Strangers on a Strange Planet: On Hospitality and Holocene Climate Change

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"Jakob, try to be buried in a ground that will remember you" commends the Greek geologist Athos to the young Polish Jew who has lost his family, his people, his homeland to the Holocaust (Michaels 1997: 76). The ground that might come to serve the boy well is not a land where blood or filiation is rooted in soil, for it is such imaginings of an earth and a people that have shattered Jakob's world. What it might better be, if I have any handle on the story, is a place that is willing to take him in and give him support. Somewhere that will accept the child in his damaged and grievous state and not just because of what he has to offer or the solid citizen he might become. A place and a people, that is, that will nurture his stories and keep watch over his memories as well as providing the resources for a viable future.

A story of trauma, refuge and recovery, Anne Michael's novel *Fugitive Pieces* (1997) might also be one of the first great literary expressions of the Anthropocene, though the book arrived just in advance of the concept. For the *Fugitive Pieces* of the title refers not only to the fracturing and rootlessness of diasporic lives but also to the disjuncture and mobility of the earth itself. It matters profoundly that the one who rescues Jakob and shelters him on the Ionian island of Zakynthos is a geologist. Athos becomes not only the boy's guardian but also his guide to another ground, another earth. In Jakob's voice: "Even as a child, even as my blood-past was drained from me, I understood that if I were strong enough to accept it, I was being offered a

second history …. I sat near him while he wrote at his desk, contemplating forces that turn seas to stone, stone to liquid" (Michaels 1997: 20).

Athos's accounts of deep geological time and the transformations of the earth – "the great heaving terra mobilis" - help open the boy's drastically reduced horizons, offering imaginary resources to draw Jakob away from his lost past and precarious future (Michaels 1997: 21). This is not an earth that is expected to provide the stability that the social world has so fearfully failed to deliver. The lesson of Athos's geology is that the earth shudders and wrenches itself apart, time and time again, and yet it endures: "The landscape of the Peloponnesus had been injured and healed so many times, sorrow darkened the sunlit ground". (Michaels, 1997: 60). Rather than pandering to the illusion of solidity and untroubled belonging, this is a geological imagination that encourages us to see that upheaval, dislocation, starting over is the way of the world. As Jakob recounts: "I could temporarily shrug off my strangeness because, the way Athos saw the world, every human was a newcomer" (Michaels, 1997: 103).

Today, we hardly need reminding, traumatised and uprooted people are again finding their way to Greek Islands and the surrounding littoral. Once more, as in Hannah Arendt's diagnosis of the interwar and wartime upheavals of Europe, the refugee appears as "the most symptomatic group in contemporary politics" (1973: 277). Like the boy, Jakob, the refugees Arendt spoke of were deprived of rights and exposed to persecution by the same logic through which states operated and legitimated themselves. And in this way, beyond the immediacy of their predicament or the immensity of their numbers, the very existence of exiled, stateless people revealed deep cracks in the continuum of nation-territory-state.

But are today's refugees symptomatic in the same way? For those fleeing the Syrian conflict, a case has been made that long years of drought - partially attributable

to climate change - have decimated rural livelihoods, accelerated rural-urban migration and exacerbated political dissatisfaction (Gleick, 2014, cf Selby and Hulme, 2015, see also Selby 2014). Others have argued that climate-related global grain shortages and resultant food price hikes served as a `threat multiplier' in the Arab Spring uprisings (Johnstone and Mazo 2011: 15). Reports estimate that 70% of slum dwellers in Dhaka, Bangladesh have previously experienced some kind of environmental shock that bears the mark of climate change (Cities Alliance, 2016). And so on across the world's agrarian regions: poor harvests, rainfall deficit, intensified cyclone seasons – one more reason to move, temporarily or permanently, to the nearest city or the distant labour market.

Commentators on the question of climate-induced mobility have long noted the lack of a clear political-legal definition of the climate refugee or migrant (Lazarus, 1990; White, 2011). Most add that a big part of this equivocation lies in the difficulty of distinguishing the impact of climatic or environmental change from a tangle of other motivations to move. These challenges may well prove intractable, for the problem of identifying a distinctive climate signature sooner or later opens up to the question of what exactly the earth is doing at any moment. Or as I put it some time ago: `The inherent dynamism of earth processes - the `geo' in the geopolitical - raises the possibility of displaced populations whose cause of unsettling defies final determination' (Clark, 2003: 7).

These are issues that are not necessarily becoming easier to resolve as the scientific study of the earth advances. Over the last half-century or so, geoscience orthodoxy has been developing a new appreciation of the complexity, dynamism and indeterminacy of earth processes. As paleontologist Richard Fortey sums up: `the story of our understanding of the face of the earth has been one of increased freedom of movement' (2005: 237). This story is far from over. Still reverberating through the

natural sciences, *terra mobilis* is beginning to rumble beneath the social sciences and humanities, raising questions not only about what it means for humans themselves to mobilise, but also - as Anne Michaels' Athos would surely add - what it means to try and make oneself at home.

It does not take a restive planet to trouble the idea of home. As Arendt noted, it is the conviction that political order ought to be premised on a unitary or self-consistent identity that has made so many people into strangers in their own homes (1973: 299-232, ch 9; Dillon 1999: 109-110; Larking, 2014: 31-2). The link between nation and natality - the idea that birth out of a shared soil imposes a bond between peoples, Arendt and many subsequent political thinkers have insisted, systematically excludes those who appear to have sprung from a different earth or those for whom the common substrate has somehow failed to do its filial bidding (Arendt, ch 9; Agamben 2000: 21). As Michael Hardt and Antonio Negri put it, "'the nation-state' is a machine that produces Others" (2001: 114). The prevailing critical response to this predicament has been to show that human identity is inherently complex, multiple, heteronomous – a discursive complication of self-sameness that disavows any sense that social beings are 'somehow rooted in the land, as if they needed the soil' (Kieserling, cited in Beck, 2000: 80–1).

But as a critical gesture, extirpating social or cultural identity from the earth is no longer as convincing as it once as. For today, the earth itself is beginning to appear every bit as divisible, heterogeneous, and non-self-identical as the social beings jostling on its surface. While the Anthropocene thesis has drawn attention to the capacity of collective human agency to impact upon earth processes, perhaps the more profound message of the science behind the idea is that such changes are possible only because of the multiplicity that inheres in the earth system – at every temporal and spatial scale. In the words of stratigrapher and Anthropocene working group

chair Jan Zalasiewicz: 'the Earth seems to be less one planet, rather a number of different Earths that have succeeded each other in time, each with very different chemical, physical and biological states' (cited in Hamilton, 2014: 6). And it is in this regard that - just as the borders between nation-states have long been scenes of drama and conflict - the thresholds between one operating state of the earth system and another are emerging as sites of significance and contention (Clark, 2013; 2016).

As geologists tell us, discernible differences between the strata that make up the earth's crust provide evidence to tell a story of successive transformations in the earth system. But if the nation-state is indeed `a machine that produces Others', what might it mean, politically or ethically, to inhabit an earth that is `a gigantic machine for producing strata'? (Zalasiewicz, 2008:17). Or to put it another way, if the symptomatic figures of 20th century politics were the ones who found themselves straddling cultural-political fault-lines and borderlands - what are we to make of those who are caught on the threshold between states in the earth system? How do we begin to make sense of and respond to those who are pressed between a machine for producing Others and a machine for generating the very structure of the earth itself?

One of most promising aspects of the Anthropocene debate is the way that it is bringing social thought into an encounter with other geological epochs and eras. At very least, a more informed sense of the Holocene – an imagination encompassing millennia rather than mere centuries and decades – may be one of the gifts of Anthropocene geoscience. Though already such a span is anticipated by Gilles Deleuze and Felix Guattari who, with Fernand Braudel as their guide, showed that the genealogy of any social phenomenon merges into geology if we pursue it far enough (1987: ch 3). Rather than seeking to disentangle climate from other variables at play in human migration, I want to push back well into the Holocene, and explore the possibility that climate and its incitements to mobility *are even more deeply*

implicated with politics, ethics and culture than we usually imagine.

Most of all what interests me here is the experience of being `unworlded' by environmental change and the question of how we encounter those who have been `othered' by their very world becoming strange. How does the predicament of being, in the words of the ancient middle eastern Book of Exodus, `a stranger in a strange land' (2: 22) – relate to the emergent scientific idea of an earth that is volatile, multiple and discontinuous - or indeed to older and enduring understandings of the variability of earth and cosmos? To put it another way, in what sense is exposure to changing climate – now and in the past – a scene of responsibility or of hospitality? The poignancy and power of Michael's *Fugitive Pieces* lies not only in the way that it brings estrangement wrought by the pathologies of political ordering into conversation with the ongoing strangeness of the earth, but that in the midst of these vast machinations of state and planet the value of single human life is affirmed. If `the face of the earth' has indeed become `one of increased freedom of movement', what might this mean for the way we perceive the face of the one whose movement or immobility has become anything but free? There is, of course, no answer to this. But it opens new questions, and it keeps the questions coming.

Social Thought and *Terra Mobilis*

Coming of age in the 1990s, claims that global climate change would at some point in the foreseeable future trigger vast waves of refugees helped put climate-induced dislocation on the political agenda (see Myers, 1993, 2002). These so called `alarmist' approaches have subsequently been subjected to displacement of their own (see Piguet, 2013: 154-6). Taking issue with the monocausality of climatic drivers and wary of the resurgence of discredited environmental determinisms in such work, critical climate migration research has turned to closer-grained studies of the motivating, enabling and constraining factors behind human mobility (Piguet, 2010,

2013; Bettini, 2013). In the more `pragmatist', multivariate accounts that come out of this turn, environmental variables tend to be carefully contextualized within an encompassing framework of mutually entangled socio-material processes. As Etienne Piguet characteristically concludes: `Except in extreme cases, population displacements are always the result of a multicausal relationship between environmental, political, economic, social, and cultural dimensions' (2013: 517). Or in the words of Warner, Hamza, Oliver-Smith, Renaud and Julca, more pointedly resisting any implication climatic determinism: `human agency is at the center of environmental change and the potential to respond to it' (Warner *et al* 2010: 692).

Along with other work in the genre, Warner and her colleagues' disavowal of climate as an independent or exogenous force in social life can itself be seen as an expression of a prevailing ontological position as much as it is a summation of available empirical evidence. Piguet (2013), in his insightful survey of the vacillating fortunes of environmental variables in migration studies over the last century, observes that the weighting afforded to climatic-environmental factors at any moment tends to reflect broader disciplinary trends. That is, the ebb and flow of the explanatory role attributed to the natural environment as a trigger to migration is itself conditioned by longer wave shifts in the relative significance given to physical and social variables in human geography and cognate social sciences (Piguet, 2013: 156-8). The importance of Piguet's point should not be underestimated, given that the relationship between the human and the nonhuman in critical social thought is by no means settled. For it raises the possibility that the ontological and epistemological commitment to more multivariate or `climate minimalist' positions in recent critical migration studies themselves belong to a historical – we might say geo-historical - moment that may well turn out to be provisional.

For more than two decades, social scientists and humanities scholars across a

range of disciplines have shown increasing willingness to account for the agency of nonhuman or `more-than human' actors in the composition of social life. Over this time, the idea that no single type or category of agency – whether physical or social - ought to be privileged in the construction of the social has gravitated towards the mainstream - as has the insistence that the domains formerly referred to as `society and nature' should be seen as mutually implicated and co-constitutive (see Clark, 2011: 30-6). Such a `settlement' of the society-nature question provides a broad ontological-epistemological framework for the study of climate migration, as it does for the critical social study of a host of environmental and technological changes. It is notable, however, that until very recently geological or geophysical factors have rarely received sustained theoretical consideration in the refiguring of society-nature relations. The reasons for this are complicated, although - at risk of simplification - it would seem that the pronounced ways in which earth processes exceed the span and scope of human existence makes them difficult to fully subsume into conceptual frameworks centred on inter-implication and co-enactment (Clark, 2011 7-11; 36-40).

But social thought's evasion of close encounters with earth science – in contrast to the inspiration it has taken from biology, linguistics, psychoanalysis, complexity studies and even mathematics - is remarkable when we consider the dramatic transformations that have occurred in scientific thought about the earth over the last half century or so. As historian John Brooke recounts, the years 1966-73 alone saw the emergence of four major new perspectives on the dynamics of the earth and the trajectories of terrestrial life: the confirmation of the theory of plate tectonics, a new appreciation of role of extra-terrestrial impacts in shaping in the planet's history, the thesis that evolution was `punctuated' by catastrophic bursts linked to major geophysical events, and the beginnings of the idea that the different components of the earth functioned as an integrated system - as expressed in the Gaia hypothesis and

earth systems theory (2014: 25-28, see also Davis, 1996).

What these increasingly convergent paradigms succeeded in doing, Brooke and others have argued, was both to shake up the idea of gradual, incremental change that had reigned since the mid 19th century and to overcome the separation of different disciplinary fields (2014: 25-8; see also Davis, 1996). In retrospect, this perhaps overdue burst of scientific innovation provided the basis for the coming together of an older stratigraphic geology and burgeoning earth systems science that is now at the core of the Anthropocene hypothesis (Clark, 2016). Those of us in the climatic change slow lane that social sciences have occupied should keep in mind too that from the 1960s onwards scientific research into human-induced global warming has been playing a significant role in the evolving understanding of complex, dynamic and integrated earth processes.

In the light of these revolutionary changes in earth or planetary science, we would do well to dwell on Piguet's `except in extreme cases' proviso - in his demurring from an independent or dominating role for environmental change. Whether we look forwards or backwards, the idea of extremity as an exception may need to be reviewed – a possibility that some climate migration researchers have begun to take on board in their more speculative explorations about the contours of climate-induced displacement in 4 degree warmer world. As paleo-environmental researcher Nick Brooks points out, the `minimalist orthodoxy' - with its definitive reluctance to identify climate as the major driver of migration, `is most heavily informed by studies of livelihoods and migration undertaken within the context of development studies, since the 1950s' (2012: 94). But as Brooks reminds us, if we want to find an analogue of global mean surface warming of the 3 °C or so now predicted for the latter 21st century, we need to go at least as far back as the mid-Pliocene – a journey of some 3.3 million years that takes us to time well prior to the

emergence of the genus *Homo* (2012: 94; see also Hayward et al, 2013).

If social thinkers are to give due consideration to the meanings of `extreme', so too do we need to be mindful of the evidence of abrupt climate change that has been mounting since the 1980s (Broecker, 1987; Alley et al, 2003). An heir to the convergent revolutions of which Brooke was speaking, the discovery of abrupt or runaway climate change has been one of the most significant scientific surprises of recent decades. As climatologist Richard Alley puts it: 'for most of the last 100,000 years a crazily jumping climate has been the rule, not the exception' – a discovery that has `revolutionized our view of Earth' (2000: 120; 13). It is this understanding that the global climate system has a propensity to rapidly tip from one state to another that is the crux of the more encompassing notion of a complex, dynamic earth system with multiple possible operating states – expressed earlier in Zalasiewicz's point about successive earths with very different physical conditions.

Over recent decades critical thought has generally held modernity's grand nature-society ontological divide to blame for the social science and humanities' conventional reluctance to account for nonhuman agency. What ought to be added to this diagnosis is that the long-reigning gradualism of the earth sciences had planetary processes lumbering slowly enough not to perturb social thought's assumption that the dynamics of social life were played out on an stable platform. Today, with the Anthropocene thesis gaining wide publicity and the concept of climate tipping points well ensconced in the vernacular, the notion of earth system change is making inroads into social thought (Clark, 2014; 2016). Though there is still a tendency to envision earth system change as a one-off `apocalyptic' event in some quarters, the sense that episodic state-switching or regime change is an *ordinary* aspect of physical systems at many scales is beginning to insinuate itself in social and cultural thinking. And in this context, relational ontologies hinging on society-nature co-constitution are being

nudged in the direction of more asymmetrical imaginaries in which the earth and cosmos are viewed as an unstable ground of social existence rather than as mutually present co-actors (Clark, 2016; 2011; 40-50).

A useful gauge for this shift is the `Gaian turn' in the work of Bruno Latour. Latour, who has often been a touchstone for ontologies and epistemologies that position human and nonhuman actors in mutually-generated networks, is increasingly speaking in terms of a `geo' that is the antecedent and subtending condition of what we have tended to call the natural and the social. 'The prefix "geo" in geostory does not stand for the return to nature, but for the return of object and subject back to the ground – the "metamorphic zone"' as he recently put it (2014 16). More broadly, commentators are now detecting a `geologic turn' or `fold' in the social sciences and humanities – a new appreciation of the dynamism of the earth that both recognizes the geologic agency of (certain) human populations and acknowledges that such social forces emerge late on an always already volatile planet (Chakrabarty, 2008; Cohen, 2010; Turpin, 2011; Yusoff, 2013).

This sense that the earth and its constitutive systems are the condition of possibility of human social life has important implications for conceptualizing climate migration. With the unsettling of ontologies that privilege human-nonhuman inter-implication, climate change is permitted to be something other than one variable or factor amongst many. An ex-orbitant earth (Clark, 2016) - a planet that is never quite at one with itself - while it may not be able to shake off the totality of life that is part of its systemic functioning, most certainly has the potential to withdraw its support from specific populations of living beings. But such avowals of unmitigated inhuman force can easily encourage grandiose and melodramatic thinking: the kind of sweeping gestures that leave little space for the valuing of a single life. A planet that can become strange to itself, an astronomical body capable of unworlding its own

inhabitants, I want to suggest, is also one that throws strangers into each other's paths. And just as the earth can stray from its orbit, so too can strangers draw each other out of their usual orbits. Turning now to a deeper history of climate-induced displacement, I will also be attempting to make room not only for human agency but for a passivity or receptiveness that might be seen as exceeding the very capacity for action.

Holocene Geo-politics

`Athos - Athanasios Roussos – was a geologist dedicated to a private trinity of peat, limestone, and archaeological wood' as Michaels describes her protagonist. `But like most Greeks, he rose from the sea' (1997: 19). And she precedes to tell the story of Athos's mariner ancestors who passed down to him an understandings of the globes' watery interconnectivity (see Goldberg, this volume) - setting the scene for his own enthrallment with the slower flow of stone, continents, ocean basins.

Jakob is not the only one who is offered refuge on Zakynthos. When the Germans invade, the island's Jewish population is spirited away by their Christian townsfolk to lofts, cellars and caves. Michaels' tale has a factual heart. History tells us that when the island's civic authorities were ordered by the Nazis to produce a full register of the Jewish population, the bishop handed over a list comprising just two names, his own and the mayor's. Safely hidden, every one of the island's 275 Jews survived the Holocaust (Goldberg, 2009). Just as real is the quake that in the story eventually demolishes the house in which Athos shelters Jakob during the war: the great Ionian Earthquake that struck the island in August 1953 destroyed infrastructure and state archives, and left only three buildings standing in the city of Zakynthos.

Long before the Greek Islands found themselves playing host to the refugees from the Syrian conflict, well before the events of World War Two, Zakynthos had a reputation for welcoming strangers. `Venetian soldiers, refugees from

Constantinople, the Peloponnese, Athens and Crete settle in Zante (Zakynthos) and turn it into a melting pot', accounts tell us, its communal life, cultural forms and built space taking shape as a compendium of elements brought by strangers who came to stay (zante-paradise.com). And earlier still, Greece itself - its peninsulas and islands reaching like gnarled fingers into the eastern Mediterranean - had long been a destination for strangers from over the sea. Even on the mountainous mainland of Greece, the sea is never more than 100 km from land, philosopher Rudolph Gasché reminds us, adding that right across the Aegean Sea, land or islands never fully slip out of sight. `Each point of the topological space of Greece is pulled inside out, as it were, by its openness to the sea, that is, to the fluid medium, in which encounters with the other, the stranger, can occur' observes Gasché (2014: 85). In the ancient world, he continues, `(t)hese factual conditions attracted the landless strangers from the Orient' (2014: 87). It is the presence of these `others' in the ancient polis, writes Gasché, that makes the stranger such an important theme in Greek philosophy. Indeed, as Nietzsche pointed out, these foreigners made up a significant number of the very first philosophers of the Greek tradition (Gasché 2014: 86).

In Gasché's book-length exegesis of Deleuze and Guattari's (1994) difficult text on geophilosophy, the question of why there might be `landless strangers from the Orient' is not pursued. Neither is the stranger a prominent theme in Deleuze and Guattari's own work, aside from their framing of the nomad as `Other' to sedentary state-dominated peoples (1987: 413). What Deleuze and Guattari *have* explored in some detail is the emergence of state-level social formations in the alluvial valleys of the ancient Middle East – where the first states form or `territorialise' around the capture of the matter-flow of the soil (1987: 412, 427-8). Michel Serres (1995) provides a simpler and rather more accessible version of the idea that territory is a process, an ordering device that cuts into and stabilises an earth that is in motion.

Speculating about the origin of both law and politics – at least in the western tradition – Serres goes back to the ancient `geometers' whose task was to measure out the alluvial soils laid down by the annual flooding in the river valleys. In response to `the great primal or recursive rising of the waters, the chaos that mixes the things of the world' comes the process of ordering: the demarcating and reapportioning of freshly sedimented soil `out of which politics and laws were born' (1995: 53).

Like Deleuze and Guattari, Serres is beginning to engage with the idea of complex, self-organizing physical systems. While Deleuze and Guattari seek to ground thought in the openness and dynamism of the earth - proposing that all philosophy sets out as *geo*philosophy (1994: 95), for Serres all politics is ultimately *geo*politics – not in the old manner of great games played out across the global space but `in the sense of the real Earth' (1995: 44). While both these interventions look prescient in the light of the contemporary geological turn in social and philosophical thought, there is also a sense in which the continued development of the geosciences over the intervening decades now offer empirical detail to thematics that Serres along with Deleuze and Guattari broached in more speculative ways. Taking advantage of a novel ability to reconstruct the rhythms of past climate, archaeologist and paleoclimatologists are now in sustained conversation – making it possible to establish close correlations between significant societal transformations and specific climatic events (Brooke, 2014: 134; Kennett and Kennett, 2006: 69).

Equipped with new understandings of the seesawing climate fluctuations of Pleistocene and their extended aftermath, climate scientists remind us that the exit from the last glacial maximum was anything but smooth. Between 15,000-6000 BP (before present), sea levels rose by 120-130 meters, resulting in extensive submergence of coastal land (Nunn, 2012). The Middle Holocene – especially the period around 6400 BP and 5000 BP – was a time of relatively rapid climate and

environmental change associated with a global shift from the warmer, more humid conditions of the early Holocene to a regime characterized by cooler temperatures in the higher latitudes and enhanced aridity in the lower or tropical latitudes (Brooks, 2012: 94). In terms of contemporary climatology, what takes place is decline in solar radiation caused by cyclical changes in the earth's axis of rotation – which is processed through the nonlinear dynamics of the global climate system, eventually resulting in an abrupt reorganization of the planet's climatic regime. Some time around 5200 BP, after a series of smaller stepwise changes, climate goes over a threshold or tipping point. Although it has different effects in different places, the signature of this `Mid Holocene Climatic Transition' shows up more-or-less synchronously in environmental records from across the Middle East, Africa, China, South America and Europe (Brooks, 2012: 95).

There is now substantial evidence linking the Mid Holocene Climatic Transition to the shift from small, relatively egalitarian villages based on subsistence agriculture to large fortified urban centres with intensified social stratification and administrative hierarchies. This correlation between abrupt climate change – manifest as enhanced aridity - and the emergence of the first `state societies' has been most fully documented in the case of southern Mesopotamia, but similar patterns have been observed in the Nile Valley, central Sahara, north-central China, the Indus region in South Asia, and coastal Peru. (Brooks, 2012: 96-99; Kennett and Kennett, 2006: 79). The evidence from Mesopotamia points to the drought-induced abandonment of many smaller villages and the rapid growth of settlements in the southern riverine floodplains - with the population in and around the city of Uruk-Warka growing an estimated ten-fold over the course of the climatic transition (Brooks, 2012: 98).

While it is the development of intensive irrigated agriculture – closely tied to the rise of state administration of labour, land and produce - that enables larger

populations to be supported, the expansion of the floodplains themselves is dependent on the deceleration of sea level rise (Kennett and Kennett, 2006: 90). But this process of post-glacial sea-level rise – or `marine transgression' – adds another whole level of chaos and dynamism to Serres' mythopoeic account of the annual redistribution of alluvial land, for the very deltas and floodplains in question are likely to have still been undergoing formation during their nascent marking out. There is a vital precursor to the aridity-driven urban growth on the Southern Mesopotamian alluvium, Kennett and Kennett (2006) argue, which is the earlier consolidation of settlements driven by the final surge of sea-level rise. Prior to the Mid Holocene Climatic Transition, coastal land in the Arabo-Persian Gulf - whose attraction lay in its rich marine resources - was still retreating at a rate of around 100 meters a year: `Optimal freshwater and estuarine environments continued to shift inland, displacing human populations' observe Kennett and Kennett. `This dynamic mosaic would have stimulated increased competition for localized and circumscribed resources and the need to constantly redefine territorial boundaries and village locations as rapidly as within a single generation' (2006: 88). Over time, it also had the effect of concentrating populations in those urban centres such as Eridu or Ur that were on higher, more stable ground.

Mesopotamia is of course just one example, albeit the most intensely studied of ancient regions - and explanations for the rise and fall of its urban-centred empires remain highly contested. As is the tendency in contemporary critical climate migration studies, most paleo-environmental researchers now prefer multivariate approaches over monocausal accounts. Climate change, scholars acknowledge, had markedly different effects at different times and places. It may even have incited near opposite responses: urban consolidation in one location, more pastoral mobility in another (Brooks, 2012: 100). And yet, when all the variation is taken into account,

there is a pronounced willingness in the telling of these paleo-stories to conceive of environmental change as an endogenous and context-setting force (Kennett and Kennett 2006: 68; Brooke, 2014: 267).

Many archaic societies appear to have been resilient in the face of changing climate, at times achieving remarkable durability (Brooke, 2014: 266-7). But there are decisive moments - discernible thresholds – at which climate and environmental change arrives with a speed or intensity that exceeds coping strategies. In the last 4 millennia BC, Brooke concludes: `the trajectory and pulse of climate change provided one of the fundamental variables in the human condition, establishing the boundaries within which life was conducted' (2014: 317). When these boundaries were crossed, especially during the abrupt climate change episode just over 5000 years ago, the impacts were momentous and widespread. On an earth that was itself carrying out `a movement of deterritorialization on the spot', in the words of Deleuze and Guattari, (1994: 85), the option for many populations seems to have been either abandon their existing settlements or perish. And what mobilization most often implied was an encounter with others.

Hospitality and the Climate Migrant

There are three points I want draw from this all-too-brief engagement with the ancient world – more in the manner of provocations than conclusions. The first is that there is strong evidence linking climate change and its environmental effects to the emergence of state-level societies. As Brooke sums up: `boundaries and gradients in geography and climate, in space and time, form the essential root condition of circumscription that shape the timing of the pristine emergence of the state' (2014: 210). If this is the case then climate is not simply a supplement to politics – as we imply today when we speak of `climate politics' or `climate governance.' It would be, rather, an originary

complication of the political as we have come to understand it in western discourses - and perhaps much further afield. In this sense, the very idea of a specialised system of rule and administration with jurisdiction over a population and a section of the earth's surface cannot be understood in isolation from climatic-environmental variability in the earth system. In a word, politics from the outset is always already climate politics or geo-politics

The second point is closely related. Gasché's passing comment about `landless strangers from the Orient' (86) speaks of the ancient Greek milieu but arguably opens out into a much more generalised predicament. What paleo-environmental evidence suggests is that when climatic change – gradual or abrupt - exceeds a threshold, people attempt to relocate: there is `out migration, in migration, population agglomeration in refugia' as Brooks sums up (2012: 101). While some of the growth of settlements in fertile, well-resourced locations would have been endogenous, a large proportion seems to have resulted from migration from unviable areas. That is: `the southern alluvium attracted huge numbers of migrant peoples over the course of these millennia, either as refugees, or as transhumant peoples looking for better land' (Brooke, 2014: 210; see also Johnson, 1988). Climate migration, then, is not just a problem that polities has had to confront. It is intrinsic to the emergence of urban centres and their governance systems.

Which brings us to the third point. If those who have been estranged by climate change have a significant presence in the earliest cities, then we might also view the question of who or what is a stranger, and of how to treat the stranger, as taking on a constitutive role in urban social and political life. The stranger is present, and troubling in their presence, not only in Athens or Zykanthos, but in Uruk, Eridu or Ur – wherever there is a rural hinterland, which is to say in every premodern city. Or as Jacques Derrida liked to put it: `Hospitality is culture itself and not simply one

ethic among others' (2001: 16). Hospitality is at the heart of culture for Derrida, because it concerns `one's home, the familiar place of dwelling': because it involves not only how we relate to others but how we relate to the otherness within ourselves – the strangeness within or the possibility of any of us of becoming estranged.

There are many ways that any one of us might lose our sense of dwelling, of being at home amongst family, friends, neighbours or being at one with ourselves. But what the paleo-story of climate change and displacement reminds us is that the experience of the physical world withdrawing its support is a primordial form of estrangement, and thus likely to be an originary incitement to hospitality. As we have seen, Serres speculates that it is the swirling chaos of the flood and its deposits that prompt the decisions or demarcations `out of which politics and laws were born'. But so too from the encounter with this worldly chaos - a chaos capable of unworlding as much as it renews the world - comes the appeal to suspend those boundary markers, to open the gate or the door, to be admitted to what is – at least for now - a more secure world. Alphonso Lingis, one of few thinkers to acknowledge the instability of the earth as a primary incitement to ethical relating, put its like this: `You ask of my hands the diagram of the operations your hands are trying to perform, and ask the assistance of my forces lest yours be wanting. But you ask first for terrestrial support. The fatigue, the vertigo, the homelessness in your body appeal for support from my earthbound body, which has the sense of this terrain to give' (1994: 128-9; see also Dikeç *et al* 2009: 12).

Whether or not this terrain is offered, how and with whom it is shared, I am suggesting, may well be one of the inaugural questions in the cultural, politico-juridical, and perhaps economic formations of the ancient settlements of the alluvium. For these were the centres that functioned, in biological terminology, as `environmental refugia': sites of relative stability during episodes of climatic change

that attracted environmentally stressed people. Hospitality – the question of the stranger – arises in many, if not all cultures. But it is approached with particular ardour in the Middle East - where it is has been described as 'a burning in the skin' inherited 'from the father and the grandfathers' (Shryock 2009: 34). If as an inheritance, hospitality seems to recede into an irretrievable past, it is certainly prominent in the books of the Old Testament, which counsel: ` the stranger that dwelleth with you shall be unto you as one born among you, and thou shalt love him as thyself' (Leviticus 19 34). And again, hinting that famine or hunger may be at issue: 'And when ye reap the harvest of your land, thou shalt not wholly reap the corners of thy field, neither shalt thou gather the gleanings of thy harvest….neither shalt thou gather *every* grape of thy vineyard; thou shalt leave them for the poor and stranger (Leviticus, 19: 9-10; see also Deuteronomy 24 19-21).

Noting the speed at which the waters advanced in the Arabo-Persian Gulf prior to the sea level stabilization of the mid-Holocene, Kennett and Kennett ponder if biblical flood mythology may have originated in southern Mesopotamia (2006: 83). Though as Peter Sloterdjik conjectures, the tale of the unworlding flood and the subsequent refounding of social life: `probably constitutes the most important shared memory trace in world cultures' (2014: 238). It is after the chaos of the flood and its related environmental upheavals, `after the annihilation of nature by nature' as Sloterdjik puts it, that human agents fully take upon themselves the responsibility of shoring up, framing, shaping their own worlds – of rendering the inhospitable environment livable (2014: 240). This is why, for him, city building is originally as much a symbolic as a material process. Though paleo-climatic change is not Sloterdijk's primary concern, his argument that the stark verticality of the walls of the ancient Mesopotamian city - far in excess of merely defensive needs - are preeminently a gesture of permanence or durability resonates with the idea that cities

rise and consolidate in the very face of environmental instability (on Sloterdijk, see Saldanha, this volume). And for the one who has been estranged by the transience of the cosmos, we might further speculate, the iconic obduracy of the city wall may well serve as an attractor as much as an impediment.

While the architectonic appeal of the urban to the agrarian precariat may itself be proving remarkably enduring, we might also look to the emergent concern with identifying thresholds in earth systems and protecting them with non-transgressible `planetary boundaries' as our own era's grandiose gesture in defiance of a once-more-upheaving cosmos (see Rockström *et al* 2009). What the figure of the planetary boundary seems to be seeking to materialise is the understanding that the earth itself is something more and other than a unified, undivided, self-consistent planetary body. Henceforth it is no longer the community, the city, or even the nation-state that stands as the scene of openness, permeability and transgression, but the very state of the earth. In this sense, it is worth recalling that the notion of hospitality for Derrida refers not simply to an ideal or a directive, but to an `essential structure' of exposure to the arrival of the other or otherness – which is to say, the spatio-temporal modality of *`non-contemporaneity with itself of the living present'* (2005: 143, 1994: xix authors italics). And that disjuncture, that state of being temporally out of joint, poised always between an irretrievable past and a future-to-come, seems now to extend to the very earth.

But how might we be hospitable to the coming of a novel state of the earth system, to the passage over a threshold into what is now shorthanded as the Anthropocene? This is also a question, I have been suggesting, of how we inherit and rework ethico-political-juridical conventions for which the radical unworlding of climatic extremity may be an originary complication. As Derrida has often insisted, the unconditional side of welcoming the future necessarily involves openness,

receptivity, a kind of passivity, even as it calls for the conditionality, the action of decision-making, an informed and calculated response (2005: 145; see Dikeç *et al* 2009). Already, in the ancient cities of the Middle East we see the often draconian measures of the emergent state: `policies intended to ensure social stability and secure access to resources' in the face of uncertainty (Brooks, 2012: 96) that are perhaps the very inauguration of centralized economic policy-making. But so too do we catch a glimpse of an encouragement to welcome and provide for the stranger – a call to reap or harvest *uneconomically* that may be as primordial as the very idea of acting economically.

There is nothing to prevent fear of climate change - and fear of those mobilized by climate change - functioning as an impetus for reinforced spatial closure, for more tightly securitized boundaries, for bigger retaining walls (see Brown, 2010). At the same time, for those who aspire to be good hosts when environments turn inhospitable, the ancient conundrum of hospitality points to the need to keep one's own house in order, literally and metaphorically (Shryock, 2012: S24). Wall building may not be the most appropriate option, but as the more nuanced analyses of state power in times of environmental extremity remind us, looming uncertainty calls for measures to protect critical infrastructure – at every scale (see Collier and Lakoff, 2015). And ought to encourage experimentation with and construction of whole new infrastructures. Trickier still are the innovations in governance that are summoned by the appeal of unsettled and bereft strangers, multiple others who will compete for our attention, who may ask for fair and equal treatment while deserving to be treated as singular and special. Paradoxes that are at once ancient and novel.

Climate migrants, I am proposing, might be viewed as symptomatic of contemporary politics not just because their provocation is new but because they

invite us to rethink the very idea of political – all the way back to its murky origins. And because once the idea of being unworlded by the mobility of the earth gets under our skin there is no stopping it. As a trigger for migration, climate is difficult to tease apart from other variables (cultural, political, economic), I have been suggesting, not simply because these factors are entangled, but because all these aspects of collective life always already bear the trace of climatic and environmental change. Ebbing, shifting, tipping climate has been unsettling life, pushing and pulling it into `refugia' since long before we were `civilised', and indeed long before we were human. If, for better and worse, the state is a machine for producing and processing strangers, this in part because the earth is a machine that in its own strangeness manufactures strangers. Which means that in the face of every stranger – that is to say all of us – there is always the trace of the earth, the signature of changing climate, the memory of storms weathered and paths followed.

The thematic of hospitality, which may be at least as ancient as the polis, suggests that estrangement is more than a technical problem to be solved, but also more than a matter of inevitable or interminable conflict. Though it is also all these and more. Looking particularly at its Middle Eastern manifestations, anthropologist Andrew Shryock reminds us that `hospitality is a test that can be failed; the stakes include life and death'. (2012: S21). And even death is not the end of it. To try and be buried in a ground that will remember you, as Athos advises, is not just to be admitted or tolerated, but to be welcomed as one shaken and shaped by the strangeness of the world. And the ground that may offer this embrace will only do so because it too has been injured and healed a great many times.

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