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‘Staying’ as climate change adaptation strategy : A proposed research agenda

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Forum

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ABSTRACT

This paper brings work on mobility and ‘staying’ together with theoretical ideas of resilience to consider responses to climate change. To date, the majority of work that has explored the impacts of climate change on human populations has taken a migration-centred perspective, with an emphasis on mobility as a key response in crises, including extreme climatic events and civil conflict. However, evidence suggests that people may alternatively – and pro-actively – adopt a different approach involving “staying” as a climate change adaptation strategy. This is important as recent evolutionary approaches to resilience have highlighted how resilience is an on-going process of adaptation which emphasises the temporal, fluid and open-ended aspects of individuals’ experiences and practices in shaping everyday lives. In turn, this means that individuals’ experiences and practices can lead to different strategies of staying (as well as moving) in the face of climate change. Consequently, the paper highlights four key areas where more research is required in order to explore the links between climate change, ‘staying’ and resilience. These include the importance of historical context in disentangling and contextualising the “multicausal” nature of individuals’ mobility decisions; translocal networks in shaping mobility or immobility; the influence of equity, diversity and gendered social expectations on staying; and the importance of governance responses in facilitating resilience, adaptation and subsequent decisions by individuals to stay or move.

1. Introduction

Migration and mobility have increasingly been perceived as an adaptation or coping process in relation to climate change (Foresight, 2011; Black et al., 2011). Two questions have dominated recent debates concerning the relationship between mobility and climate change: *how many people are going to move* and *where are they going to move to*? Migration is therefore seen as an integral element of adaptation

strategies, with people adopting a range of mobility practices which may vary in distance in respect of their spatial (short to long-distance) as well as their temporal (temporary to circular to permanent) domains (Black et al., 2011). Migration as ‘adaptation’ can also be uneven due to resources, individual dispositions and experiences, as well as individual agency.

In contrast, strategies of “staying” – as opposed to involuntary mobility – remain a relatively underexplored but crucial element of any

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discussion on the impacts of climate change. This is important as much of the research conducted in the last 20 years highlights that migration is not always a default option given social, psychological and financial factors can influence decision-making (Adams and Adger, 2013; Azeb-Karlsson et al., 2020). If, as is increasingly suggested, many people aspire to stay in place in the face of changes in their environment as a consequence of climate change (Weigel et al., 2019; Carling, 2002), new ways of thinking will therefore be required and which challenge existing perspectives of immobility as connoting stasis, decline and disadvantage, often referred to as ‘trapped populations’ (Foresight, 2011; Black et al., 2011; Black and Collyer, 2014).

Consequently, this paper sets out a new research agenda for more systematically investigating reasons why people might choose to stay in areas affected by climate change, bringing this into dialogue with theoretical ideas of resilience. In doing so, it recognises that linking climate change to human mobility or immobility is highly complex as people tend to move (or stay) for various reasons (Foresight, 2011). As much as climate-related hazards might have contributed to their decision, other underlying factors such as cultural, socioeconomic, environmental and political factors can also shape the decisions of people to stay or move (Hunter et al., 2015; Black et al., 2011).

2. Perspectives on migration and staying as adaptation strategy to climate change

Migration and climate change discussions invariably lead to different perspectives of whether movement is ‘failure of adaptation’, a positive adaptive strategy, or a matter of survival (Renauld et al., 2007). Initial research suggested that migration was a negative consequence of climate change given issues of securitization (Tickle, 1989; Myers, 2001) and which involved quantifying numbers of people migrating and a consideration of the policies and / or adaptation measures being used by national governments and international agencies to reduce movement (Martin et al., 2013). However, more recently there has been an emerging consensus among scholars that migration may be seen as a positive adaptation strategy to environmental and climate change (Tacoli, 2009; Black et al., 2011; McLeman and Smit, 2006). For example, migration can reduce population pressure and stress on resources in places prone to adverse climate events (McLeman and Hunter, 2010) or contribute to recovery following climatic shocks (Black et al., 2011).

Furthermore, economic and social remittances from migrants can serve to increase community adaptive capacities ‘back home’ and improve responses to climate risks (Levitt and Lamba-Nieves, 2011; Stark and Lucas, 1988). Such actions can be an effective way for people to diversify income and build resilience in fragile environmental contexts and where individuals may have insecure livelihoods (Black et al., 2011). Nevertheless, actions taken to adapt to a changing climate are constantly in flux, non-linear in nature and may not always produce a positive outcome (Gemenne and Blocher, 2017). Migration and adaptation are linked, although ‘successful’ adaptation to climate change remains ambiguous (Warner and Afifi, 2014). Some of the short-term coping strategies that initially appear to facilitate adaptability can prove to be maladaptive in the longer term. In addition, the agency involved with migration in the context of climate change also needs to be considered. For example, the *need, ability and desire* of individuals to migrate demands consideration and can lead to some individuals becoming ‘trapped’ depending upon their individual circumstances, resources and dispositions (Foresight, 2011).

Such concerns segue into a focus on ‘staying’ as an alternative adaptation strategy to climate change, and which may involve considerable agency. As such, we argue that there is a need for a greater focus on bringing questions on climate change into dialogue with work on immobility and staying. Indeed, there is a need to re-conceptualize staying in the context of climate change as an active process subject to continual (re-)negotiation, and with staying often a deliberate choice

(Stockdale and Haartsen, 2018). However, migration research has traditionally centred on tracing movement and mobility, especially in relation to climate change, and with much less focus to date on the experiences and practices associated with staying in place (Morse and Mudgett, 2018; Looker and Naylor, 2009; also see Farbotko, 2018). Staying processes are increasingly understood as relational and contextual and linked to the biographies and experiences of individuals, including past experiences and future aspirations (Coulter et al., 2013; Kley and Mulder, 2010). Ideas of place attachment (Adams and Adger, 2013) – which involves an emotional connection to a place (Lewicka, 2011) – as well as culture, history, a strong sense of belonging and strengthening of social capital can all influence the desire to stay (Anton and Lawrence, 2014; Black et al., 2013; Lewicka, 2011; Carling, 2002). Nevertheless, in the context of climate change, there has been little consideration to date of how such influences may actively shape processes of staying (Coulter et al., 2016; Thomas et al., 2015; Urry, 2007).

3. ‘Staying’ in areas affected by climate change: A resilience lens

A further contribution of the paper is to bring work on mobility and ‘staying’ together with theoretical ideas of resilience to explore in more detail why people might choose to stay in areas affected by climate change. First, traditional ‘engineering’ approaches to resilience can be drawn upon in order to highlight how both individuals and communities may seek to *resist* the effects of climate change (also see Hayes et al., 2019). This can involve the use of both local and extra-local resources and mitigation activities often associated with ‘hard’ (physical) measures, such as building new flood defences and so on. However, mitigation is more challenging in resource-poor contexts (Markkanen and Anger-Kraavi, 2019). Alternatively, through drawing on ‘ecological’ approaches to resilience, it becomes possible to apprehend how individuals and communities may in contrast seek to adopt a new ‘equilibrium’ through developing new ‘ways of living’ and with the aim of absorbing and adapting to (climate) change rather than to resist it in order to remain *in-situ* (Hayes et al., 2019).

More recently, ‘adaptive’ or ‘evolutionary’ approaches to resilience have emerged highlighting the need to view resilience as an on-going process of adaptation and re-adaptation (Hayes et al., 2019). Such a perspective can therefore be used to facilitate a more nuanced understanding of how individuals’ everyday lives are often subject to constant negotiation and re-negotiation and which may, in turn, lead to strategies of staying (rather than moving) as a response to climate change (Huntington et al., 2018). Viewing resilience in this way also emphasises how individuals and communities change their expectations and ways of living over time and space (Adger et al., 2009). Consequently, we argue that applying evolutionary ideas of resilience to help understand processes of staying in areas affected by climate change is particularly appropriate as such an approach is not based on a notion of equilibrium towards which areas impacted by climate change must return (engineering perspective), nor in respect of achieving a ‘stable’ new equilibrium that persists over time and space (ecological perspective).

Adaptive / evolutionary approaches also raise key questions of ‘*resilience of whom, where and to what?*’ (Cote and Nightingale, 2012). For example, the effects of climate change can include environmental degradation (i.e. physical issues), conflict over land and resources (political), a lack of resources / assets (economic) and the rupture of social networks (social / demographic). An analytical focus on apparently homogenous, bounded, monolithic and undifferentiated “local communities” continues to be employed in academic work and development practice (Uddin et al., 2020; Rapaport et al., 2018) ignoring long-standing development scholarship analysing the multidimensional nature of socio-spatial relations (Jessop et al., 2008), the importance of intra-community power differentials (Wanna, 1991; Chambers, 1983), and the linkages between the two. Hence through an evolutionary resilience lens it becomes possible to highlight the importance of evolving translocal networks in facilitating the exchange of tangible and

intangible resources across different spaces and which can contribute to processes of staying over and above those resources found within “local communities”. Furthermore, such an approach emphasises the need to take into account issues of power, exclusion and marginalisation and how individuals may have differential access to local resources and translocal networks, and which may evolve over time. In turn, this impacts on the feasibility of staying as a resilience strategy to climate change.

i) Historical context

Human beings have been moving, choosing to stay in place and adapting to different types of “changes in the weather” stemming from, *inter alia*, environmental and political factors, for all of recorded history. An explicitly historicised analysis is crucial when addressing the development of local knowledge, and when disentangling and contextualising the “multicausal” nature of moving and staying today. By way of illustration, the peoples of the Bengal delta in South Asia have been adjusting to the movement of rivers and extreme climate events including cyclones, floods and droughts, for centuries (Lahiri-Dutt and Samanta, 2007). Local knowledge based on historical experience shapes individuals’ incentives to stay by providing solutions to emerging environmental problems. Many of the solutions developed “in place” by individuals and groups to adapt to such occurrences offer the potential for adoption in other contexts. For example, the *Bede* or ‘River Gypsies’ of Bangladesh have used their local knowledge and experiences over a long period of time to generate a (highly) reliable understanding of which rivers are currently navigable, facilitating their ability to maintain their way of life (Lasker et al., 2019). How to draw upon and utilise these insights therefore warrants further investigation given that the custodians of such indigenous knowledge, including marginalised groups like the *Bede*, are often excluded from mainstream development conversations.

The Bengal region of South Asia has also seen vast ‘trans-border’ population movements at Partition in 1947, during the 1965 Indo-Pakistan War and at the time of the Bangladesh Liberation War of 1971 (Mookherjee, 2011). In addition, there has been substantial international migration, including to the UK in the 1950s and 1960s (Farid et al., 2009). However, many individuals remained in place during this period. Some remained because they had little choice – as such, they were ‘trapped populations’ (Black et al., 2011). But many others made a deliberate choice to stay based on the importance of a range of factors, including place belonging and attachment and emotional connections to place (Lewicka, 2011). Indeed, the late Professor Jyotirmoy Guhathakurta – a humanist of Hindu origin and assassinated by the Pakistani Army in the period preceding Bangladesh’s Liberation War – chose to stay in place at the time of Partition because of his optimism for the future of a newly Independent Pakistan – and despite political turmoil (Guhathakurta, 2004). Moreover, if the focus moves to internal migration, there is also evidence of how many individuals have sought to remain *insitu* and resist agrarian dispossession in countries (such as Bangladesh) which have been subject to rapid urbanisation and the associated movement of populations from rural to urban areas (Paprocki, 2018; Li, 2009). Consequently, whilst these examples differ from the overall focus of this paper, the issues which they highlight have a strong resonance for understanding responses to climatic events. As such, staying in the context of climate change needs to be understood as a highly personal, contextual, temporal, relational, reflective and historical process that involves a constant weighing up of previous and current experiences in contrast to perceptions of future opportunities and challenges.

ii) Translocal Networks

The ‘throwntogetherness’ of place identified by Massey and Jess (1995) and Massey (1997) and how localities – and the experiences of

those within – are defined as much by ‘routes’ as ‘roots’ (Massey, 1997) emphasises translocal networks as one of the more important products of historical processes discussed above. Understandings of the importance of networks have informed life course theories which draw our attention to how lives can be linked over space and time (Coulter et al., 2013), articulating strongly with the concept of translocality, or local-to-local relations (Brickell and Datta, 2011). Thus given the recognition that the mobility practices of individuals, including “staying”, are shaped through ‘linked lives’ (Coulter et al., 2016), further research is required on how such interpersonal and translocal networks (Greiner and Sakdapolrak, 2013) function in relation to climate change and (im)mobility.

Moreover, the relative importance of ‘linked lives’ – whether in relation to families, friends or others – can also affect how resources and power may be unequally distributed between individuals and thereby impact ‘staying as adaptation’ strategies in the context of climate and environmental change. Remittances are of central importance here. Remittances can enhance social capital and trigger innovation, increasing the flexibility, diversity and creativity of individual and group responses to climatic stressors. In addition, the role of stayers in the exchange and transfer of remittances and the impact of remittances on resilience is a key area for further research. Financial remittances can provide stability for individuals – especially in the short term – to recover from climatic shocks and may improve the long-term adaptive capacity of households (Adger et al., 2002; Mortreux and Barnett, 2009; Scheffran et al., 2012). Social remittances, an emerging concept on immaterial transfer and exchange of knowledge, ideas, norms and practices (Levitt, 1998; Levitt and Lamba-Nieves, 2011) may also impact immobility decisions. Given that there is often a positive link between remittance receipt and subjective well-being, this may subsequently inform decisions by individuals to stay in an area despite the disruption and challenges which emerge from both short and longer-term processes of climate change.

Differential access to translocal networks means that the distribution of remittances is uneven within communities. However, more research is required on the extent to which such differentials become disrupted or entrenched. This includes a focus on the role of formal collective entities (in the form of community organizations) and more individualised local sociability in shaping the nature of such networks (social, political, kinship) and subsequent implications for resilience strategies focused around staying.

iii) Equity

Viewing communities as sites where access to sources of power and resources, including translocal networks, are unequally distributed and contested has the added benefit of bringing equity concerns into sharper focus. This is crucial to understanding staying as a deliberate agent-centred strategy in the context of climate change *vis a vis* something that is more involuntary. Gender and gendered social expectations provide a clear illustration of the importance of equity: staying can be voluntary but in certain social contexts, local expectations may serve to curb women’s desire to migrate (Arya and Roy, 2006). Indeed, environmental vulnerability and exposure to risks associated with climate change, especially in the Global South, can have a different impact on women (Alston, 2015).

As such, the subordinate position of women in many countries prescribed by a masculine society, coupled with a lack of access to resources can impact on (involuntary) decisions to stay in a climate risk affected area – for example in countries such as Bangladesh. This is reflected in our own ethnographic study in rural coastal Bangladesh where local women have suggested how their “*place belongs in the house, in my husband’s village, which is now mine. This is what women here do. My husband seasonally migrates, but I cannot do the same. That [mobility] is not for me, that is not how our society works*” (Tripathy Furlong et al., 2021). Moreover, gender constructions in a patriarchal society, where the male is traditionally positioned as being dominant within the household – and

which informs and shapes migration decisions and processes – need challenging. Both voluntary and involuntary actions of staying are shaped by norms and gendered social expectations, and with women being deemed as ‘homemakers’ in certain scenarios (Arya and Roy, 2006; Alston, 2015). Thus more research is required on the importance of equity and gendered social expectations and the ways in which women living in areas subject to climate change may deliberately stay through developing new knowledge, skills and resources, rather than being involuntary immobile.

Turning to questions of diversity in general and the need to avoid discrimination, the presence of demographic diversity – who lives in a place – and infrastructure diversity – the different features of a place (and which may / may not be reflective of local populations) can act as key reasons for staying. For some, the presence of religious diversity, gender diversity and linguistic and lifestyle diversity as being the norm may serve to attract individuals to stay, and to avoid perceived or actual discrimination elsewhere (see Pemberton and Phillimore, 2018). Such rationales and motivations need more exploration in different types of locations in order to either confirm or contradict existing work. For example, Butcher (2010) has noted how immigrants in New Delhi, India, divided the city into spaces of belonging where they could ‘fit in’, ‘be themselves’ and be with people ‘like me’. Is this the case for areas affected by climate change? Or are new perspectives required?

iv) Governance

Considering the relationship between networks and equity also leads to a need to fully engage with governance and the scaling of governance responses to climate change. To this end, our research agenda calls for further work on the importance of territorial (place-based) and relational aspects of governance, and how they may shape processes of staying. This includes the need to work across different scales of governance in order to avoid approaches which locate sources of resilience within a particular scale (or place) in question (Mackinnon and Derickson, 2013). Indeed, while ‘horizontal’ collaboration between public, private and non-profit actors may be important in shaping adaptation measures in the context of climate change, some argue that the effects of such activities will remain fairly limited without support from ‘vertical’ policies emanating from the state and ‘beyond the local’ scales of government (Bauer et al., 2012). Both, in turn, may facilitate resilience and adaptation of those subject to the effects of climate change, and in turn lead to individuals remaining within particular areas.

The need for a broader governance perspective is reflected – once again – in relation to the importance of remittances. We have already referred to the impact of both financial and social remittances on staying. In particular, the salience of social remittances has only been recently recognised and is therefore an area where further work is needed. In addition, the inter-relations between remittance behaviour and governance structures are significant yet relatively underexplored. For example, the recent move of an estimated 10 million Dhaka residents (Tribune Desk, 2020) back to their “home” villages during Bangladesh’s Covid-19 suppression measures highlights how internal remittance behaviour may be fluid and can work in both directions (i.e., it may involve ‘return’ remittance once a ‘shock’ has subsided). Such arguments reverberate in the context of governance responses which seek to mitigate the impacts of climate change as they highlight the need for governments and policy-makers to ‘craft’ scales of working that are multi-dimensional and which work across different places, drawing on resources from the international to the local.

Hence we propose a translocal lens (Greiner and Sakdapolrak, 2013) that captures the interconnectivity between places, people and institutions. However, further attention needs to be paid to the importance of ‘scale matching’ in developing governance responses that facilitate the adaptation and resilience of individuals and which may be important for ‘staying’ in the context of climate change.

4. Conclusion

The aspiration of people to ‘stay’ in the face of a changing climate is a vital and underexplored issue for academics and policy makers. Guided by the evolutionary approach to resilience, we propose a historicising perspective. This views current attitudes to moving and staying, as well as the resources to do so, as the outcome of previous patterns of mobility and impacts of climate-induced environmental change, unevenly distributed across diffuse and diverse networks of practice. In reality, people may re-negotiate and re-adapt to changes in the environment according to their ability and/or willingness to utilise and appropriate their resources, skills, knowledge and networks, and which may change over time. In so doing this highlights the importance of equity and a more nuanced conception of governance which identifies how populations are differentiated, and who may move or stay according to the importance of contemporary and historical local influences, as well as those beyond.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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