



Re-thinking the present: The role of a historical focus in climate change adaptation research



George C.D. Adamson^{a,*}, Matthew J. Hannaford^b, Eleonora J. Rohland^c

^a Department of Geography, King's College London, Strand, London WC2R 2LS, UK

^b Department of History, Utrecht University, Drift 6, 3512 BS, Utrecht, Netherlands

^c Department of Iberian and Latin American History, Centre for InterAmerican Studies (CIAS), Faculty of History, Philosophy and Theology, Bielefeld University, Universitätsstraße 25, 33615 Bielefeld, Germany

ARTICLE INFO

Keywords:

Adaptation
History
Path-dependency
Culture
Determinism
Development

ABSTRACT

There is a growing recognition that adaptation to climate change requires an understanding of social processes that unfold across extended temporal trajectories. Yet, despite a move to reconceptualise adaptation as ‘pathways of change and response’ with a deeper temporal dimension, the past generally remains poorly integrated into adaptation studies. This is related to a disavowal of environmental determinism within the academic field of history, which has caused the past to be addressed from other disciplinary perspectives within climate change literature, leading to accusations of over-simplification and neo-determinism. Conversely, whilst a relatively small amount of research within the subdiscipline of historical climatology has engaged with theories from mainstream adaptation to understand societies in the past, there has been little influence in the other direction.

Building on a comprehensive review and critique of existing approaches to historical climate-society research, we argue for three important areas where historians should engage with climate change adaptation. The first area we call *particularizing adaptation*; this is the development of long-term empirical studies that uncover societal relations to climate in a particular place – including climate’s cultural dimensions – which can provide a baseline and contextualisation for climate change adaptation options. The second, *institutional path dependency and memory*, argues for a focus on the evolution of formal institutions with a responsibility for adaptation, to understand how historical events and decisions inform and constrain practices today. Our third argument is for an appreciation of the history of ideas and concepts that underpin climate change adaptation. We call for a *second-order observation* – observation of the observers – within climate change research, to ensure that adaptation does not perpetuate historically-grown power structures.

1. Introduction

There is now a growing recognition that adaptation is constrained by social and cultural factors¹ and requires an understanding of values and knowledges (Adger et al., 2009a; Barnett, 2010; Biesbroek et al., 2013; Head, 2010), as well as of societal processes that unfold across extended temporal trajectories (Bankoff, 2003a; Fiske et al., 2015; Mauelshagen, 2013; Rockström et al., 2014). This has created an impetus for an integrated, humanities-focused approach to understand and inform climate change adaptation, particularly culturally- and historically-informed research (Adger et al., 2013; Allan et al., 2016; Brace and Geoghegan, 2011; Castree et al., 2014; Geoghegan and

Leyshon, 2012; Hulme, 2011a, 2015). Whilst adaptation has a growing focus in the more interdisciplinary field of historical climatology, in historical disaster studies – a field mostly covered by ‘classical’ historians – researchers hardly engage with the concept. Outside of these subfields, ‘historians’ (we use this term loosely to include all humanities researchers with a focus on the past, including historical geographers and anthropologists) have generally seen themselves as dealing with a past that remains separate from the present and have been weary of the determinism that the concepts of ‘adaptation’ and ‘climate’ have conveyed at various points through history. Where historical climate-society interactions have been discussed within climate research, this has therefore largely come from those without historical training.

* Corresponding author.

E-mail address: george.adamson@kcl.ac.uk (G.C.D. Adamson).

¹ We are aware of the issues around defining the word ‘culture’ and a full analysis of its usage in relation to adaptation is beyond the scope of this paper. In climate change adaptation research, it is usually defined as anything that can inform adaptation decisions but is not directly tied to livelihood or wellbeing shocks, e.g. values, beliefs, norms, identity, place-attachment. A fairly representative definition of its current usage within the field is provided in Adger et al. (2013, p. 112): ‘the symbols that express meaning, including beliefs, rituals, art and stories that create collective outlooks and behaviours, and from which strategies to respond to problems are devised and implemented’.

In this paper, we seek to elaborate on the important contribution that history should make to climate change adaptation research. Our narrative (written by two geographers and one historian) should be seen as a call both to adaptation researchers and historians to meaningfully engage with the contributions that studies of the past can make to climate change adaptation. We argue that a historical focus is vital; history has much to contribute by grounding adaptation strategies in long-term place-specific studies of climate-society interactions, by uncovering path-dependent processes, by ensuring that adaptations are equitable and do not reproduce historical power structures, and by exploring the role of social and institutional memory in informing or preventing adaptation. Our argument builds both on calls within ‘mainstream’ climate change adaptation literature (i.e. that included within the IPCC Working Group II reports) as well as experience from a range of disciplinary fields that have expressly analysed climate change in the past. We suggest three domains within which historical research could contribute innovatively to adaptation debates: particularizing adaptation, a focus on path dependency, and what we refer to as ‘second-order observation’. Our analysis begins with a review of historical approaches in mainstream adaptation literature, before reviewing explicitly historical approaches to adaptation within historical climatology and elsewhere, and finally, elucidating our three new domains.

2. Historical analysis in climate change adaptation research

2.1. Diverse approaches – shallow time depths

In recent years climate change adaptation research has shifted its focus away from model-based ‘predict-and-provide’ framings towards social science-led approaches. The majority of insights within this domain have derived from development studies, qualitative social research, policy studies and economics. In particular, social scientists have attempted to assess vulnerability and adaptive capacity to climate change (Füssel, 2007), identify barriers and limits to adaptation implementation (Adger et al., 2009b; Dow et al., 2013; Moser and Ekstrom, 2010), monitor climate change adaptation action (Brooks et al., 2011), uncover examples of ‘maladaptation’ (Barnett and O’Neill, 2010), examine traditional, indigenous or local knowledge (Berkes, 2012), and explore past and future adaptation pathways (Haasnoot et al., 2013; Haasnoot and Middelkoop, 2012; Wise et al., 2014). This has resulted in a loose coalition of foci and studies that have drawn insights from ‘the past’ to highly varying degrees (Table 1).

Recent arguments for a greater historical focus have derived partly from a critique of traditional indicator-based approaches, which tended to focus only on symptoms, rather than the more deep-rooted factors that develop over longer time periods (Hinkel, 2011; Pelling, 2011), and generally have yet to fully incorporate subjective factors that influence vulnerability (e.g. how climate knowledge is perceived and constructed) (O’Brien and Wolf, 2010). In a similar vein, few empirical studies that seek to identify barriers to adaptation have meaningfully engaged with the historical contexts out of which these constraints emerged. Although some theoretical contributions recognise that an actor’s ability to overcome a barrier depends as much on its temporal origin as the actor’s current capabilities (Brace and Geoghegan, 2011; Grothmann and Patt, 2005; Moser and Ekstrom, 2010; Shackleton et al., 2015), the majority of studies have instead focussed on asking ‘if’ and ‘which’ barriers exist (Biesbroek et al., 2013). Conventional conceptualisations of vulnerability have therefore been criticised as narrow, ahistorical, and as reinforcing the framing of adaptation as a set of ‘no regrets’ actions which reproduce existing modes of unsustainable or inequitable development (O’Brien, 2012; Pelling, 2011). The empirical literature has also been of limited value in uncovering and tackling deep-rooted problems such as path dependency (David, 1985; Pierson, 2000a), inertia and memory embedded within institutions and policy processes.

A more general criticism of adaptation research has been that it has tended to focus on problems rather than solutions (Ford et al., 2011; Maru and Stafford Smith, 2014). More recently, greater emphasis has been placed on ‘solution-oriented’ research, which is underpinned by the view that there is much to learn from adaptation that has already been implemented, and from monitoring and measuring its consequences (Arnell, 2010; Berrang-Ford et al., 2011; Engle, 2011). This includes efforts to uncover examples of ‘maladaptation’ (Barnett and O’Neill, 2010; Brooks et al., 2011). Yet, such assessments have still tended to measure adaptation practices against supposedly universal metrics, which has led to simplistic uses of the concept (Agrawal and Perrin, 2009). A lack of temporal depth in studies of maladaptation (e.g. Fazey et al., 2011; Heyd and Brooks, 2009) also makes it unclear as to how so-called maladaptive practices arose in the first place. Furthermore, the ability to monitor the outcomes of adaptation to climate change is limited, as many of these policies have been implemented relatively recently and thus offer few examples of what might be considered as ‘fully fledged’ implementation (Wise et al., 2014).

One area of adaptation research that has included a more unambiguously historical dimension is the literature on traditional knowledge (also local, indigenous or lay knowledge) (Berkes, 2012; Berkes et al., 2000; Brace and Geoghegan, 2011; Crate, 2011). This includes knowledge from decades and often centuries of ‘adaptation’ practices (Orlove et al., 2010), as well as cognitive aspects such as cultural memory of historical weather, climate and responses, and the way in which these memories shape perceptions of the future (Endfield and Veale, 2017; Thomas et al., 2007). Traditional knowledge has generally been poorly integrated into adaptation planning, while many cite the challenges of developing ‘shared narratives’ of future adaptation choices against the backdrop of uneven power dynamics and differing perceptions of weather, climate and its changes (Roncoli et al., 2010). Many studies have similarly cautioned against uncritical acceptance of the utility of traditional knowledge in the face of the “nonlinear and stepped changes” associated with climate change (Adger et al., 2011, p. 764; Wittrock et al., 2010). A mounting body of research within this field has nonetheless suggested that the integration and co-production of traditional and scientific knowledge can be a valuable mechanism in raising awareness of, and dealing with, climate-related uncertainty, and for reconciling the global scale of climate change with local-scale entanglements of weather and place (Brace and Geoghegan, 2011; Flint et al., 2011; Matless, 2016; Nakashima et al., 2012).

2.2. Adaptation pathways

Whilst a body of adaptation research has begun to recognise the importance of deeper temporal perspectives, this has mostly been driven by theoretical advances rather than systematic, empirically tested research. One exception is the emergent literature on adaptation pathways, or ‘pathways of change and response’, which has in part grown out of ‘pathways thinking’ in the sustainability science and development studies domains (Leach et al., 2010; Westley et al., 2011). Pathways thinking emphasises the need for radical approaches to understand and address the causes of vulnerability and to develop strategies for sustainability, underpinned by the view that the uncertainty of climate change projections over long timeframes may remain incompletely understood well into the future. In this respect, adaptation pathways takes the view that climate change adaptation is an ongoing process that is managed over time by committing to shorter-term actions embedded within clear long-term visions. The use of adaptation pathways in practice has largely drawn upon the use of ‘route maps’ as a means of conceptualising future adaptation options (Haasnoot et al., 2013; Rosenzweig et al., 2011; Yohe and Leichenko, 2010). This has been questioned in certain decision contexts, particularly those where the trajectory of the system is heavily influenced by the past, where goals for adaptation are contested, or where prevailing governance

Download English Version:

<https://daneshyari.com/en/article/7469116>

Download Persian Version:

<https://daneshyari.com/article/7469116>

[Daneshyari.com](https://daneshyari.com)