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Visualising the global environmental: new research directions

Sebastian Vincent Grevsmühl

This special issue on the visual cultures of global environmental issues proposes innovative research directions by introducing new methodological frameworks and profoundly rethinking the crucial role of the visual in environmental research. The five papers gathered here were written by researchers coming from various disciplinary and cultural backgrounds, thus helping bridge the divides between different disciplinary traditions. Each essay examines the notion of the 'global environment', and of 'global environmental images' in particular, from a different theoretical perspective. From these emerge shared concerns about underlying aesthetics and politics, and reflections on the tensions that arise when visualising the environment, especially when objects and theories are at a global scale. In this introduction, I reflect upon two aspects across the five papers exploring tensions between the 'local' and the 'global', as well as the politics of images within global environmental research. Considered as an *ensemble*, this special issue calls for sustained interdisciplinary inquiry into global environmental images, paying close attention to the nature of this new type of global knowledge, the imaginaries mobilised, as well as the politics, power struggles, asymmetries and marginalisation processes which are inevitably involved when talking about the global environment.

Key words visual cultures; global environment; climate change; Anthropocene; interdisciplinarity

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Introduction

Today, we are all familiar with global views on our environment, be it in graphic form, such as the famous 'Keeling curve' showing rising CO₂ levels (Howe 2014), or through iconic photographs, such as the famous Apollo images of planet Earth (Cosgrove 1994; Jasanoff 2001; Heise 2008; Poole 2008; Grevsmühl 2014a). As a growing body of literature has shown, most of these icons of the global environment were born out of the fundamental tension between technoscience on the one hand, and new forms of political environmentalism on the other (Turner 2006; Kirk 2007). During the early Cold War period, modern technoscience, and in particular military technologies and infrastructures (Turchetti and Roberts 2014) provided new, powerful tools for conceptualising planet Earth as a complex, interconnected system, while at the same time threatening to erode the very foundations of life on Earth by introducing new looming threats of global environmental catastrophe and nuclear annihilation.

Within this context, global environmental images played a crucial role not only in monitoring,

understanding, and managing the global environment, but they also inspired the creation of popular slogans such as 'Think globally, act locally!' and new political ideals of collective responsibility and global citizenship. Lovelock's Gaia hypothesis and Buckminster Fuller's 'spaceship Earth' metaphor cannot be read and understood outside of this often paradoxical, historical constellation between the military, the Earth and environmental sciences, and images from space. In particular, the view 'from the top down', as Lovelock (2000, xvi) wrote in reflecting on the origins of his Gaia hypothesis, provided important stimulation for creating novel theories on the global environment.

Global environmental images therefore deserve close attention, especially because their omnipresence may tempt us to take them simply for granted as completely naturalised, transparent objects, without reflecting on their epistemological status, the politics that drive them, or the ethics and aesthetics they mobilise. I hope the essays gathered in this special issue will inspire an interdisciplinary dialogue about these issues, in order to gain new insights into the various ways we construct, mobilise and perceive global environmental

issues. In what follows, I reflect upon the contributions of the five papers to two related debates in global environmental research: the tensions between 'local' and 'global' views on Earth, and the politics of global environmental images.

Local versus global views on the environment

Critical analysis of global environmental images reveals profound tensions between the 'global' and the 'local', between the lifeworlds that surround us, and what some have called the 'cosmopolitan global' (Hulme 2010a). For many observers, a central problem stems from the fact that the globalising gaze comes necessarily with a certain level of abstraction that is quite literally also an effect of scale. Tim Ingold (1993), for instance, has pointed at the problematic nature of the globe as an object of contemplation, detached from the domain of lived experience, and others have shown that the top-down perspective proves often too remote and distant, too sterile and abstract to become meaningful within everyday life (cf. Hulme 2010a 2010b). Especially within the domain of climate change, by tackling an inherently invisible threat involving timescales that are difficult to apprehend, communicators are struggling to efficiently mobilise politics and the general public. Although NGOs, for instance, have devised visual communication strategies documenting locally observable environmental destruction, they confront great difficulties in overcoming the problems linked to the often invisible and complex temporal nature of climate change as an ongoing accumulative process (Doyle 2007).

Most papers gathered in this special issue confirm these tensions and findings. Schneider's (2016) essay on climate 'cosmograms' (a conflation of 'cosmos' and 'diagram') shows that the global maps published by the Intergovernmental Panel on Climate Change are part of a scopic regime of 'whole Earth' imagery. This contributes to the objectification of Earth, while at the same time naturalising these views, obscuring the fact that they are always highly constructed views, infused with political and cultural presuppositions that are difficult to control and predict. Other papers add further textures to these arguments. Höhler's (2017) essay on the construction of El Niño satellite views from space and Regnaud and Limido's (2016) contribution on the emergence of global ocean and global coastline models show that the movement towards global views never followed uniform paths, thus calling for close historical and epistemological analysis. They insist on the complex relationships that exist between the 'local' and the 'global' when it comes to environmental phenomena, and argue that global environmental views have become a dominant, almost

hegemonic trait within the climate sciences and physical geography.

Both papers also show that the emergence of holistic conceptions of the environment reveal complex and diverse temporalities, depending on which environmental objects and geographies are taken into consideration. For instance, Regnaud and Limido trace firm links between the ocean and climate science back to the early nineteenth century, showing that Humboldt popularised the idea of a 'global ocean' with the help of innovative visual tools, an idea also picked up by Grevsmühl (2016, see also Grevsmühl 2014b). Coastlines, however, were incorporated into global views only relatively late, as the rise of tourism called for promoting and managing site-specific, local features of the coast. Höhler (2017), on the other hand, shows that modern climate science integrated the idea of a global ocean relatively late. The ocean became a central climate change indicator only during the 1980s and 1990s. The idea of El Niño as part of regular climate cycles is a scientific theory that stands in stark contrast to local, oral traditions relating extreme weather events.

Finally, the perceived dichotomy between the disengaging 'global' and the particular 'local' may itself be questioned in productive ways. As Mahony (2016) shows in his essay on the use of photomontage in illustrating the speculative effects of global climate change on recognisable places, montage can provide an innovative and subversive approach to engaging with the complex geographies of climate change. At the same time, he emphasises, just like Schneider and Höhler, the importance of staying critical of the cultural variability of themes introduced – be it the world in ruins, mass migration of people, or climatic types.

The politics of the visual

Closely related to the discussions on 'the local' and 'the global' are the politics of the visual, or to put it in other words, the various ways through which images become political agents. A central research question that cuts across all of the contributions to this special issue is how we may re-politicise the visual and how we can problematise and reach beyond the apparently transparent and normalised surfaces of images.

One suggestion made by Grevsmühl (2016, 7) is to chart political spaces of global environmental images 'through analysing the evolution and the changing perceptions of the actual physical sites on which they rely throughout their production process, and of the diverse technologies involved in shaping global environmental knowledge'. In so doing, one may raise important questions, for instance what it means to increasingly quantify and rationalise the global

environment, or to ask who has the right to control global knowledge and speak for the global environment. These historical developments are investigated in several contributions.

Paying close attention to the cultural forms and mediating technologies (such as oral traditions, paintings, analogue or digital photography, and computer visualisations) helps to uncover and better understand the complex political, economic and social histories involved, showing that cultural forms and their circulatory regimes profoundly shape our ways of knowing. Communication scholars have already shown how visual framings shape the cultural politics of climate change in important ways by creating, for instance, dominant themes while marginalising others (cf. O'Neill 2013; O'Neill and Smith 2014). Common framings of satellite images also marginalise, as Höhler (2017) shows in her contribution, where the aspirations of manageability, controllability and predictability come with the downside of a great neglect of the local violence of extreme weather events related by oral tradition.

The creation of blind spots is of course only one aspect of a broad range of political processes revealed by the essays. Others include processes of 'typification' in climate change photography by 'offering only a simplistic, racialised politics of space' (Mahony 2016), the use of colour in climate change images introducing an 'aesthetics of fear' (Schneider 2016), or the visual promotion of 'beautiful' landscapes and 'perfect' landforms for conservation policies (Regnauld and Limido 2016). In sum, since there is no unmediated access in knowing the global environment, many important lessons are to be learnt by engaging in a process of re-politicisation of global environmental images.

Nourishing interdisciplinary discussions

Today, research into global environmental images is still at its beginning. Yet as all the contributions discussed above make abundantly clear, there is a great merit in engaging in a truly interdisciplinary dialogue, a dialogue that reaches across the disciplines, stretching in this special issue from art history and science studies to cultural and physical geography, across a broad variety of national contexts. Indeed, the following incursions into the field of global environmental imagery show that an expanded cultural geography may benefit from openings to novel themes, topics, forms of inquiry and new research approaches, which put the visual at the very centre of their reflections.

Indeed, the highly traditional field of landscape studies, concerned with landscape not as a mere scenic representation but as active producer of spatio-temporal relations, may benefit from the productive tensions

which arise in the confrontation between different disciplinary lineages. This is evident when combining for instance art history and models developed in physical geography (Regnauld and Limido 2016), or when amalgamating German media studies with Anglo-Saxon science studies to provide innovative tools for accounting for the crucial role of technology in the meaning making of the global environment and the cultural production of spaces (Grevsmühl 2014b 2016; Höhler 2015 2017; Schneider 2016). Finally, French cultural studies can provide critical arguments for effectively engaging in a political analysis of dialectic and symbolic forms which shape the cultural politics of images and thus spatial order. Considered together, these theoretical traditions help reflect different yet connected concerns for productively engaging visual cultures in their different geographical manifestations, as well as bridging gaps within and between diverse geographical traditions.

The five essays that follow thus all embrace a methodological openness that is in my eyes both necessary and urgently needed in order to tackle the truly hybrid nature of global environmental issues (on climate change, see for instance Popke 2016). I believe this can be the beginning of a highly productive dialogue in developing new tools and research directions for a historically informed, critical analysis of global environmental issues within the visual domain which proves particularly fruitful. This new dialogue, finally, should be of substantial interest to all those interested in the complex geographies of the global environment, the role of the visual in shaping environmental knowledge, and its socially, culturally, economically and politically varying contextualisation and materialisation from the nineteenth century onwards.

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