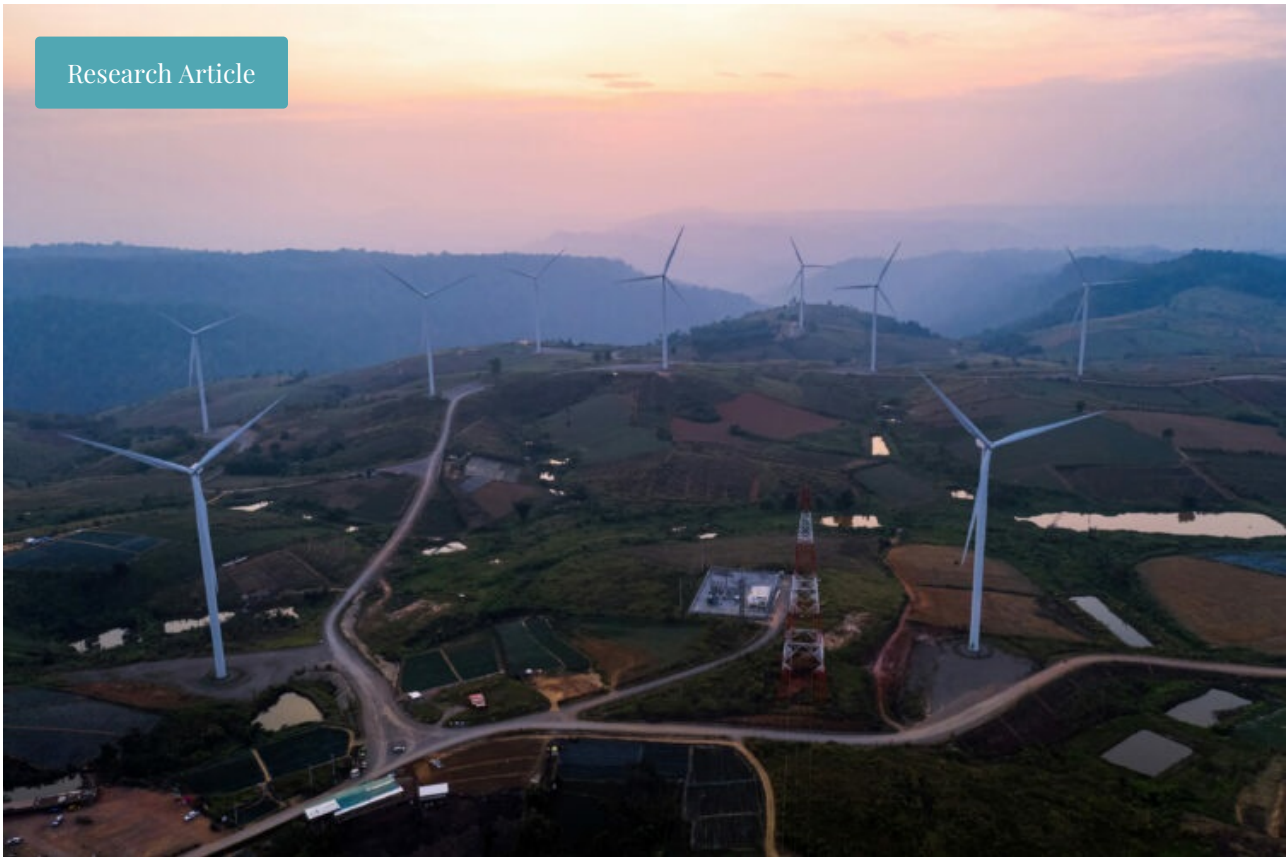


Research Article



Climate justice in the context of planetary urbanization

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Amidst the escalating emergency of climate change (CC), addressing issues of climate justice is almost an imperative. Any valid response to its totality is impossible without fair and inclusionary policies that enhance the political feasibility of a zero-carbon transition (Patterson et al., 2018). However, it is inconsistent to seek justice within the same geopolitical schemes that created the conditions of the crisis in the first place. Embedded in them are structural injustices that are reproduced again in the battle against CC, following the schemes North/South, urban/rural, center/periphery.

What follows is an effort to relocate and respond to claims for climate justice on a planetary ground, beyond these divisions, transcending the scales of urban or the state, mobilizing the concept of planetary urbanization. It is an effort to connect critical urban theory with CC policymaking. Planetary urbanization theory was introduced by Brenner & Schmid (2015), based on Lefebvre's provocation that "our society has been completely urbanized" (2003), as "a call to supersede the inside/outside dualism that has long been naturalized in urban studies" (Brenner, 2018). Planetary urbanization theory brings to the foreground, instead of the spatial forms, the processes that connect places of *concentrated urbanization*—dense agglomerations, global cities and places of *extended urbanization*—the operational or infrastructural space of logistics, extraction sites and loose peri-urban areas; all these places that support the dense agglomeration urbanization.

I begin with some reflections on the planetary spatiality of CC, expanding the notion of planetary, as used in the original concept, with a more pluralistic reading informed by cultural studies and distinguishing it from the *global* of geopolitical international relationships. I proceed by pointing out the main issues of failure of the current CC governance approaches regarding its planetary nature; the inadequacy of territorially bounded policymaking, the irrelevance of the idea of autonomy and the primary financial framing of CC. I then propose the enhanced planetary urbanization concept as a more inclusive and fair viewpoint from which to imagine and propose possible solutions. With a focus on the processes and with an emphasis on the invisible terrains of extended urbanization, it is possible to imagine their right of participation in the urban processes that are already part of as a right of decision-making as well. The combination of environmental rights and the right to the city, (i.e., the right to participate in the production of space) could be transformed to an extended right to the urban.

The planetary spatiality of climate change

While it sounds like a truism to say that climate change is a planetary challenge, its planetary spatiality is not self-evident. It is important to distinguish between *planetary*, as used here, and *global*, as two different theoretical and political standpoints.

Planetary emerges as a term in the 1990s as an alternative to the abstraction and homogenizing culture of globalization. For Axelos, Lefebvre's friend among other:

Globalisation names a process which universalises technology, economy, politics, and even civilisation and culture. But it remains somewhat empty. The world, as an *opening* is missing. ... The thing that is called *globalization* is a kind of *mondialisation* without the

world. (Axelos, in Elden, 2008, 82)

*Mondialization*¹, is in a way Lefebvre's version of planetarity. It is the ongoing conceptual exercise that precedes globalization, the representation of the world as a totality, an abstraction on which the globalized world is built. The Earth is transformed through technical interventions into the world (the planetary); through technology "humans are in the process of "becoming worldwide and planetary [*devenumondial et planétaire*]," and then may "finally be able to enjoy or command [*jouir*] the Earth." (Lefebvre, in Elden, 85)

My view of planetarity diverges from this privileged position of humans towards Earth; it is synthesized as a field of interconnected alterity and differences. Originating in the field of anthropological and cultural studies (Spivak, 2003), the notion of planetarity changes not only the discourse but also its field merging it with environmental studies. Translation becomes a critical issue for advancing this notion of planetarity, gaining a central point for the comparative methodologies deployed in urbanism, which put forth a *worlding* of the subaltern. In recognition of a field of alterity, a field of non-translatable, there where no translation is sufficient, comparative approaches promote new theory-making from the lens of the so-called periphery. They develop new concepts and understandings that do not deny global explanations, but enhance them with historical difference and geo-ecological specificity (Robinson, 2015).

Through this planetary conceptual lens, the more material aspects of CC's planetarity can be approached. Beginning with the distribution of effects, there's no CC immunized area, however unequal the disaster will be for some habitats, species and populations. Increasing disaster incidents for the most vulnerable habitats relocate the adaptation challenge to the least affected as an influx of expelled humans, animals, microbes and displaced uses, such as tourism and agricultural industries, with a parallel acute need to redesign infrastructure and global logistics networks accordingly (Ghadge et al, 2019). The shared, yet quite variegated experience of the catastrophe sets the background for an emerging collective human conscience, a shared sense of the common struggle as humanity, which is also a prerequisite for a planetary politics of CC (Chakrabarty, 2009).

Climate change then is planetary in that effective technological solutions that are currently explored are planetary in scale and require architectures and design processes that have to respond to a hyper-macro spatiotemporal horizon (Bratton, 2019). Especially the most controversial geo-engineering projects, whose unknown side-effects cannot be predictably geographically restrained (Horton, 2011; Buck, 2019) require new governance models. The ways in which infrastructural developments pose a challenge for a more fluid reorganization of the planetary political space is even more evident in the transition to 100 percent renewable energy (RE). The transition to the intermittent, omnipresent RE sources implies that every place could be potentially energy producing and to do so it should have as many connections as possible, organized in a decentralized way, exchanging energy according to availability of supply and demand rather than geopolitics (Child et al., 2020). This mobilizes the planetary space in a quite different way than geographically constrained resources, such as gas and oil, which defined geopolitics until now. The design of these networks of infrastructures, the construction of new energy

sharing pathways, requires, rather than a construction of boundaries and exclusionary protocols, new collaboration protocols, making the idea of autonomous, within borders solutions irrelevant.

Finally, CC's planetarity unfolds as a radical transformation of our world's scientific and philosophic representations. CC is deployed in a critical zone; a terrain full of signs, sensors and observatories, a living atmosphere that cannot be reduced to the abstraction of geometric space (Latour, 2013). The sophisticated observation, mapping and data visualization techniques change radically the representations of the world and different conceptual abstractions of it imply different political organization. Moving and immovable subjects and objects can be increasingly traced, controlled and governed through mechanisms other than the prevalent governmental-statistic enclosures. And, while the AI-sensing and observation capacity has increased, there is a limit to the possibility of visualization, set not by technical efficiency that is constantly evolving, but by the acceptance of uncertainty principle and of our perception's limit to meaningfully connect all levels of data.

After all, it comes out that the ground on which CC is to be fought is quite different from what is described through the existing legal schemes and world divisions; the mitigation battle requires new conceptualization and reorganization of world's resources, territories and more-than-human populations.

Scales of governance of climate change

In spite of the planetary spatiality of the CC, its politics are still organized through nation-state hierarchies and their bigger or smaller scales. After decades of failed efforts for effective international collaboration in CC mitigation, it was not until the 2015 Paris Climate Agreement that non-state actors were involved in official United Nations (UN) negotiations, with mayors from over 100 cities participating in the parallel C40 Summit, setting their own pledges and goals (Held, 2017). The Paris Agreement sets a hallmark for a more multi-scale, global (though not yet planetary as delineated above) form of climate governance. The concession of the exclusive jurisdiction of national and international bodies to sub-national actors, transnational corporations and civil society was a development that was both spurred and gave surge to an increasing agency of these latter actors in effective CC mitigation battle.

After the Paris Agreement and with the adoption, in the same period, of the UN's Sustainable Development Goals and the New Urban Agenda, *multilevel governance* gained ground as a term, describing better what in practice global governance stands for (Aksu, 2016). This multilevel emphasis is consistent with the growing realization that top-down political leadership is inadequate of effective action and horizontal collaboration and self-organization at smaller scales delivers better results, even if it does so in perplexed and improvising ways that could be acknowledged as a *messy governmentality* (Castán Broto, 2019). It is also consistent with an increasing emphasis on climate governance at the urban scale which, both in the literature as in praxis. What is new is the increasing agency, effectiveness and consolidation of the institutional role of urban actors, municipalities

and transnational municipal networks such as C40, ICLEI or corporate initiatives like Rockefeller's *100 Resilient cities*.

Urban governance, as a sub-case of multi-level governance, appears to mean both the collective agency of the network that sets common milestones between their members and the enhancement of each city member's agency in its respective jurisdiction (Gordon, 2020). Described by Goh (2021) as emerging 'urban network formations', these networks reinforce rather than challenge pre-existing power relationships, with flows of best practices, expertise and funding by power centers of the North circulating across the world, through the implementation of climate-proofing infrastructures at a local level.

Whether, global, multi-level, urban or messy, the climatic agency remains primarily inscribed in the territorial borders of each governmental entity and, even if other actors emerge, the structure of the legal jurisdiction of the whole system is still quite state-centric (Taylor et al., 2016). Regarding urban governance, the majority of policy interventions and the spirit shared at good policy reports, aim towards the achievement of green certifications of urban as a spatial form, rather than as a multi-scalar, variegated planetary process. Both in the urban climate governance literature as in the actual urban policy approaches, there is a persistent "methodological cityism" (Angelo & Washmuth, 2015), a conception of urban in the form of compact cities or suburban sprawl, or in other words a "metropolitanization of climate change" (Hodson, 2010). In it is inscribed a systemic inequality with the omission of their relationship to their metabolic counterparts, the landscapes of extended urbanization that bear the burden of concentrated urbanization, and which are operationalized again in the battle for CC mitigation, either as extraction sites for RE component materials or for the allocation of vast, land-consuming RE projects. Despite some earlier efforts (Swyngedouw & Heynen, 2003) there is failure to connect critical theory of urbanization to climate change in a conversation that goes both ways—critical urban theory being mostly indifferent to the technicalities of CC, and CC policy research being ignorant to critical theory (Goh, 2020).

Moreover, at all scales the current schemes of climate governance are dominated primarily by a spirit of "liberal environmentalism" and less by a sense of planetary emergency (Gordon, 2020). The European Union (EU)'s Green Deal is explicitly promoted as a "growth strategy (...) where economic growth is decoupled from resource use" (EU, 2021). This focus on financial growth has seriously deviated global efforts for CC mitigation, as exemplified in the various failures of the carbon trade-offs mechanism (Gilbertson and Reyes, 2009), another state-centric solution for a planetary scale problem, as if CO₂ can be contained between borders. Essential to the neoliberalization of nature is the development, at the international level, of common indexes, carbon performance and environmental indicators and other green certification prototypes, which constitute a "lingua franca" of international collaboration, based, though, on a translation of any type of ecological performance to the language and metrics of economic growth. Such translation systems reproduce systemic inequality patterns between mainly the Global South and North, rendering invisible whole geographies of non-profit relationships to space and Indigenous socio-ecosystems (Peluso, 1995), thus paving the way to their extinction.

Planetary urbanization and urban rights

Places that are suffering the most severe consequences of both CC and the efforts to combat it remain the ones least participating in the politics and governance of this planetary scale enterprise. It is of no surprise that the majority of conflicts around renewable energy projects concentrate on landscapes of extended urbanization. Small remote islands, mountain tops, environmentally protected areas; peripheral areas of small-scale agricultural production are sacrificed at a cost that reaches beyond the local ecosystems. (Temper et al, 2020; Kati et al, 2021; Vlami et al, 2020). To bring in the concept of planetary urbanization is quite poignant, connecting and putting in the foreground together with their metabolic counterparts, all these places that support the urbanization of life across the planet without being considered urban. For these habitats, participation in urbanization processes should also come with participation in decision-making processes.

Discussions about energy futures, assemblies, protests and other gatherings are currently multiplying in places like mountain crossroads or small villages. For Lefebvre, centrality is not about a geographic location, nor about the spatial form of an urban core. Instead, it is mainly about the access to what constitutes the social construction of urban; access to political, economic and cultural life and capital. The landscapes of extended urbanization could be the new loci of centrality that only have to be reimagined and politically recognized as such. Kipfer (2018) in a study of Indigenous struggles against pipelines in Canada, also recognizes centrality as the product of mobilizations happening in places beyond urban as usual. However, he sees in the denial of Indigenous groups to be urbanized, the limits of planetary urbanization theory. If there is a right to the urban; a right to define the terms of the urbanization processes, there should also be a right of refusal and denial of it as a defense of alterity.

Planetary urbanization theory has been criticized for being totalizing, excluding other causal explanations in the production of urban space, such as patriarchy, ethnicity, religion and other socio-cultural differences as well as geo-historical specificities (Oswin, 2018). It is also criticized as leaving no space for a constitutive other of urbanization putting every planetary phenomenon under an urban lens (Jazeel, 2017; Ruddick *et al.*, 2017) or erasing the category of rural (Shaw, 2015; Roy, 2016). Moreover, the planetary in planetary urbanization, as proposed by its proponents, bears more to globality rather than planetarity conceived as a place of acceptance of alterity and unknownability. Following Goonewaderva's (2018) but also Brenner's (2018) call to enrich and expand the concept, I improvise with an expanded reading of planetary in it. Accepting the validity of the critiques and that urban phenomena are complex, multi-causal and locally variegated, and "paying extra attention to minimal differences" (Buckley & Strauss, 2016:627), I find its usefulness in that it allows to think of the political possibility of rural as urban. This translation intends not to subsume or ignore rurality and all the relationships developed through it but to defend and demand justice as in the urban context. It allows one to allocate urban rights to what is considered non-urban, to remove the non-urban label as a synonym of a site of exploitation in support of urban-metropolitan lifestyles, to attribute

them the missing politically instituted centrality. Beyond the strictly defined state-sanctioned version of rights that are attributed top down, rights are viewed in a broader definition, as gained and defended through collective struggles that shape the extended urban planetary space (Purcell, 2003). The right to the urban, as an expansion of the right to the city, a right of the inhabitants, of all the interdependent beings of a locality, to participate in the production of their space as it is transformed through urbanization processes that connect them with places of concentrated urbanization.

Aspects of climate justice beyond the state's jurisdiction

The rights that could be claimed under the context of climate justice could be organized in three directions, both in scope and temporality: procedural to the present, implying rights of participation in the design and decision-making of climate policies and infrastructures; distributive and reparative to the past, allocating resources to relieve the damages already happened and to shield against vulnerabilities; and future-oriented guaranteeing that “the right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations” (UN Rio Declaration, 1992, principle 3), (Schlosberg and Collins, 2014). It is interesting to notice that while in urban policies distributive justice—how to protect all in a just way from a potential disaster—is the primary concern, there is a main difference between geographical contexts. Cities of the Global South seek more dimensions of justice compared to cities of the Global North that are focused mainly on the distributive (Bulkeley et al., 2013). This difference highlights the need to prioritize procedural justice, in an attempt to overcome the structural injustices and rationalities that are consolidated in given spatial hierarchies and reproduce the causes of environmental crisis.

In a purely technocratic CC mitigation approach, justice and the time-consuming participatory democratic procedures it entails, is considered a waste of time in the face of an emergency. Besides, participation does not always equal a fair process entailing dangers of limited representation of certain social groups (Young and Allen, 2011). However, upholding the climate justice demand in all its three dimensions, addressing the lack of consent and the needs of local actors who are variously affected by the allocation of RE projects across rural landscapes, in the long run, saves time and money from time-consuming legal debates that further make people disengaged with the common goal of CC mitigation. A review of 673 conflict cases from the Environmental Justice Atlas (2020), relating for the first time the resistance of local movements against fossil fuels projects with the conflicts raised against low-carbon energy projects, concludes that in both circumstances, a quarter of projects were stopped, delayed or suspended, setting an alarm “that the decarbonization of the economy is by no means inherently less environmentally damaging and more socially inclusive than a fossil-fueled status quo.” (Temper *et al.*, 2020:3). Given that RE infrastructures are very land extensive² the vast amounts of land required for the installation are typically found in remote, peripheral places, where land is free or almost free. Land-grabbings of natural/agricultural land for the deployment of renewable projects lead to the dispossession and further impoverization of rural populations, thus consolidating injustices (Yennetiet *et al.*, 2016).

However, this sacrifice does not even contribute to the common goal. The conversions of natural lands to RE production may result in a reduction of up to 8 percent of earth's capacity to capture carbon (Kiesecker *et al.*, 2019).

On the basis of this injustice is the translation of natural land's value to real estate value. What if there was a shift to a functional, use value; a value that derives from the processes and relationship in which places participate and which they enable. Energy or food producing landscapes are very central to the urban function. A decision of building extensive sea wall infrastructures to protect high-value urban land could be weighed against protections for places of extended urbanization, counting which function is more central to the urban in a long-term horizon. Or, given that RE production can happen almost everywhere, the decision between massive RE installation in non-degraded land or between installation in denser urban areas shouldn't come so easily for the first. For such comparisons to be possible, a transcendence of jurisdictional urban borders and a non-financial understanding of ecosystems functions is necessary. Urban adaptation and mitigation plans that wish to address climate justice should thus be reexamined in an extended urban ground.

It is what in other words, from the same place, but from a mirror perspective Borras & Franco (2018:11) call an agrarian climate justice, combining agrarian and climate justice and proposing five ways to pursue "redistribution, recognition, restitution, regeneration and resistance." Resistance is quite critical for the cultivation of the imaginary of new territorial orders and new governance spatialities in the CC reality. What is underway through the planetary deployment of energy infrastructure projects and the resistance movements towards them is the political activation of the hinterland, the emergence of new spaces of political institutions, new political subjectivities, the formation of communities brought together by their common struggles. From the 3,200 documented cases of the Environmental Justice Atlas (2020), the majority of conflicts happen in Indigenous lands, and the resistances formed by this shape demands for different political relationship to land. A political infrastructure is gradually built-up, expanding bottom-up and horizontally, in rhizomatic ways, without gravity center and through networks of places and movements with similar agendas against massive infrastructural projects. The alternative institutions are mobilized through online platforms, and global networks, their places of symbolic political coming together are crossroads and mountain pathways. Through these encounters, more fluid forms of citizenship emerge, that go beyond the rights allocated by state authorities. As similarly to Purcell's (2003) global city citizenship, an extended urban citizenship could be based on the right to collectively participate in deciding and shaping the space of extended urbanization.

Conclusion

Addressing issues of climate justice, especially in its less undertaken procedural dimension, is a prerequisite for a timely combat of CC, which requires a critical rethinking of the sociopolitical schemes through which solutions are deployed and which enabled conditions of ecological degradation at first place. At first, it is important to

recognize CC's planetary spatiality, both in its conceptual and material aspects, distinguishing it from the global. The viewpoint of a planetary terrain, one that is embracing alterity, difference and unknown ability, enables us to pay attention to spatial relationships that remain invisible in their translation to economic performance indicators or fragmented in between existing jurisdictional divisions. Answering to the inadequacies of territorially bounded approaches of global, multilevel or urban governance to govern the diversity of interactions and connections that shape CC's planetary terrain, I introduce an improvisation on the concept of planetary urbanization, in an expanded reading of planetary in the original concept. Focusing on urbanization processes and acknowledging that they unfold across multiple networks and places it brings in the foreground spaces of the extended urbanization that suffer from structural injustices, embedded also in the CC mitigation schemes. Under this lens, the renewed emphasis on urban climate governance, rather than unsuccessfully limiting itself to the ecological upgrading of spatially enclosed forms, to be fair it should address all the spectrum of urbanization processes. Paying justice to these operational landscapes of urbanization, places of transformed rurality implies the recognition of the right of participation to the processes that shape extended urbanization space. Since CC mitigation strategies unequally affect these places it is also the right to participate in the shaping of planetary scale political restructuring under the spectrum of CC. Finally these rights are gained through encounters and struggles, they are an in praxis manifestation of an emerging extended urban citizenship.

¹ *Mondialization* is also used by Nancy, but is in a way closer to what here is referred as planetarity than to mondialization according to Lefebvre. ...“mondialisation preserves something untranslatable while globalization has already translated everything” (2007a, page 28, original emphasis). (Nancy in Madden, D.J. (2012) ‘City Becoming World: Nancy, Lefebvre, and the Global—Urban Imagination’, *Environment and Planning D: Society and Space*, 30(5), pp. 772–787. pp:775)

² The land required is multiple times up for the same amount of energy related to carbon but the exact factor varies strongly from ten to hundred times depending on how the land that is required is calculated, or if the land is used for agriculture as well, so a more precise calculation could be only case specific.

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