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Emptying the future: On the environmental politics of anticipation

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ABSTRACT

Anticipation may be seen as structured by images and representations, an approach that has informed recent work in science and technology studies on the sociology of expectations. But anticipation, as a capacity or characteristic, is not solely manifested in the form of representations, even where such representations of the 'not yet' are performative in nature. It also comprises material capacities, technological, biophysical and affective in nature. The politics of anticipation is shaped by how these symbolic and material capacities, and the forms of agency they make possible, are distributed. As anticipation is an environmentally distributed capacity, it is suggested that the politics of anticipation is also an environmental politics. A conceptual framework for analysing anticipation as comprised of environmental capabilities is introduced, and fleshed out using a case study of energy infrastructure planning from the UK. Key elements of this framework include the concepts of anticipatory assemblages and future horizons or 'styles' of anticipation. Working through the case study as an empirical example of a conflict concerning the politics of anticipation and of 'environments', it is demonstrated how the relationships between styles of anticipation are materially constitutive of such conflicts.

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1. Introduction

The central role of anticipating the future in social life is attested to by recent research in science and technology studies (STS) (e.g. [Berkhout, 2006](#); [Jasanoff & Kim, 2009](#); [Ruivenkamp & Rip, 2011](#)). Much work in this field (e.g. [Borup, Brown, Konrad, & van Lente, 2006](#)) draws on earlier research within future studies on the role of images and representations in shaping perceptions and beliefs about the future (e.g. [Bell & Mau, 1971](#); [Polak, 1973](#)). However, anticipation includes more than acts of representation and their effects on how people perceive future possibilities. This is recognised in studies that have explored the performative function of promises and other forms of publicly enacted expectations ([Brown et al., 2000](#)). But the material aspects of anticipation – its capacity to draw virtual futures into the present and make them actually effective – extend beyond language. Anticipation is dependent on capacities of bodies and of socio-technical apparatuses, distributed throughout the environments of social action. This includes the living and geo-physical systems of the Earth ([Miller & Poli, 2010](#)), and the technological devices and infrastructures which are interwoven and imbricated with social practices ([Thrift, 2004](#)). Further, anticipation is also dependent on emotion and desire ([Brown, 2005](#)), which can coalesce in the form of positive and negative forms of attachment ([Berlant, 2011](#)) to people, objects and ideas.

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The extent to which scholarship in STS and other fields interested in futures (such as environmental sociology, geography or sustainability studies) has been able to recognise this dual dimension of anticipation has been questioned by some (e.g. Anderson, 2010a; p. 17). A focus on language and representation continues to ‘humanise’ anticipation in a way that fails to acknowledge its ‘more than human’ dimensions. When anticipation conceptualised as conscious intention or orientation is placed in the foreground, the ways in which material assemblages are implicated in anticipation are pushed into the background. In this paper, I explore how understanding these ‘more than human’ dimensions of anticipation can give us a more comprehensive understanding of what is at stake in the politics of anticipation, and of the sense in which it is also an *environmental* politics.

That such dimensions can be politically significant is not difficult to demonstrate. Bodily and social routines, for example, create reliable expectations about the reproduction of social reality. The scripts written into infrastructures and technical devices organise spaces in ways that allow such routines to go on. This produces spaces of relative reliability, predictability and security that support the acquisition of important capabilities by individuals and by groups acting together, whether at work, at home, or in public life. In turn, these capabilities make possible effective agency, in the sense of enabling actors to shape their environments and the lives lived within them. But the socio-material organisation of anticipation is not a neutral process: it distributes unevenly and unequally the capabilities required by actors in order to influence the present and the future. While taming some uncertainties about what will happen, such processes can also intentionally or unintentionally move uncertainties around or create new ones, as in, for example, the organisation of assembly lines (Dudley, 1997).

This political aspect of anticipation also connects directly to how the social and material environment helps produce explicit anticipations. For example, ongoing activities of anticipation select certain aspects of these environments as ‘public things’ (Honig, 2012), objects of common concern, through which the future then becomes framed explicitly as an issue for the present. Conflicts over the intergenerational distribution of assets, over how a nation should produce energy, or about the significance of synthetic biology and nanotechnology for what it means to be human are all, at one level, debates about the social distribution of capacities for anticipation and over the injustices which may be produced by inequalities in this distribution. At the same time, what becomes a ‘problem’, and how, is a political question that reflects the outcome of how previous activities and processes of anticipation have been patterned, and which actors have been able to draw on particular anticipatory capabilities. If contemporary politics is, at one level, about ‘colonising the future’, then understanding how the means of anticipation are distributed can help us understand both the genealogy of particular ‘public things’, and also the injustices and injuries to which necessarily selective framings of the ‘not yet’ can lead.

In this paper, I have two goals. First, to contribute to the theoretical vocabulary through which the diversity of material as well as representational elements of anticipative capabilities can be understood. Second, to draw on this contribution to help understand the environmental politics of anticipation as arising from conflicts, not just between distinct *visions* of the future, but between different *styles of anticipation* or *future horizons*. Such conflicts, as intimated above, are significant because of how they reflect inequalities in the distribution of capabilities needed to influence individual and collective futures, and also because of how, through such conflicts, some aspects of social and material environments are foregrounded as things of public concern and others as not. I draw on an empirical case study and previous theoretical contributions (Groves, 2015) to help think through the relationships between material and representational anticipatory capacities and their political significance.

2. Materialising futures-in-the-making

We can take anticipation (in the broadest possible sense) to refer to the capacity of an organised system to incorporate projected future states into its present functioning, as a way of orienting or modulating its activity. This definition means that anticipation is a capability of living systems more broadly and not just a feature of intentional conscious states in humans (Miller, Poli, & Rossel, 2013). Deciduous trees, for example, anticipate falling temperatures in winter through their sensitivity to shorter day length (Rosen, 1985; p. 8). In the sense that they may ‘hesitate’ between potential bifurcated future states, this may also be said to be true of metastable non-living systems, insofar as they are capable of novelty (Groves, 2010). Where human activity differs from other forms of anticipation is commonly taken to be in the degree of active reflexivity through which humans may prepare for alternative future possibilities. But there is also a significant difference in how social futures are anticipated implicitly and materially as well as intentionally, through explicit representations of possible futures. For example, socially-inculcated bodily habits anticipate future states (Weber & Varela, 2002), and scripts written into technologies constrain future performances of practices, for example (Akrich, 1992).

Understanding human anticipation therefore requires that we analyse how socially-organised action and representation are patterned at several distinct levels. At the most concrete, empirical of these levels, anticipation has been the object of extensive study, particularly in the form of specific representations of future socio-technical developments. Consider nanotechnology, for example. For over 15 years, STS scholars have catalogued and analysed the use of images, metaphors and vignettes by enactors of nanotechnologies to create and reinforce future expectations (e.g. Bensaude-Vincent, 2004; Ruivenkamp & Rip, 2011), which constitute future imaginaries through which are built group and institutional identities, and to help create social coalitions (Mordini, 2007). This, in turn, shapes the ‘issue space’ which defines, here and now, the potential social significance of nascent technological developments. In this way, technologies and the social futures that they promise are speculatively constructed as public things, objects of concern, around which often equally speculative ethical debates are then constructed (Nordmann, 2007) (Fig. 1).

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