ORIGINAL ARTICLE

Tracking local and regional climate im/mobilities through a multidimensional lens

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Abstract

Recent scholarship on climate mobilities and mobility justice calls for dynamic, relational, and agent-centered approaches to comprehend the complex decision-making that compels certain people to leave the places they call home, encourages or forces others to stay put, and acknowledges those who engage with mobile populations in host countries. Yet, these efforts fall short of advancing a coherent conceptual framework to make sense of the multifaceted, subjective, and affective aspects of climate-related movements and deliver more inclusive research agendas in the context of regional environmental change. This article aims to address this gap by introducing a multidimensional visual heuristic that we call the im/mobility cube. This framework makes it possible to systematically examine relational and intersectional struggles of mobility and (dis)placement, along three interconnected axes: the lived experiences of moving, remaining in place, and receiving mobile subjects upon arrival; the role of climate change as part of a complex web of drivers; and the consequences that mobility and immobility have on people's lives, livelihoods, and well-being, from desirable benefits to intolerable losses. This heuristic foregrounds the embodied inequalities and often intimate kinopolitical struggles that im/mobile populations face, at the juncture of their aspirations and capabilities, complex subject-making processes, and ever shifting relations of power. As such, our conceptual lens sharpens the focus on the simultaneity and linkages of climate-driven im/mobility encounters within regional contexts and their diverse and courageous protagonists.

Keywords Climate-related migration · Climate mobility justice · Mobile and immobile subjects · Heuristic

Introduction

Emerging scholarship on climate mobilities lays out a broad mobility agenda that goes beyond the narrow focus on climate-induced migration or the climate-migration nexus within studies of regional environmental change

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and their frequently deceptive narratives and myths around mass migration and the unwanted bodies of so-called climate refugees. A climate mobility lens acknowledges the diversity and complexity of both mobility and immobility in the context of climate change (Boas et al. 2019) and brings much needed nuance to overcome the flattening of archetypal regional "hotspots" and climate-related migration and displacement, such as small island states and atolls in the South Pacific and the Caribbean, flood-prone river basins in South Asia, and drought-afflicted areas in sub-Saharan Africa (Clement et al. 2021; Cissé et al. 2022). This more critical and re-politicized research agenda benefits from advances in mobility justice driven by a dynamic mobility paradigm that sees movement as the new normal rather than an inferior or pathological anomaly. While movement, not stasis, is now understood as an essential feature of all (social) life (Nail 2015; Barcus et al. 2017), widespread immobility in the face of environmental change remains inadequately addressed (Zickgraf 2021). This new mobility paradigm, eloquently explained

in Mimi Sheller's (2018) book on im/mobility justice, builds upon notions of space and place advanced by the late geographer Doreen Massey. Seeing space shaped by interactions and interrelations, from the tiniest node to the global, Massey (2005) offered a useful foundation for a relational mobility lens. This angle foregrounds movement and space as co-constitutive of spatial, social, and ultimately political relations.

Recent calls to facilitate a dynamic, relational, transdisciplinary, and agent-centered research agenda on climate mobility studies in local and regional contexts (e.g., Carling and Collins 2018; Boas et al. 2019) invite an informed debate about the nexus of climate change and human movement. This entails questioning the multitude of interrelated crises that trigger and control movements and within them the role of climatic hazards and their interaction with economic, political, social, cultural, and other environmental migration drivers. Closer attention to "push–pull plus" driver complexes (Van Hear et al. 2018) provides insight into the ways in which proximate drivers such as incremental sea-level rise intersect with precipitating drivers such as increasingly furious cyclones as well as a multitude of other structural forces, including slow emergencies and slow violences (Nixon 2011; Anderson et al. 2020). This opening up and the pluralising of mobility narratives also provide an opportunity to advance understandings of the fear of the migrant "other," differential insights based on intersecting dimensions of inequality, and the potential simultaneity of loss, harm, and gain. Explicit efforts to "humanize" migration and mobilities, influenced by feminist critiques of rational agents and the affective turn in the social sciences, bring to the fore the aspirations and desires of im/mobile subjects, their lived experiences, and the often concealed embodied struggles with uneven power relations and subject-making processes that discriminate, discipline, and prevent people from fulfilling their potentials (Carling and Collins 2018).

Yet, such progressive developments nonetheless fall short of advancing a coherent, conceptual approach through which to deliver new research agendas and make sense of the multifaceted entanglements of mobility. Drawing upon canonical scholarly achievements on power, politics, and agency in mobility justice ("Power and politics in mobility justice" and "The "climate migrant" as a speaking subject with agency" sections), we introduce a conceptual device—the im/mobility cube—to make visible the multidimensional, dynamic, and relational experiences, drivers, and consequences of moving, staying, and receiving people elsewhere, centered on the perspectives of those affected ("The relational and dynamic im/mobility cube" section). We bring the cube to life via exemplary case studies in regional settings ("Lived mobility experiences and stories of fluidity" section) and then conclude with possibilities for future research.

Power and politics in mobility justice

Mobilities are fluid and unequal, based on what Massey called "power geometries" (1993) and "uneven geographies of oppression" (2008) that control the production and directionality of flows within and across regions. Sheller (2018, 2020, 2021) expands on these power differentials that shape mobile lives and advances a notion of mobility justice that distinguishes between privileged and elite mobility on the one hand and maligned mobility of the poor on the other hand and the control the former exercises over the movement of the other. Elite mobilities, she argues, are equated with the "'good' mobile subject … male, individual, able-bodied, usually white," typically shielded from the inquisitive gaze in climate mobility rhetoric (Sheller 2020, p. 36; 2021). In contrast, mobile members of the transnational diaspora all the way to undocumented migrants tend to be lumped together under the stigmatizing notion of "bad," undesirable mobility. However, the relational dimensions such as uneven vulnerabilities between these two, and across many translocal societies in regions of substantial environmental changes (e.g., pastoralists in the Sahel, labor mobilities in the Pacific, and densely populated delta areas such as in Bangladesh and Egypt), remain poorly understood in the nascent environmental mobility field (see Baldwin et al. 2019; Boas et al. 2018).

A mobility justice lens makes it possible to demonstrate that movement is fundamentally political, propelled by power asymmetries that perpetuate hierarchies of mobile lives. A politics of mobility, also called "kinopolitics" (Nail 2015), allows us to scrutinize who and what controls differential mobile subjects, particularly those whose movements are deemed as a threat to any established social order. Such politics also applies to immobility, and the pace and management of mobility, including blockages and coerced movement, all of which are a product of the relationality of power (Sheller 2018; Zickgraf 2021). Power relations, from UN frameworks on refugees to gendered patterns of oppression at the household level legitimize discourses and practices of marginalization. They also contribute to the demonizing and dehumanizing of the aspiring, successful, or abortive migrant who embodies the quintessential "other."

As such, mobility justice meets climate justice, and ultimately multispecies justice, as an intersectional, inclusive, relational, and decolonial attempt to imagine more just (mobility) futures (Baldwin et al. 2019; Scott 2020; Tschakert 2020). The core focus shifts from theories of migration and immobility and projecting environmental migration patterns (e.g., Piguet 2018; McLeman and Gemenne 2018; Zickgraf 2021) to tracing how systemic inequalities are (re)produced (Kelman et al. 2016). This includes the colonial and capitalist violence that makes

histories of erasures, structural racism, differential vulnerabilities, and climate apartheid inherently political (Whyte 2019; Tuana 2019; Bonilla 2020). By extension, this shift in focus sheds light on how climate-related movement and the bodies entangled in it navigate the complex politics.

It is imperative then to recognize, as Nail (2015) argues, that the migrant has become the political figure of our time, representing a gendered, classed, and racialized counterforce to the state (Westmoreland 2016). The recognition of the mobile subject as a political agent, and not as a villain or victim, opens up analytical space to examine the multiscalar, relational agency in im/mobility (Tschakert 2020). Which role she then plays (or can play) as this political figure depends on the narratives that frame her subjectivities; her actions to comply, contest, or subvert; and the emergencies in which she finds herself, reflected in Sheller's (2020) notion of "kinopolitical struggles."

The task hence is to further dissect dominant narratives of mobile lives in the climate crisis. The binary of the "desolate climate refugees" ("bad mobility") as opposed to the "environmental migrants as agents of adaptation" ("acceptable mobility"), summarized and critiqued by Wiegel and colleagues (Wiegel et al. 2019) as the "alarmist" versus "optimistic" portrayals of those on the move, is indeed too simplistic. Equally inadequate are the essentialising imaginaries of the "poor peasant from the South" (Piguet et al. 2018, p. 359) and helpless women and children as "passive, racialized, and dependent on land" (Ayeb-Karlsson 2020a, p. 5) as archetypical victims of the climate emergency. More promising are narratives that reject the depiction of "non-resilient" and "non-adapted" "climate barbarians" (Bettini 2019, p. 341) and replace them with "subversive mobilities" (Sheller 2018, p. 19). Through them, mobile agents speak back at the rhetoric, practice, and mechanisms of power that make expandable, govern, vilify, detain, and kill, through what Bettini (2019) calls the "return of the *oppressed*", as a "vehicle for climate justice" (p. 352).

It is in this space of the mobile subject as a political actor that this article aims to prioritize the views and embodied experiences of those enmeshed in climate-related movements. Our conceptual im/mobility heuristic fulfills two purposes: first, by lifting to the fore the voices of those entangled in moving, staying, and receiving, it provides vital insights into the diversity and fluidity of experiences; and second, given its dynamic, three-dimensional lens, it offers a conceptually guiding structure to do justice to different movements, embodiments, and driving factors. This, we believe, will help scholars of local and regional environmental change, as well as practitioners and policy makers, to overcome lingering fuzziness, detect knowledge gaps, and coordinate action without pigeonholing people and their needs and aspirations.

The "climate migrant" as a speaking subject with agency

Across academic literatures, there is an indisputable call for hearing the voices of those who have, for too long, been merely objects of scholarly work. For instance, in his delineation of subaltern disaster studies, Gaillard (2019) critiques the hegemonic domination of Western epistemologies and scholars in the ways disasters—including hazards, vulnerability, and failures in governance—are studied and located within imperialist risk reduction policies. To decolonize this field, he demands the long overdue political view from "within" and "below." This means an entirely different epistemology centered on the often maligned "other" or, in Spivak's (1988) terms, the subaltern that can speak. It entails active participation of those affected and knowledgeable, as (co-)researchers rather than passive bystanders, coupled with an external investigator's will and ability to listen and grasp on-the-ground realities and lived experiences. Such a turn toward each "other" (Oswin 2020), advanced also in Human Geography, makes it possible to address and potentially overcome practices that "ghettoize, demean and dehumanize" (p.13) and replace them with solidarities in which speaking, listening, and hearing are reversed.

Boas and colleagues (Boas et al. 2019), in their six-point agenda for new climate mobilities studies, also request the inclusion of affected populations as well as local and indigenous ways of knowing regarding both drivers of and solutions to climate-related movements, best in co-developed research. Yet, this seems easier said than done. Even progressive scholarship and new theorizing, such as Nail's *The Figure of the Migrant* (2015), risk to further silence the bodies and voices of those concerned when, in fact, they themselves should be narrating their stories and truths, speaking for themselves, in their own words, and in their name (Westmoreland 2016). For instance, Parsons (2019) illustrates how climate change mobility materializes in Phnom Penh, Cambodia, through the idiosyncratic and affective chronicle of an 87-year-old, female beggar. Such commitment to listening to stories by mobile subjects themselves (Carling and Collins 2018) and acting upon their embodied accounts are essential to bring into being the epistemological and ontological pluralism requested in cutting-edge mobility studies.

Therefore, pluralizing the mobility debate requires attention to a multitude of aspirations, abilities, and capabilities that shape im/mobility decisions (Carling and Schewel 2018; Wiegel et al. 2019; Mallick and Schanze 2020). This applies not only to regional climate "hotspots" in the global South (e.g., Small Island Developing States, the Sahel) but also to affluent nations and regions (e.g., Australia, the USA, and the European Mediterranean), including within community differences, produced by intersecting axes of

inequality (age, gender, class, race, caste, (dis)ability, ethnicity, indigeneity, religion, and sexuality). It also requires in-depth, people-centered, and bottom-up understandings of the relational dynamics that shape agency and decisions about staying, leaving, returning, and sheltering. Lastly, it necessitates explicit attention to the power relations that operate at micro- and meso-scales, to make visible the social norms wrapped up in layers of power, knowledge, and authority. In her work on discursive subjectivities, subject-making processes, and micro-politics of im/mobility in Bangladesh, Sonja Ayeb-Karlsson (2020a) shows that climate-related migration is not just "something that happens to people" (p. 5) in predictable ways and risk-prone areas, but "a long complex process involving several steps" (p. 9). This process is driven by social roles, cultural codes, language, emotions, fears, desires, resistance, and disciplining practices such as shame and punishment, intertwined in constantly shifting exercises of power. Along similar lines, Osborne (2015) recommended to analyze intersecting dimensions of inequality (intersectionality) within the context of structural power to make visible "interlocking structures of domination" (p. 136), which she labels "kyriarchy." Such a lens makes it possible to examine relative privilege in a web of power constellations; this may include, for instance, how patriarchy, in certain cultural and religious contexts, influences the abilities of young, unmarried women to stay or to leave and the tools these women may have to contest imposed norms.

Attention to these and other power dynamics, and how they overlay trade-offs between what to preserve and what to abandon, highlights the intrinsically political work of agents in mobility decisions. They simultaneously navigate the micro-politics within their cultural group and the broader networks and political economy of the region that create their precarious conditions in the first place. Our conceptual im/mobility cube allows us to sharpen the focus on these crucial dynamics, and the simultaneity and linkages of embodied experiences as articulated through their diverse, courageous, and political im/mobile subjects. Taking seriously the protagonist and her climate mobility agency needs to be part and parcel of inclusive, embodied knowledge production to further advance mobility justice.

## The relational and dynamic im/mobility cube

What is needed to bring into closer conversation mobility and climate justice is, above all, an invitation for the many voices and embodied experiences in mobility realities to be heard; second, it requires a more comprehensive way of thinking about diverse and dynamic regimes of mobility and how they are intertwined with climatic hazards, climate change, and local to regional environmental changes.

As Parsons (2019) puts it, we need conceptual work to re-envision disaster response and climate mobilities "from the subjective, intimate and multi-scalar perspective of the people who undertake it" (p. 679), moving beyond "hard" structural aspects associated with dispersed geographies and bounded territories. By drawing upon translocality studies, new climate mobility scholars are better equipped to adopt an "agency-oriented perspective," based on the lived experiences of those living translocal lives, in order to examine connectedness and fluid relations across spatial divisions (Parsons 2019, p. 77). This perspective mirrors Massey's (2005) notion of space as a product of relations, continuously in the making. Such a relational ontology for climate-related movement is also in line with Sheller's (2018) conceptualisation of mobility justice: it sees mobilities and immobilities as "always connected, relational, and co-dependent, such that we should always think of them together, not as binary opposites but as dynamic constellations of multiple scales, simultaneous practices, and relational meanings" (p. 1).

Here, we offer a novel conceptual tool that we call the *dynamic and relational im/mobility cube* to capture the intricacies of people's movements in the context of climate change. The cube lends itself to a multidimensional analysis of climate mobilities, through the stories and lived experiences of those wrapped up in them. Like other three-dimensional analytical frameworks, it is graphically conceptualized along three axes, in our case *experiences, drivers, and consequences*, each with three sub-dimensions that represent continua rather than discrete entities (Fig. 1A). In addition to the three largely external, material, and structural axes, the heuristic also captures more intimate, intersecting, and embodied kinopolitical struggles the im/mobile subjects or those positioned in relation to them face in their decision-making (Fig. 1B), namely, aspirations and capabilities, shifting relations of power, and subject-making processes (see "Power and politics in mobility justice" and "The "climate migrant" as a speaking subject with agency" sections). Together, the six sides of the cube, each with nine interconnected quadrants, and numerous possible constellations mirror the ever-shifting and relational nature of the climate-mobility space. Just like the moveable elements on Rubik's cube, our conceptual tool accounts for specific realities that, for some and at certain moments, come to the front while others shift to the background, depending on complex power geometries and individual, often visceral and emotional experiences, determined by gender, age, class, race, and other intersecting dimensions of privilege and disadvantage.

First, we aim to make visible and heard the *lived experiences* of being on the move in-between places, staying in potentially threatened or risk-prone areas, and resident populations receiving migrants upon arrival. These three dimensions are best seen as a continuum or stages of a broader translocal and/or transnational process, from

Fig. 1 The dynamic and relational im/mobility cube designed for the climate crisis—a graphic and conceptual device to story kinopolitical struggles across degrees of climate influences and differential outcomes. **A** Conceptual mobility axes and sub-dimensions (E = experiences, D = drivers, C = consequences). **B** Intersecting and embodied kinopolitical struggles
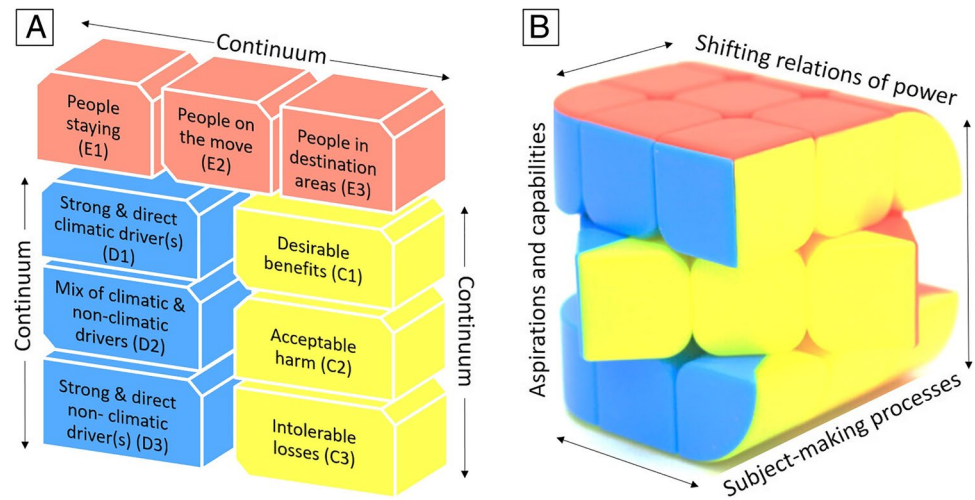
staying put, leaving, journeying, traversing, waiting, arriving, settling, residing or being trapped in, sheltering, and returning (Carling and Collins 2018). Immobility or staying is increasingly seen as an active, deliberate, and relational practice tied to mobility rather than a binary opposite, with desirable outcomes potentially surpassing negatives such as "stuckness" (Stockdale and Haartsen 2018) and "trapped populations" (Zickgraf 2021). We ask the following questions: who and where are these people?; why have they decided to stay or to move, and are they doing so voluntarily or are they forced to?; is their moving a planned or an abrupt decision?; are they moving internally (within the same country) or across international and regional borders?; for those in receiving places and destination countries, how do they see mobile subjects and what do they do to welcome, help, reject, and/or ostracize them, how and why?

Second, we acknowledge the various *intersecting drivers of im/mobility* (Van Hear et al. 2018) that make people stay, move, and help or hinder mobility. At the same time, we deliberately interrogate the role of climate change/climatic hazards, including slow, incremental and rapid-onset, extreme events, as a key driver. We ask the following questions: is the climate influence strong and direct to act as a precipitating driver (e.g., when a 100-year flood exacerbated by massive snow melt in nearby mountains destroys a community's farmland, settlements, and livelihoods)? Or is it a proximate driver (e.g., when incremental sea-level rise and saltwater intrusion trigger shifts from common rice paddies to more privileged shrimp farming), together with non-climatic drivers such as business cycles? Or are the dominant drivers not climate-induced but instead political such as conflict or economic destitution, or mediating factors such as migration networks?

Third, we aim to tease out the nuanced *consequences* that mobility and immobility have on lives, livelihoods, and well-being and implications for what may be lost. The situated and socially engaged science of loss reveals the numerous, subjective, and place-specific ways in which individuals and groups experience harm and grief that are often non-commensurable (e.g., Barnett et al. 2016; Cunsolo and Ellis 2018; McNamara and Jackson 2019). Human mobility, migration, and displacement, explicitly acknowledged under the UNFCCC Warsaw International Mechanism for Loss and Damage, are often tightly connected to other "intangible" (non-market') dimensions of harm—culture, lifestyle, and heritage; sense of place; social fabric; emotional and mental well-being; knowledge and ways of knowing; identity; dignity; order in the world; self-determination; territory; and sovereignty (Tschakert et al. 2019). We ask the following questions: what are the impacts on the various agents in the places and situations in which they find themselves? and specifically, who benefits, who loses out, why, how, and to what extent? We differentiate between consequences that agents judge as desirable or beneficial, others they encounter as resulting in some harm but nevertheless consider acceptable, and further harmful impacts still that, rationally or not, they experience as intolerable losses, such as irreversible loss of sense of place and culture.

Caution is needed though. While the three-dimensional entry points to the im/mobility cube can provide much-needed conceptual clarity of different forms of movements, diverse drivers, and lived experiences, the resultant partitions should not be misunderstood as a rigid way of compartmentalizing people and their diverse agency. In other words, we need to avoid interpreting these dimensions as fixed categories or in isolation. Instead, they need to be accepted as relational rather than binaries, i.e., what happens in one domain (e.g., staying) is connected with another (e.g., people on the move). Moreover, the axial constellations are not neatly proportioned but instead uneven and supple. They capture complex realities of people shifting from one space

to another, depending on opportunities and constraints, and may well change from season to season, or get reinforced during extreme events while petering out thereafter.

The ultimate scholarly purpose of the cube is to reveal the multiplicity and fluidity of how individuals and groups navigate their im/mobility landscapes, in a more inclusive way rather than through homogenizing and/or pathologizing accounts. The cube, as a heuristic, opens up space for often overlooked stories and voices; it displays what advantageous mobility experiences are, for whom, why, and when, and how they differ from most devastating incidents, and everything in between. This fundamentally people-centered approach brings together nuanced driver-centric applications (Van Hear et al. 2018) to climate-induced migration with the affective and embodied spheres of kinopolitical labor. Its distinctive strength and novelty come from explicit attention to the threat to and loss of valued things, such as sense of place and belonging, as well as the often concealed, discursive operations of power, and how these two dynamics shape decision-making processes, positions, and movements across the landscape of the cube. Without a comprehensive lens and the right conceptual and methodological tools, these lived experiences and visceral rationales risk remaining invisible.

Lived mobility experiences and stories of fluidity

Here, we demonstrate how to operationalize the im/mobility cube. What follows are *examples* of embodied mobility experiences to bring the spaces of the cube to life. The examples are extracted from a few, in-depth case studies that have attempted to distill the nuances of differential mobility. We make use of direct quotes to underscore the voices and stories of those affected. This is not an attempt to offer comprehensive evidence for each of the cube's possible configurations. Instead, by providing glimpses into and across the three axes and kinopolitical struggles, our hope is to motivate others to expand the task of listening and populating the cube's planes and fault lines with available information across spatial and temporal scales.

The examples from the literature that we find most illuminating are those that employ specific methodologies to elicit the nuances of lived and bodily experiences, including affect (Carling and Collins 2018), and the fluidity within mobility decision-making. These methodologies comprise qualitative, quantitative, multi-method, and/or participatory approaches. We are inspired by insights from storytelling methods such as life narratives, walking methods and field visits, and other modes of (co-)inquiry that emphasize the voices of im/mobile agents, their stories, and their truths, rather than outside, authoritative, western/northern assessments. Understandings of climate mobilities (and climate

and mobility justice) and dynamic approaches to translocatility require embodied re-imaginations. As Nancy Hartsock showed with her standpoint theory, and scholars advocating for situated knowledge (e.g., Haraway 1991), "marginalized subjects have an epistemic advantage" (Kartzow 2010, cited in Osborne 2015, p.142): they can educate us about how uneven power structures materialize and function and, by extension, determine mobility decision-making. For instance, Ayeb-Karlsson (2020a; 2021) describes the advantages of personal narratives; they allow the storyteller to choose what story to tell, what reality to convey, and which emotions to accentuate. Storytelling is easily combined with other methods, such as livelihood histories, timelines and calendars, and participatory diagramming or mapping. Together, narrative methods, as well as analyses attentive to epistemological and ontological details, such as discourse analysis, are part of the grounded methodologies that foster careful listening. Hence, they are well-suited to elicit how power operates in mobility decision-making.

We begin with examples that convey the layered dynamics between immobility and being on the move. Without aiming to resolve the debates on forced migration and voluntary, involuntary, and acquiescent immobility (Zickgraf 2021), we show the nuances of who stays and who leaves and why.

We first indicate which dimensions (E, D, and C; see Fig. 1A) are at play in Pacific atoll countries—one of the regional "hotspots"—where notions of migration in dignity and adaptation in place remain contested, including acceptable harm and intolerable loss and in whose eyes. Whereas Tuvaluan governments have repeatedly rejected citizen relocation to other countries, government policies in Kiribati have abandoned the "migration in dignity" paradigm in favor of a "stay and fight" policy within two consecutive presidencies (Kupferberg 2021). This shifts the realization of climate change impacts from intolerable loss to acceptable harm, thereby denying those who are willing to move the right to migrate in dignity. Using Q-methodology, Oakes (2019) found diverse views regarding mobility decisions in Kiribati, Tuvalu, and Nauru, with many seeing no other option than to leave their islands, despite recognizing substantial sociocultural losses associated with cross-border migration.

> "We should try to think of the ways to evacuate now ... before it is too late" (Tuvaluan) and "Because I was born in Nauru, I don't want to leave, but climate change makes me move" (Nauruan). (Oakes 2019, p. 494 and 496)

Their history of mobility notwithstanding, indigenous Pacific Islanders carry strong attachments to place, namely, their ancestral land- and seascapes (Neef et al. 2018; Yates et al. 2021). Here, voluntary immobility, especially among older residents and chiefly leaders, is an adaptive measure based on "an informed, freely indicated preference to remain

in sites" (Farbotko and McMichael 2019, p. 150), despite increasing risks from sea level rise.

> Tuvalu is where I belong, my true identity and also it is where I was brought up and leaving will result in the loss of culture. (Oakes 2019, p. 494)

Yet, the reluctance of community leaders to relocate from areas threatened by climate-related hazards can also lead to forced immobility of those who would rather relocate to safer locations. This is reflected in a statement of a young indigenous Fijian woman from a river delta on the main island Viti Levu that is the main source of livelihoods; the government's offer for land further inland was refused by male elders and leaders:

> I personally think the headman should have considered [the offer], but their ancestors have grown up here … so it is hard to relocate. (Neef et al. 2018, p. 130)

A second set of examples teases out configurations between types of immobility (E3), climatic drivers (D), and losses (C) in drought- and flood-prone regions in sub-Saharan Africa, with further emphasis on age, gender, rurality, and dignity. In northern Ghana, elderly family members had no choice than to stay put in terrains shriveled by droughts, lack of political support, and eroding social networks while the younger generations had long migrated to cities in the country's south; the aged men and women who remained in place reported extreme sadness, distress, depression, and desiccation of self and body (solastalgia) in their hollow homes and thinned-out places of alienation (Tschakert et al. 2013). Without dignified prospects for the future and little to no agency to contest such "collective existential outsidedness" (ibid, p. 23), the social and environmental losses among those forced to stay had become intolerable:

> The old woman does not go to the farm because she deems it unnecessary because it is not raining. She said she visited the farm last Saturday and said she could not do anything because the place was dry. She felt like crying and was so sad. She was thinking about how they are going to survive for the next year until the next growing season (describing Samaata, 53 years). (Tschakert et al. 2013, p. 22)

Dignity, or more precisely the loss thereof, is one of the under-researched aspects of intangible harm from climate hazards and climate change. In the same case study from Ghana, an elderly man described the fact of having to drink from the same water source as animals as the ultimate breaking point beyond which he no longer recognized himself as human (Tschakert et al. 2013). Similarly, yet in the context of floods in Kenya, a woman lamented her lot in an emergency relief camp where she had sought shelter:

> I moved with my family to the camp … and stayed there for two months. I did not have money for food and depended on relief from the government and some NGOs … My dependence on others means I lack respect in the community. I am tired of relief aid from the government and NGOs. (Opondo 2013, p. 460)

A third set of insights provides closer attention to power dynamics and kyriarchy (Osborne 2015) and, as illustrated by Ayeb-Karlsson's work in coastal Bangladesh, reveals more complexities still at the intersection of gender, age, and dignity, and why some individuals or groups stay in the face of climate-related calamities (E1-3 and C3 as in Fig. 1A, and axes of struggles as in Fig. 1B). Her findings on non-evacuation to cyclones (Ayeb-Karlsson 2020b) shed light on the role of patriarchy in creating "spaces and places of male and female (un)safety" (p. 5). Unmarried women, in particular, were perceived as risking their honor when moving to shelters—an entrenched norm that in itself is immobilizing, compelling women to hold on to banana trees at home rather than choosing the even riskier option of the shelter. As one man explained: "It is not right [for unmarried women to go to the shelter] because it could create problems./ …/I do not like women going to the shelter. It just doesn't feel right. Wherever they go, things happen" (p. 6). Gendered expectations are also to blame for the fate of a young woman who is raped in a cyclone shelter:

> The girl decides not to tell anyone what happened as she is afraid of losing her honour. She thinks to herself; I was an educated girl who was planning to create a better life for myself, but now, because of this, all is ruined. She decides that she does not want to live anymore, and kills herself by drinking poison. (Ayeb-Karlsson 2020b, p. 7)

Shaming and loss of agency, honor, and dignity also occur at places of destination and shape involuntary immobility in indirect, psychological ways. The ensuing mental paralysis is experienced by some but not others of the same group, with some even benefitting. Such differential experiences are (again) driven by gender, power, and social norms, as Ayeb-Karlsson (2021) witnesses among residents of the Bhola Slum in Dhaka, Bangladesh, who had originally migrated there due to cyclone devastation on their home island. Among this group trapped in an urban environment, the desire of many to return to their rural home place was strong, conveyed through nostalgic accounts; yet, the social hierarchies and stigma and the resultant restrictions, especially among unmarried women, that held them back were stronger still than the loss of well-being, identity, and belonging they were experiencing in the crowded, informal settlement. Feeling

paralyzed and entangled in bad cycles of drugs or pregnancies in Dhaka intertwines with layers of punishment and disciplining that blur the boundaries between moving, being displaced, and becoming immobile, with the original strong and direct climate driver (Cyclone Bhola in 1970) shifting to the background.

> Girls often meet men in the garment factories [in Dhaka] and start a relationship, but the husband may leave her even after she has his child. This is the punishment for marrying someone without knowing them enough….. She can no longer go back home to her parents…. That is what her life has become, miserable. (Ayeb-Karlsson 2021, p. 353)

Gender, albeit described as the "core of mobility studies" (Lama et al. 2021), never exists in isolation. Like all other dimensions of inequality, it is tied to the inner works of power (authority, subjectivities, and knowledge), also apparent in scholarship on the politics of adaptation (e.g., Eriksen et al. 2015) and climate resilience and migration (e.g., Baldwin 2017). The experiences above illustrate how stigma such as shaming and abandonment functions as a punishing tool for women trespassing social and discursive norms, quashing aspirations of migrating for some and returning home for others.

Our final examples refer to responses of host populations in areas that receive mobile subjects (E3) and their rationales around consequences (C). In an online survey, German citizens expressed favorable attitudes towards "climate migrants" from elsewhere, comparable to attitudes towards other mobile subjects in need of protection, such as those fleeing from conflict, as opposed to less-welcome economic refugees (Helbling 2020). Respondents linked their support for those who had left due to climatic triggers with Germany's financial resources and overall migrant population, i.e., they considered whether admitting them would constitute "acceptable harm" to their society rather than evoking principles of moral or corrective justice (ibid). Similar considerations may explain why most of the host population in the Nigerian part of the Lake Chad Basin was opposed to receiving people internally displaced by both climate change and conflict (Kamta et al. 2021). Incoming mobile subjects were seen as competing for scarce resources, particularly water, and causing intolerable losses to the receiving communities. Spilker et al. (2021) found in their surveys in Kenya and Vietnam that urban residents were most welcoming towards people internally displaced by drought, storm, or flood events that were young and well-educated, i.e., when they had the capacity to positively contribute to host communities.

Conclusion

This paper has presented a dynamic, relational, and intersectional heuristic to uneven mobilities and immobilities that are grounded in systemic inequalities, across regional contexts. We have responded to Parsons' (2019) call for a conceptual lens to scrutinize the emotional (affective), subjective, and intimate spaces in which people wrestle with diverse kinopolitical struggles and make decisions, or are forced to, about moving, staying, returning, and receiving those who had packed up their lives and left. We have offered an agency-oriented perspective, thereby pluralizing and making visible diverse experiences centered on the stories of those navigating the staying-moving-receiving spectrum. Such a relational climate mobility/mobility justice lens acknowledges movement and staying put as embedded within a relational web of embodied micro-politics, co-constitutive of social, spatial, and (micro)political interactions.

Our hope is that the im/mobility cube introduced here, with its numerous possible constellations, serves as an impetus for future empirical research. Much more needs to be done to systematically utilize existing and co-produce new case studies and large datasets within regions known for incremental, extreme, and cascading climatic impacts and climate-driven mobility (Clement et al. 2021; Cissé et al. 2022). The aim is to make visible the rich, emotional, and place-specific experiences of im/mobility and scalar driver complexes (Van Hear et al. 2018) and foreground the voices of those affected. Such an application would fulfill three purposes:

First, with its focus on systematic assessments of place-based, complex, embodied, and shifting realities across local to regional climate-mobility landscapes, it would help overcome the persistent fuzziness regarding concepts of climate-induced migration, environmental im/mobilities, translocal lives, forced versus voluntary migration, involuntary displacement, climate migration as maladaptation, and the often obscured benefits, harms, and struggles tied to relocating or remaining in place. For instance, how does climate change intersect with existing mobilities in semi-arid sub-Saharan Africa, for men, women, and youth? How do daily privilege and disenfranchisement shape mobility decision-making in the context of rising sea levels, hurricanes, and detention politics between the USA and the Greater Antilles? These insights would also be relevant for policy, such as the Global Compact for Safe, Orderly and Regular Migration (UN 2018), including Objective 1 (better data for evidence-based policies), Objective 16 (empower mobile agents to realize full inclusion and social cohesion), and Objective 17 (eliminate all forms of discrimination and promote evidence-based public discourse to shape perceptions of migration).

Second, a more systematic compilation of evidence could further advance attribution studies to demonstrate the extent to which climate change contributes to slow and incremental or rapid-onset extreme weather events and intersects with other drivers that influence people's mobility decisions in regional contexts. Separating out climatic hazards as proximate or precipitating drivers of movement from the often macro-scale predisposing drivers such as globalization and environmental destruction remains a significant challenge. As such, people's narratives are vital to reveal the centrality of climatic hazards (e.g., increasingly severe cyclone events) versus pervasive power dynamics as deciding factors for whether to move or stay. The case studies presented here on Bangladesh illustrate shifting drivers, yet for most other environmental/climatic "hotspots," these realities remain poorly understood.

Third, the im/mobility cube could be used to further expose the many concealed power constellations that constitute the intersectional, dynamic, and relational webs of moving, staying, and receiving mobile populations. We can see the cube contributing to populating the nuances and fluidity of climate mobility justice as well as pinpointing the gaps and silences that inevitably exist and that require targeted attention and committed action. For instance, little is known still about the context-specific, embodied, and visceral experiences of increasingly ferocious heat waves in South Asia, e.g., in India and Pakistan, and the intersecting inequalities, fragmented identities, and diverse forms of uneven power and oppression that shape gendered movement and experiences of escaping or being trapped.

These research prospects for climate mobilities and climate justice, with clear emphasis on regional patterns of environmental changes, underscore the need to employ the proposed heuristic not as a rigid way appropriated by researchers to catalog and pigeonhole people's lived experiences but instead as a relational device that attends to and foregrounds the interdependencies between actors across climate-mobility landscapes. This entails committed emphasis on non-linear dynamics and translocal phenomena such as remittances and mutable cultural identities. It also demands close attention to gender, age, class, race, ethnicity, indigeneity, caste, (dis)ability, sexuality, patriarchy, and other facets of subject-making processes. We see this as a call to arms to enrich climate and mobility justice scholarship via an explicit focus on social context from the multi-scalar perspectives of its courageous protagonists.

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