objective and rethinking societal metabolisms and flows (D'Alisa *et al.*, 2014), degrowth can frame an overarching critique of transport systems that also contains seeds for transformative visions (Cattaneo *et al.*, 2022; Cox, 2023; Kębłowski, 2023). For example, Griggs (2023: 193), reflecting on resistance to airport expansions, emphasizes the importance of degrowth in enabling activists 'to fabricate an alternative vision and image of society, based on progressive principles, in which we divest from aviation'.

In particular, in this article we use a UPE perspective to analyse opposition to the expansion of the El Prat airport in Barcelona as a distinctively degrowth-oriented struggle. Guided by central concepts in UPE literature and considering the airport expansion as a metabolic process, we examine how it is resisted across multiple sites of scalar politics, where socio-ecological relations are contested and reimagined by

intersecting the expression of territorial environmental subjectivities with a degrowth-based critique of aeromobility. We specifically engage with the multiple sites and meanings of the Stay Grounded resistance¹ and show how discursive and strategic alliances are forged by reterritorializing abstract opposition to climate change and linking it to wider-scale debates on economy, life and degrowth. In line with current scholarship highlighting the power of local struggles to repoliticize urban natures (Grove, 2009; Hope, 2021), we show the polymorphic nature of urban resistance and how degrowth principles help shape multi-local opposition to the expansion as a metabolic process. We reflect on how resistance to the airport economy intertwines with movements seeking to repoliticize peripheries and reterritorialize economies of scale, and on how the debate on carbon emissions and sustainable transport entangles with a reflection on the politics of the Capitalocene.

This article thus complements current debates on aeromobility resistance by presenting a rich example of multi-site opposition that includes seeds for transformation, including examples of how degrowth can inform everyday opposition to aeromobilities. Furthermore, by using a UPE lens to bring an example of politicization of infrastructure and development, it responds to calls to enhance UPE's emancipatory potential (Ernstson and Swyngedouw, 2019), particularly in response to the growing climate emergency (Kaika *et al.*, 2023). Similarly, it addresses recent efforts to establish a research and activism agenda for the UPE's future (Doshi, 2017; Loftus, 2017; Tzaninis *et al.*, 2021; Gandy, 2022), and opens UPE to new dimensions of research, including suburban landscapes of 'airports, oil fields and garbage dumps' (Tzaninis *et al.*, 2021: 242; Nevins *et al.*, 2022; Kaika *et al.*, 2023).

The analysis draws on the authors' knowledge of Barcelona's activist scene² (Castro, 2019; Martín and Bonet-Martí, 2024), an extensive review of grey literature—including articles by activists, interviews in media, flyers and social media statements—and eight semi-structured interviews conducted between November and December 2021. These include six interviews with representatives of organizations linked to the environmental struggle, against touristification, in defence of the Llobregat Delta or for the promotion of public transport, which are part of or collaborate with the platform that brings together and leads the struggle, ZeroPort; two include referents of political groups linked to local and regional councils (Barcelona en Comú and En Comú Podem). Interviews, anonymized and thematically coded, traced the historical development of the conflict around the airport expansion, actors involved, links with other struggles and the degrowth movement.

UPE and urban resistance

The UPE approach to urban resistance is tied to the field's evolving understandings of metabolism, politics and the political (Holifield and Schuelke, 2015). Early neo-Marxist-inspired work focused on the metabolization of capitalist urban natures as an 'inherently socio-material and hybrid form of metabolism, whereby social categories such as capital, money, norms, gender, and race are intimately interlinked with material assemblages' (Ernstson and Swyngedouw, 2019: 4). The emphasis on how social power (re)produced contested urban natures underscored the seeming inevitability of capitalism-driven hybridization and the metabolization of nature, leaving limited room

1 With the term Stay Grounded resistance we capture the work of the global network or Global Anti-Aerotropolis Movement and its specific articulation in Barcelona (Heuwieser, 2019). The campaign against airport expansion in Barcelona was waged by different organizations, with ZeroPort acting as a platform leading the fight locally.

2 Castro and Martínez are members of the IDRA Urban Research Institute of Barcelona, a Barcelona-based think tank dedicated to making cities more fair, equitable and sustainable by combining the efforts of social movements, policy makers and engaged academics.

for resistance and alternative urban imaginaries (Gandy, 2012; Gabriel, 2014; Lawhon *et al.*, 2014; Goldfischer *et al.*, 2020; Swyngedouw, 2023).

Lately, situated UPEs have explored the links between political subjectivities and culture, revisiting metabolism as a form of ‘embodied politics’ (Doshi, 2017) and resistance as emerging from situated everyday practices (Lawhon *et al.*, 2014). The intersection with Southern theory shifted attention to the role of ‘cultural practices of nature [as] the source of processes that must be accepted as political’ (Escobar, 1998: 64; Grove, 2009: 209). Feminist, embodied (Doshi, 2017), queer (Sandilands, 2016) and anti-essentialist approaches in UPE challenged the inevitability of capitalism-driven urban metabolism, redirecting attention to the ‘struggles over meanings and practices of nature and the city’ (Grove, 2009: 209) as a critical transformative force (Heynen, 2018). They engaged with ‘the subjective (and subjectivizing) forces through which novel forms of metabolic interaction with the non-human may emerge’ (Grove, 2009: 215), enriching UPE’s initial notion of power and socio-ecological nature and encouraging an analysis of their discursive and subjective formation (Hope, 2021). In such a way, for example, they have uncovered multifaceted forms of resistance to infrastructural projects, which can include the emergence of environmental subjectivities from engagement with infrastructural material configurations (Behrsin and Benner, 2017) or the mobilization of shared historical narratives in resisting racialized dispossession (Goodling, 2021).

Engagement with poststructuralist ideas matured an understanding of politicization as emerging within the multifaceted discursive, emotional and embodied ways in which nature is differentially known, symbolized and (re)imagined by different communities. It has brought a territorial perspective to UPE, emphasizing ‘*territorio*’ as a socio-material metabolic process (re)connecting spatial and material processes to their socio-cultural and political signifiers (Swyngedouw and Boelens, 2018; Quimbayo Ruiz, 2020; Perrone, 2023). It has also uncovered ‘the uneven socio-ecological positions different humans and non-humans occupy in the circulatory metabolic process that sustains capital accumulation’ (Ernstson and Swyngedouw, 2019: 256). As a result, we witness an expansion of UPE’s understanding of metabolism and socio-natures as produced through countless multi-species interactions, encompassing embodied experiences and emotions. Subsequently, processes of resistance to capitalist metabolisms are recognized not just as occurring as part of the traditional ‘properly political’ repertoire (Holifield and Schuelke, 2015: 295) of unions or social movements (Swyngedouw, 2022), but rather ‘metabolic conflicts erupt and alliances are formed and fragment as people struggle to define their “place” in, and relation to, dynamic situated urban political ecologies’ (Demaria and Schindler, 2016: 294). In response to the tyranny of consensual post-political urban governance, which often absorbs issue-based movements (Oosterlynck and Swyngedouw, 2010), UPE has uncovered movements’ dynamic ability to emerge as political subjects with their critical material-discursive practices which disrupt and ‘repoliticize’ the status quo (Wilson and Swyngedouw, 2014; Beveridge and Koch, 2017; Dikeç and Swyngedouw, 2017; Blühdorn and Deflorian, 2021). Recent opening to degrowth has further expanded an understanding of emerging socio-natures and potential counter-hegemonic imaginaries (Kaika *et al.*, 2023).

In sum, expanding its engagement with diverse perspectives, UPE has highlighted the multivocal and multi-site sites of resistance where struggles to halt capitalism-driven metabolization of nature can unfold (Kaika *et al.*, 2023; Swyngedouw, 2023). It is with this attention to the multiplicity of resistance that, in the following sections, we bring a UPE-informed analysis to consideration of the ‘Stay Grounded’ campaign’s work in resistance to aeromobilities, where alliances are constructed around a polysemantic understanding of nature, which encompasses the conservation of local territory, the grounding of CO₂ and the reframing of local economies around themes of degrowth.

Resisting aeromobilities

– Aeromobilities

Aeromobility constitutes a salient feature of neoliberal uneven geographies. Less than 20% of the world's population has ever set foot on a plane, and only 5–10% fly yearly (Hopkinson and Cairns, 2021). However, aeromobility is a major contributor to global CO₂ emissions and air pollution (Paterson, 2007; Freund, 2014). Beyond reproducing vertical and transboundary inequalities (Graham, 2015; Marks and Miller, 2021; Nevins *et al.*, 2022), aeromobility's spatialized form, airport terminals or aerotropoli, are horizontally developed as highly uneven spaces of capital accumulation, where rules, materialities and architectural design commodify passengers' and goods' movements and experiences (Frølund, 2016). These intertwine with growth-oriented tourism and travel practices that lock in air-travel as a popular and high-demand practice (Barr and Shaw, 2022) and lifestyle (Budd, 2011).

Politico-economic analyses of aeromobility consider infrastructures of aeromobility as forms of socio-ecological fixes, i.e. capital investments aimed at transforming socio-ecological relations towards some more conducive to accumulation (Ekers and Prudham, 2017; Lin and Harris, 2020). Relatedly, and with a focus on their ability to spatialize cheap natures, a growing stream of cheap food, labour, energy, and raw materials functional to accumulation (Moore, 2015; 2017; Walker and Moore, 2018), they could also be understood as new metabolic rifts or, in Saito's (2023) words, 'metabolic shifts'. Developed by displacing tremendous amounts of raw materials (Graham, 2015), airport construction intertwines with complex multiscale processes of resource appropriation and people displacements, including patterns of labour migration and precarization (Lin and Harris, 2020).

Further, as metabolic shifts, airports and aerotropolis contribute to extending the metabolization of peri-urban socio-natures (Addie, 2014; McNeill, 2014), which are becoming of central concern for UPE (Keil, 2020; Tzaninis *et al.*, 2021; Kaika *et al.*, 2023). Airports are constructed around a specific ecology of territorial relations, which becomes a 'prominent "symbolic marker" discursively legitimizing the processes and practices of neoliberal urbanisation' (Addie, 2014: 89). Airports express a new synthetic form of territorialized urban nature with a complex geo-political role and multiscale territorial entanglements (McNeill, 2014) that facilitate new practices and regimes of post-national citizenship (Addie, 2014) and new post-political governance configurations (Oosterlynck and Swyngedouw, 2010; Griggs, 2023).

– Aeromobilities in Barcelona

Aeromobility constitutes a key feature of the Spanish and Catalan variant of urban entrepreneurialism as emerged in the early 1980s, during the transition from the Fordist–Keynesian spatiality of the Franco period to a financial–real estate spatiality. As part of such transition, Barcelona and Madrid tertiarized their urban centres, reindustrialized their peripheries and opened land markets, seeking to fit them into the international division of labour and consumption (Robira *et al.*, 2000; González *et al.*, 2014) and capture transnational flows of capital. During the first cycle of European integration (1986–92), Madrid and Barcelona consolidated themselves as the main 'growth poles' thanks to the expansion of financial markets linked to housing and infrastructures and commercial and urban developments. In the search for a spatial solution to the subsequent economic crisis, the cities had to find their metabolic specialization; in Barcelona, public intervention sought to promote a transition from an industrial metropolis to a diversified economy and a city that was the recipient of an explosive tourist supply and demand (López Palomeque, 2015; Delgado, 2017; González *et al.*, 2018).

The construction of large mobility infrastructures and the proliferation of events and mega-projects, with their associated metabolic shifts, have been central to this transition in Barcelona's economy. The growing relevance of tourism, consumption

and real estate promotion consolidated the Port of Barcelona, the Zona Franca and the El Prat airport as centres of gravity for logistical and economic activity. Such intensive territorial reorganization based on the relocation of manufacturing activity and the design of environments specialized in services has led to an increase in precarious work associated with tourism and services and an intensification of fossil fuel consumption, as well as a progressive reduction in the food sovereignty of the region, a critical dimension for closing the metabolic cycles of the urban system (IERMB, 2022; Tinc Tant, 2023). In this way, it has built a direct relationship with cheap natures, promoting an ecology of capital that is devastating regarding the ecosystemic needs of its nutrients, be they territorial, energy, human or other species. On the one hand, the fragmentation and capitalism-driven metabolization of the territory owing to the lack of regional urban planning has resulted in the loss of ecological functionality and the abandonment of agricultural activity, with a constant decline in agricultural land (Cattaneo *et al.*, 2018). On the other, new infrastructures have tightened in a new economic model based on global flows of capital and resources. For example, the Port of Barcelona serves as a major entry point for food products such as grains and raw materials for fertilizers and biodiesel. It plays a significant role in importing and processing soy, which is crucial for the Catalan livestock industry. Half of the soy entering the Port of Barcelona originates from Brazil, primarily linked to the Amazon deforestation process (Peña *et al.*, 2021).

Barcelona-El Prat airport is a very relevant case, both analytically and politically, and a clear example of attempts to reorganize the environment, territory, labour and energy as cheap nature. As we will discuss, its history as one of Barcelona's logistical hubs shows how each crisis is followed by an expansion and spatial reorganization, a resignification of the place according to the interests of a new cycle of accumulation and a direct attack on the life of the territory. The significant spatial reorganization carried out in the mid-1990s with the Llobregat Delta Infrastructure Plan, including transport and logistics developments, was part of a plan to make the Barcelona Metropolitan Area, and the city of Barcelona in particular, an aeromobility centre in southern Europe. The operation was framed in terms of adapting to a global economy and responding to the increase in employment resulting from deindustrialization, with Barcelona taking advantage of its position as a logistics centre for goods and tourism. To this end, measures have been taken to remove 'natural barriers' by diverting the River Llobregat, urbanizing the periphery and developing major infrastructures (port and airport) through consortia and mixed capital companies. The same arguments, albeit with languages, imaginaries and approaches situated in the current context, have been repeated to defend the airport's expansion in 2021. Once again, the capitalism-driven metabolization of a new physical landscape was designed to respond to the needs of capital for 'cheap nature'. The problems of employment, the need for economic growth, and the need to meet increased tourist demand were set against the environmental impacts, which the developers promised to resolve with compensation policies or even with the creation of a 'low-emission airport'.

Stay Grounded and the El Prat expansion

The recent story of El Prat's expansion and its halt is a fascinatingly rapid cascade of events involving meetings behind closed doors in government palaces and the convergence of the different voices of the region's historic grassroots resistance. Since the 1980s, movements have emerged in opposition to the famous 'Barcelona model' of global competitiveness fuelled by mega-events and mega-projects (González, 2011; Charnock *et al.*, 2021). Such a model has been understood in the context of a quasi-federal State model (Rodríguez, 2002), where the state decentralization (initiated in the 1980s) privileged regional governments (Comunidades Autónomas) and left Spanish municipalities with little autonomy (Wollmann and Iglesias, 2011). Combined with poor inter-scalar collaboration and unclear distribution of competencies and resources (Pradel, 2016),

this model ‘make[s] it impossible [for municipalities] to govern consistently against the material condensation of capitalist imperatives and the political and economic elites defending the status quo’ (Sarnow and Tiedemann, 2023: 15). As a result, larger local authorities, especially Barcelona, apply strategies of urban entrepreneurship to gain autonomy (Blakeley, 2010). Paradoxically, the defence of subsidiarity, negotiated in a multilevel environment, gradually translated into private dependency and speculative operations with an increasingly negative social and ecological impact.

In critical opposition to the widespread consensus of positive growth and the resignification of Barcelona as a global player, combined with the progressive shift of local government functions to large companies and private developers initiated in the 1990s, local social movements contested the exploitation and commodification of urban natures central to the growing presence of private actors in the management of the city. The work of a small group of activists in the 1980s intersected with the squatter mobilizations of the 1990s and led to a strong civic response to the Forum of Cultures in 2004 (Franco, 2004). A sustained force of urban dissent emerged, focused on denouncing the privatization of the city, unequal access to secure housing and social precarity, and more recently, the reliance on tourism (Milano *et al.*, 2019a; 2019b) and the development of large infrastructures.³ These concerns joined a long tradition of Catalan environmental and climate justice mobilizations as part of the Stay Grounded conference, which took place in Barcelona in 2019. The conference provided an initial space for the unification of struggles of groups interested in contesting the expansion of aeromobilities in Barcelona.⁴ During the conference, the local ZeroPort platform was born, focusing on the degrowth of the port of Barcelona and aviation, which later led the campaign against the expansion.

It is not surprising, then, that in May 2020, the sudden declaration by the director of AENA⁵ that the airport expansion—deemed to turn Barcelona into an international aviation hub—must be approved as a matter of urgency was greeted with a multifaceted mobilization.⁶ The possible expansion and its positioning as a global hub alarmed a public already aware of the consequences of the disproportionate growth of tourism and the event-based economy. The opposition mounted even more when the expansion was confirmed, in a surreal secret meeting (Soler, 2021), on 2 August, after only three technical meetings between AENA and the local government, during which local concerns about the environmental impacts of the project were not addressed (Pareja, 2021). The agreement included an increase in capacity from 55 to 70 million visitors per year, a new direct high-speed railway line to the airports of Reus and Girona, and an estimated 85,000 new direct jobs and 365,000 indirect jobs (Calvet, 2021; Martins, 2021; Soler, 2021). The expansion, as later explained in the documentation provided by AENA and in the following Delta plan, would explicitly require a new stage of metabolization for areas of the Natura 2000 Network, including the natural reserve of La Ricarda (Martins, 2021), which would be sacrificed to produce a new airport. It

3 Notable examples are the mobilizations for the right to decent housing (VdeVivienda platform), the work against the expansion of the C-32 road corridor (Aturem la C32) and for the protection of coastal livelihoods and nature (SOS Costa Brava). Opposition to mass tourism and its detrimental effects on local livelihoods was also key to the emergence of the ‘Assemblea de Barris per un Turisme Sostenible’, which joined the ecologist movement and the Plataforma per la Qualitat del Aire to support the historic opposition to the development of the local port (Plataforma per la Qualitat de l’Aire, 2018).

4 From 12 to 14 July 2019, the conference on degrowth in aviation was held in Barcelona, organized by Stay Grounded and a number of social and environmental organizations and movements in Barcelona. This has been identified by the social movements interviewed as a key element that has favoured their ability to mobilize against the expansion of the airport in 2021 (Malta, 2019).

5 AENA is a Spanish state-owned company that manages airports and heliports of general interest in Spain and is the largest airport manager in the world.

6 The urgency is linked to the calendarization of national investment, with AENA having to plan major investments every five years, but it is regulated by a national framework, the DORA II, which must be approved by the Council of Ministers by September 2021 at the latest, putting pressure on the Catalan and national institutions to come to an immediate agreement.

was only when these details were made public that various local politicians, including the mayor of El Prat, the deputy mayor of Barcelona City Council, and later also the Catalan government, openly opposed the plan (Martins, 2021).

Such, although slow, cross-scalar opposition has to be placed in a context where reaching consensus was very difficult, especially as coalition governments with internal divisions over support for the project were in place at all levels, national, regional and local. The debate was also intertwined with broader conflicts over Catalan independence that have, in recent years, increased tensions between the central and regional governments. In such a context, discourses around economic growth (for example, promoted within the strongest wing of the national coalition directly linked to the AENA's director) collide with renewed climate crisis concerns, which mobilize more progressive voters, generating further instability, particularly at the regional level. Concerns about the ecological endangerment and threats to biodiversity linked to the project were instrumental to it reaching a standstill (Lozano and Iñaki, 2021; Mitru, 2021). On 8 September 2021, under opposition from various sectors of civil society and parts of the local and regional government, the Minister of Transport announced the suspension of the expansion owing to a 'lack of support' from the Government and Barcelona City Council.

Although the expansion had already been temporarily halted, on 16 September, the ZeroPort platform and the Xarxa per la Justícia Climàtica, together with 300 organizations from all over Catalonia, including environmental associations, neighbourhood movements, groups opposing large-scale projects and infrastructures in Catalonia, trade unions and platforms against mass tourism marched in the centre of Barcelona to the slogan of the Stay Grounded platform: 'No to expansions. Fighting for the climate, health and life'. The protest, which marked the temporary halt in the attempts to expand further metabolization of the Delta de Llobregat, is a sign of the widespread opposition to any future project of expansion based on the premise of intensive economic growth. The Guardia Urbana estimated the number of participants to be 10,000, a figure that the organization raised to 90,000.

The protest had a distinctly anti-capitalist and degrowth character, with explicit critiques of the exploitative economic model of perpetual growth to satisfy capital accumulation and a reproachful attitude towards local and national politicians. During the speeches, the philosopher Marina Garcés declared:

They say we are the 'no' camp. And our 'no' is 'enough' because we have the ideas, the will and the bad blood to say enough of taking us for a ride in the name of the common interest, enough of capitalism dressed in green (Blanchar and Mouzo, 2021: npn).

The activists framed the protest with strong criticism of the role of private capital, this time represented by AENA, in corrupting the path of social policy, highlighting, in particular, its 'lack of transparency in decision-making' (interview with activist).

Although the demonstration took place after the cancellation, it had a strong symbolic power as a gathering of the many forces opposed to the expansion, which strongly politicized the debate around mobility, infrastructure and Barcelona's economy. As we will show, traditional environmental justice positions against the destruction of local ecosystems bring together conservationists and de-growthists. The latter point to the urgency of taking seriously what was already argued in the 1970s in the Meadows Report about the unsustainability of an economic model based on perpetual growth on a physically limited planet. Stemming from the risk of overshooting these physical limits expressed half a century ago, degrowth is now defended as an imperative necessity in a situation of overshooting planetary boundaries owing to an acceleration of extraction, consumption and waste generation. As conceived in related academic publications, degrowth is mobilized in this struggle as a constructive critique of the dominance of

economic growth as a social objective. It subsumes a project for a radical redesign of societal metabolisms and flows. The campaign around the airport challenges productivism and consumerism and invites more localized and autonomous economies (D'Alisa *et al.*, 2014; Moore, 2015).⁷

However, as we will see, for these Barcelona movements, degrowth alone does not provide a comprehensive unifying framework to prepare society for the climate emergency. Instead, it is a return to territorial relations and environmental justice that allows all the different actors mobilized around the airport to come together and halt the further metabolization of the Llobregat Delta.

– Stay Grounded, back to the (wet)land: La Ricarda

Barcelona El Prat Airport is located in the lower basin and delta of the river Llobregat, a natural area of 98 square kilometres and one of the region's most important lagoons and wetlands. It contains various riverine forests and is the second largest delta in Catalonia. The Llobregat Delta is also one of Catalonia's most densely populated regions, located in the non-floodable areas bordering fertile lands of irrigated fields, thanks to its aquifers and deposit terrain. Its proximity to Barcelona has led to intense pressure on this territory, with leisure, residential and industrial developments coexisting with agricultural land and natural reserves, which are included in the Special Protection Areas for Birds declared by the European Union (Ministerio de Transportes, Movilidad y Agenda Urbana, 1999).

In the 1990s, a new phase of metabolization of the Delta and its progressive destruction as a hydroscape began through the Delta Plan, which included the expansion of the port and airport, new rail and road links, the diversion of the final stretch of the river and the construction of the wastewater treatment plant (Barcelona Regional, Agència Desenvolupament Urbà, n.d.). Following a clear praxis of cheap nature where the hydroscape of the Delta is conceptualized only as a barrier to the growth of crucial infrastructure, as early as the 1990s the Delta Plan predicted the expansion of the airport 'to provide the necessary services to guarantee its position as a hub airport, a centre for the distribution of aeronautical traffic, aircraft maintenance, services and air cargo' (Ministerio de Transportes, Movilidad y Agenda Urbana, 1999: 47).

La Ricarda stood, and stands, precisely in between these plans of capitalism-driven metabolization of nature as fragments of the Delta hydroscape. Formalized as a Special Protection Area, La Ricarda comprises wetlands and aquatic ecosystems hosting rich biodiversity, which also function as natural barriers against the salination of the area. Constantly threatened by the Delta Plan, La Ricarda has slowly become, in the narratives and imaginaries of those who resist its metabolization, 'territory as it symbolizes collective experiences', in similar terms to the ancient bed of Lake Texcoco in the resistance to the expansion of Mexico City's airport narrated by Schwarz and Streule (2016: 1011). La Ricarda becomes '*territorio*' for a collectivity that mobilizes memories of biodiverse landscapes and the relations they enable, uniting claims to the right to the permanence of local leisure time and of endangered ecosystems against their metabolization, highlighting the more-than-capitalist value of a place for life. La Ricarda is a territory necessary for the endurance of the life of local bird species whose loss is immanent as much as one enabling the mundane recollection of collective leisure time in nature of family weekends in the reserve.

Similarly to what Grove (2009) found in the experience of the Darby watershed, the defence of La Ricarda entails a resignification of territory and local subjectivities. Against the de-territorialized and bi-dimensional representation of the Delta

7 As we will show, it is particularly Moore's world-ecology perspective of capitalism as a socio-ecological regime (Moore, 2011) which resonates with the movements' approach to nature and, more broadly, to UPE's ontological foundations.

reproduced in the expansion plans, activists counter with tales of lived experiences and detailed accounts of the biodiversity of these territories. They construct La Ricarda as a ‘hydro-social territory’, a ‘socio-nature deeply embodying its constituting societies’ contradictions, conflicts and struggles’ to be protected (Swyngedouw and Boelens, 2018: 117). Such narratives force a zoom from the bird’s-eye view of industrial expansion plans—where the reality of a single patch of lagoon is erased to make way for an imagined landscape of expansion and development—a view from the ‘Globe’ to a ‘Terrestrial’ one (Latour, 2018; Perrone, 2023), one that focuses on the reality of a lived ‘*territorio*’ of local livelihoods, with their socio-natural practices and subjectivities (Climate Sessions, 2021). To the idea of nature as cheap raw materials that can be monetarily compensated for and metabolized to produce growth-promoting infrastructure, to the violent act of building a runway, they contrast the specific embodied, emotional geographies of a place for life and environmental subjectivities, of a *territorio* that has to be cared for and with (Quimbayo Ruiz, 2020).

An impressive number of resources and accounts have been produced by local movements to narrate the hydroscape as a place of life with a specific ecological function in the region, particularly vital to halting the salination of the lake waters and the defence of hundreds of rare birds (Salvem el Delta del Llobregat, 2004). These narratives and environmental subjectivities become particularly important in mobilizing those who inhabit the other Barcelona of peri-urban and ex-urban expansions and mega-infrastructures developed to serve the pulsating economic core. Subjectification as a united collectivity in a threatened *territorio* develops around the being at the receiving end of the negative effects of Barcelona’s territorial model and questioning why the right to the permanence of local nature, leisure time and endangered ecosystems should be valued less than the mobility of international tourists.

This idea of metropolitan identity from a perspective that was not being taken into account and that was very necessary, that many municipalities that feel ... they are Barcelona’s backyard, where we put everything that Barcelona does not want ... the waste, the airport ... All of a sudden, you say, ‘the few things that I have, that are of added value that give me quality of life are now going to be taken away because some people have decided that they need this’ (Interview, Barcelona City Council).

This double move of reterritorializing the struggle and vocalizing the uniqueness of local subjectivities and how they are affected brings together ‘environmental groups, neighbourhood associations near the airport, territorial movements in El Prat and in defence of the Llobregat Delta. In other words, there is a clear opposition that has been going on for years because the debate on the expansion of the airport had already taken place and an agreement had been reached to preserve La Ricarda’ (interview, MP).

In this sense, La Ricarda is far from being the representation of pristine nature to be preserved. Constantly interrupted and disrupted by the noise of the planes and the pollution of air and water, like the locals’ lives disrupted by the Barcelona model, rather than a ‘rift’ between the airport and nature, La Ricarda is the perfect symbol of hybridity, is ‘una tierra imperfecta, compleja, agrietada y salvaje, pero nuestro hogar al fin y al cabo’⁸ (Climate Sessions, 2021). As a local activist depicts in a lively document on the struggle,

La Ricarda is not a mere pristine and virgin ecosystem to delimit and protect from the dull action of men. Nor is it a passive, faceless and agencyless space. It is much more than that: it is a specific place, a place with stories narrated and lived by the people, animals and other beings that inhabit and frequent it. It

8 '[A]n imperfect, complex, cracked and wild land, but our home nonetheless'.

matters what kind of relationships are established between them, it matters if they add or subtract (Soler, 2021: npn).

As a contested imaginary and spatially bounded hybridity, La Ricarda matters to activists as a *hydro-social territory* facing another threat of deterritorialization, which has a value that matters to local life and that, although constantly shaped and reshaped in the flows of metabolization, should not be further traded as cheap nature.

– Stay Grounded: fossil fuels and CO₂

Far from resembling a form of NIMBYism, the protection of La Ricarda is part of a broader multi-local focus adopted by the Stay Grounded movement. The movement opposes the deterritorialization of La Ricarda as hydro-social territory while creating discursive shifts that mobilize—along with the life of the wetland—CO₂ and seawater. These elements combine the territorial struggle with attention to the vertical politics of metabolization (Graham, 2015) and the other material manifestations of the transboundary impacts of airport expansion.

In particular, CO₂ is mobilized to broaden the debate around La Ricarda. Saving the remaining wetland from further metabolization would not stop the logic of cheap nature from disintegrating other territories which matter to the web of life in and out of La Ricarda. By engaging with air spaces and atmospheres as interconnected sites of struggle which link and expand the territoriality of La Ricarda, activists centred the climate and energy crises within the opposition to the expansion. They also uncover the underestimation of the socio-environmental costs of aeromobility as a hyper-energy consuming model that the AENA is pursuing within the post-political debates surrounding the decisions to expand the airport.

In analyzing the socio-material flows of fossil flue burning and their historic intertwining with toxic environment, loss of livelihoods, deterritorialization and exploitation, CO₂ and greenhouse gases are mobilized vertically and in connection with the territorial relations. As Graham (2015) suggested for UPE, by adding verticality to their analysis of socio-natures, activists are able to link the fight for hydro-social territories with the politics of emissions and explicit criticism of aeromobilities. The demand to ‘keep CO₂ in the ground’ is brought not just in relation to the climate and energy crisis, in terms of planetary limits, but as linked to the tangible impossibilities of an ‘airport by the sea’ in a climate-changed world, where an apocalypse is already happening (Swyngedouw, 2023):

Then there is the effect of climate change, that this airport is touching the sea, that in a few years ... this airport, which would contribute to increase emissions, may end up being affected by sea level rise due to climate change. ... If this airport is expanded, it is likely that in a few years, not as many years as it may seem, it will either be empty or flooded. It will be a seaplane airport. So, it's not a question of whether it makes sense or not, which it doesn't, but if we get it wrong and do it, it's going to be unviable. We're not going to have that flow of people moving around (Interview, activist).

With a mix of sarcasm and realism, activists make the climate-changed future of the El Llobregat delta more tangible than ever, exposing the irrationality and short-sightedness of the expansion plan. The gleaming promise of a site for economic growth is juxtaposed with the sight of a flooded and abandoned terminal building in a very near future.

Such attention to the potential ways in which contaminated waters, up-grounded CO₂ and runways might materially interact and hybridize also allows traditional discourses of climate activism to connect with local environmental subjectivities, enabling effective alliances between existing groups. In this sense, the activists we

interviewed noted a shift, with environmental activists from El Prat moving from a focus on preserving La Ricarda to considering the broader scalar ‘urban impacts’ associated with the expansion (Interview, activists).

A new vocabulary is also mobilized to form part of the local government opposition. Local activists recount how they influenced local politics towards a more comprehensive opposition to the expansion, which goes beyond post-political environmental protection and includes a critical reflection on the growth imperative:

That is where I think we have had a certain relevance, a certain influence, above all I would say with two parties, perhaps first with the Communes, and then with Esquerra Republicana. There has been a certain movement in their speeches. ... In the beginning ... they talked exclusively about ... ‘the protection of biodiversity and La Ricarda’. ... So, it is a job that we have constantly tried to do so that this is not the only thing that is talked about, although Ricarda is obviously very important. ... [O]ur influence, [facilitated] that the discourse was tougher and that there was clear talk of emissions, the city model or the economy, etc. (Interview, activist).

– Stay Grounded: on dispossession, displacements and degrowth

The mobilization of the land and the territory enables a nuanced understanding of the implications and elements involved in the airport expansion as a metabolic process. It reveals the process of deterritorialization, dispossession and displacement the expansion entails across species living in La Ricarda, pollutants and noise, and residents, extending the effects of the Barcelona model of turistification further into suburbanity. As one interviewee pointed out:

There are environmental arguments to oppose (the expansion), but others have to do with the city model. The airport expansion leads to more tourism, which means higher rents, expulsion of residents from the city ... even having a city turned into a theme park (Interview, activist).

Deterritorialization, dispossession and displacement are linked to the economic model of aeromobilities, with the promise of millions of newcomers landing in an area perceived as incapable of supporting them without displacing residents, birds and other species. Activists highlight the speculative operations that ground this model and see cheap nature as an opportunity to enrich private interests, such as AENA’s private investors, developers, banks and agents in the tourism sector.

The recognition of the dispossession and displacement necessary to maintain the Barcelona model and its ecology of cheap nature goes hand in hand with the contestation of the ‘growth or death’ model used to justify the expansion. Degrowth arguments are intertwined with an in-depth analysis of the economic relations that determine the present and future of the Barcelona region. Against a post-political logic of accumulation and greenwashing that, very similarly to what Oosterlynck and Swyngedouw (2010) observed in the contestation of Brussels’ airport expansion, presents the expansion as a question of ‘economy or life’, ‘justified by other arguments of common interest, such as tourism, attracting talent, job creation or GDP growth’ (interview, activist), activists recall the successes of the degrowth movement in challenging a model based on perpetual growth and tourism expansion, especially around the city centre (Milano *et al.*, 2019a). These include the implementation—in response to long mobilizations—of a Special Urban Plan for Tourist Accommodation, which aims to reduce the amount of property devoted to tourist accommodation in the most saturated tourist areas of the city, or the new mobility plan, which restricts car access in several areas of the city and promotes active travel and the use of public transport.

The multifaceted voices constituting the Stay Grounded movement (Martín and Bonet-Martí, 2024) come into contact with a narrative of degrowth that is key to Barcelona's struggle against touristification. This adds to the focus on hydro-social territory and vertical pollutants, a political-economic analysis of capital accumulation and metabolic processes and how they perpetuate inequality and environmental degradation. This opening radicalizes the position of the traditional environmental movement and complements the struggle to protect existing territorial relations with the proposal of a radical alternative based on alternative economies and livelihoods. In this respect, it is interesting to follow the debate on possible alternatives to expansions and whether they should include other airports or a reduction in travel. Degrowth proposes finding leisure opportunities in proximity, localized economies, the development of equitable transport networks and distributed opportunities (Cattaneo *et al.*, 2022).

As one of the local politicians we interviewed highlighted:

I believe that the philosophy that surrounds the concept of degrowth is what has to be able to motivate a different management of everything. Because we are going into a context of scarcity where vulnerability and fragility cannot only be subject to an issue linked to economic resources ... Our obligation, from the public sphere, is to guarantee the subsistence of everyone based, surely, on new social rules that we have to agree on and that we have to be able to develop. I believe this is the most political approach (Interview, Barcelona City Council).

After long grassroots work in mobilizing degrowth concepts, these are entering the realm of official policy to inspire new approaches to ensuring ecological livelihoods. However, it is only thanks to these materialized and territorialized struggles for the expropriation and displacement of territory, pollutants and livelihoods, and thanks to the link with previous struggles against touristification, that degrowth is being taken up as a vision for alternative futures for El Prat. And it is only with caution that degrowth is named.

Far from romanticizing it, our interviewees are very aware of how the concept inhibits exchange with most local trade unions and workers. They feel the pressure to guarantee employment opportunities in a context of high unemployment and are uncomfortable with abandoning AENA's promise. In this interaction, degrowth can inspire but also hinder, especially if disconnected from the lived experiences and subjectivities of those whose territory and livelihoods are threatened. It is only through the slow work of highlighting how the growth model is the one that threatens livelihoods rather than providing new economic opportunities that such alliances are forged.

Overall, it is only by building transboundary alliances between the territorial struggles and subjectivities at the periphery of Barcelona and the concerns and victories of those at the core that the movement sticks together and can influence politics. As one of the activists recalls:

We have also seen that it is basic ... to try to unite the social struggle with the environmental or climate struggle because otherwise, we are lost. As it goes by the side of trying to confront one thing with the other, as has been tried with the airport at the level of jobs ... The airport is, I think, an iconic fight ... because it symbolises ... everything that needs to be changed. Because it includes not only ecological or climatic issues, but also the ... model of the city concerning tourism, rentals, health and other (Interview, activist).

The coming together of myriad struggles around and about the airport also allows us to link the various aspects of the current crisis and develop a multi-faceted and multi-local analysis and alternative to the Capitalocene.

Epilogue

So far, the expansion of El Prat has been halted. Still, other similar infrastructure projects are constantly being proposed in Catalonia and elsewhere as part of the repertoire of aeromobility as a formation with deep metabolic links to global socio-ecological fixes, extractivism, dispossession and exploitation. The work of Zero Port and other activist platforms continues to monitor the situation and work around air pollution issues.

The reasons for withdrawing the proposal may lie in its ill-timed and hasty nature or pre-existing conflicts between different levels of government. However, the Stay Grounded campaign and all the actors involved certainly enabled a discourse shift between local movements and local political actors that strengthened the opposition by linking nature conservation with climate change motifs and political-economic analysis of their reproduction. This shift also allowed for the creation of a local–global alliance, with EU regulations being used to defend La Ricarda.

Conclusion

This article has sought to expand the debate on aeromobilities by bringing in a UPE perspective to inform a careful engagement with contemporary social movements as sites of multivocal and multiscale struggle which can expand our understanding of mobility futures. In particular, we engaged with the powerful example of the different sites of resistance to the expansion of El Prat airport in Barcelona. Airports and aeromobilities are critical sites for UPE enquiry, as the coming together of novel peri-urban natures and exceptional materialization of current capitalism-driven forms of metabolism and associated dispossession and environmental degradation.

The analysis of the multiple voices that constitute the resistance to the El Prat expansion revealed how struggles over possible socio-natures enable certain forms of urban metabolisms while foreclosing others. By looking at the case of the Stay Grounded resistance as a ‘site multiple’ (Connolly, 2019) at the edges and boundaries of different possibilities, discourses, local concerns and global flows of capital, we highlighted the complex way in which aeromobilities unfold and the multiple ways in which they can be resisted. By highlighting the crucial role of territorial relations and the contestation of the metabolization of ‘cheap nature’ we emphasized the importance of territory as a ‘dynamic category referring to multiple subjects of the urban condition, and simultaneously framing the claims and struggles that emerge in and around it’ (Schwarz and Streule, 2016: 1013).

Specifically, the case study provided a critical example of how environmental struggles can weave together, without solving the tensions between them, territorial practices that legitimize and affirm first nature’s right to existence and contestation of the capitalism-driven metabolization of such nature based on a ‘master’ narrative around degrowth futures. Such a dynamic focus can help social movements construct broader support based on a variegated understanding of the impacts of infrastructure projects, recognizing the validity of multiple forms of knowledge and the interdependence of human and non-human worlds. The struggle to protect the natural reserve of La Ricarda and the delicate ecosystem of the Llobregat River Delta provided an opportunity to ‘ground’ vertical claims around CO₂ emissions reductions and air pollution. At the same time, the profound critique of the economic model based on cheap nature at the basis of the airport expansion allowed the nature conservation motifs to gain broader relevance to struggles over livelihoods and subsistence. The deterritorialization of nature, pollutants and livelihoods emerged as a coherent pattern to be resisted. The attention to environmental subjectivities joined the focus on the political-economic analysis by a degrowth resistance that claimed for urban natures that resist capitalism-driven metabolization and create novel imaginaries around their persistence. In such a sense, by moving beyond NIMBYism and combining dedicated attention to the embodied and situated politics of environmental subjectivities linked to La Ricarda with a strong repoliticization agenda, these movements

can avoid the shortcomings narrated in relation to the resistance against the Brussels airport expansion where ‘consensus-mediated search for a “balanced” solution to the problem [meant that opposition movements were only able to] defend a particular demand for local quality of life, and [were] precluded [from] their subjectification into new political subjects’ (Oosterlynck and Swyngedouw, 2010: 1588).

Enriching available studies of resistance to aeromobilities, the diverse voices of the Stay Grounded movement showed the importance of embracing UPE’s multiple analytical lenses and acknowledging the more-than-local and polymorphic discourses around urban-nature politics that often constitute resistance to capitalist urban natures. In our case, the struggle around La Ricarda as a hydro-social territory, the mobilization of CO₂ and seawaters, the recognition of processes of displacement and the radical potential of degrowth allowed for an in-depth critique of the political economy of aeromobility and associated metabolisms, and a strong proposal for their halting. The critical engagement with degrowth constituted a powerful move to radicalize ecological imaginaries and avoid the trap of post-political consensual governance around ‘the economy or life’ (Oosterlynck and Swyngedouw, 2010). However, degrowth only functioned when strongly engaged with territorial relations and environmental subjectivities, and an analysis of their metabolic interrelations. This temporary and dynamic alliance allowed Stay Grounded to materialize abstract claims about localism and circularity, foregrounding them in everyday struggles and taking them beyond abstract slogans or the risk of NIMBYism.

These territorial practices and discursive alliances also made it possible to build a strong opposition to an exploitative praxis of cheap nature, recognizing and revaluing nature, water, air and territory as places for life in its variegated forms. At the same time, the narrative of degrowth allowed activists to wave together a meaningful alternative critique to a praxis of cheap labour, energy and raw materials grounding aeromobilities and touristification. By re-valuing local territorial relations and subjectivities, the possibility of localized economies and lives, they brought together the different aspects of a powerful critique towards capital accumulation and strongly emphasized the interconnectedness of the web of life (Moore, 2015).

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