

# Knowledge, power and the environment: Epistemologies of the Anthropocene

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A preoccupation with the environment is no longer confined to a small set of concerned people, academics, and those bearing the brunt of disasters. Instead, engagement with issues like climate change happens worldwide, on a day to day basis, even if only at a superficial level. The mainstream media may point to a heat-wave, or wildfires as evidence of climate change; other people might treat unexpected snowfall as evidence to the contrary. An erroneous prediction of the disappearance Himalayan glaciers by 2035, took on a life of its own, being repeated periodically with greater credence, until it entered the report of the IPCC. This one paragraph in a 980 page report, was then used to garner public attention and support for action on climate change. As it became clear that this prediction was erroneous, and the original date had been 2350, it became sufficient to discredit the entire report of the premier body of experts on climate change. The prevailing mood of scepticism may even have contributed to the collapse of Climate summit in Copenhagen.

The chairperson of the IPCC at first dismissed questioning of the 2035 date as “voodoo science”, however as the error became clear, an apology eventually became necessary. Later he described his shock and perplexity at the furore that had been generated over this incident (Goldenberg, 2010). However this incident can act as a window on the changes in human relations with the environment. On reflection, there had been no change in the *reality* of the changing climate, and regardless of the date of disappearance, it would have equally catastrophic effects. However the immediacy of impending disaster within an easily understood human timescale of 30

years, receding to more than 300 years had very real consequences for our relations with the environment.

A second important development that comes through is that knowledge of the environment is everybody's business, and is no longer the preserve only of "experts" considered competent enough to talk about it. Even though this "democratization of knowledge" might appear to be inherently good, it raises troubling questions for the future of the planet. The role of power in mediating our knowledge of the environment is nothing new of course, but it has taken on new implications. This altered epistemology has reduced the power of organised disciplines, expert knowledge, and proclamations from above. Increasingly, a global public must contribute to a validation of expert knowledge, through what might be called a process of "making sense".

This leads us on to the third important aspect of environmental knowledge, the increasing reliance on communication as a tool for creating a publicly accepted knowledge. Not only does this impart a new volatility to knowledge, as seen in the example of Himalayan glaciers, but also highlights the inadequacy of major media in their ability to fulfil this requirement. The abstract, arcane and at times contradictory knowledge must not only be weighed and accurately represented, but also their reception requires them to be easily understandable, and easily communicated. Glaciers and other forms of ice have been repeatedly used as icons in communicating knowledge of climate change, due to the ease of their visual representation (Carey, 2007; Nüsser, 2009), and the intuitive understanding we have of ice melting with heat. The reliance on such visual icons is however a double edged sword, due to the complex interaction of these natural features with climate change in practice. Glaciers for instance, may show responses that include growth, as a result of changing climatic conditions. As this goes counter to a generally understood relation between ice and warming, these icons might generate more heat than light for climate knowledge.

Another often neglected aspect of power in mediating human knowledge of the environment is political and economic relations. Do the existing asymmetries of political power allow for a questioning of the US role in climate change, for instance? Or can

media and a public discourse that are increasingly controlled by corporate interests critically evaluate the role of corporations and capitalism in destroying the planet? Is it possible to generate creative solutions to environmental problems within economic, social and political systems that have done much to exacerbate these problems in the first place? How independent can academic research be in the context of constrained research funding, limited possible scope of research and narrow specializations?

Confronted with these difficult questions, turning away is simply not an option, and this special issue is this journal's way of taking a small step towards addressing them. We believe that to begin with, creative and critical solutions can only emerge from approaches that move beyond established boundaries. This ties in very well with the mission of this journal in moving beyond boundaries, without losing sight of them. Our model of interdisciplinary research, free public access, and a critical stance are all ways of adapting to the imperatives for creative, collaborative, open knowledge creation necessary to address contemporary environmental concerns in a globalized world.

Human actions have led to transformations of the earth of such a magnitude that it has been suggested that the present geological era be renamed the Anthropocene (Crutzen & Stoermer, 2000) to reflect this dominance. It is now fairly well established that in an environment in which no aspect is left untouched by humans, it is vitally important to examine the inequalities and injustices in human relations which are to a large extent reproduced in our relations with the environment. All our relations with the external environment are mediated through the knowledge/power that produces our understanding of the planet. While by no means independent of the bio-physical realities that underlie them, our interpretations of these realities are profoundly influenced by the political and economic realities of our times. Not just the form, but even the content of environmental knowledge, is often a contested and negotiated outcome, even when its legitimacy is derived from an appearance of an apolitical, objective truth. The case of Himalayan glaciers being a wonderful illustration of the asymmetric power and knowledge relations that mediate our knowledge, and subsequent actions upon the environment.

The articles in this special issue have been chosen for the insights they offer on the epistemology of environmental knowledge, and on the intermeshed roles of knowledge, power and the environment in transforming each other and consequently our world. Additionally all these articles, not only illustrate the various ways in which knowledge of the environment is constituted, but also present the profound implications these have for the future of humanity itself.

The first article by Brand and Brünnegraber refers to the creation of knowledge on the climate in two distinct socio-political contexts of Germany and the USA. Their results suggest the limited ability for creative insights to emerge from within current models of knowledge communication. Another interesting idea that emerges is the difficulty for true alternatives to emerge in a context in which global capitalism has so profoundly become normalised as the sole possible way of human existence. Any possibility for other worlds has been pushed to the rhetorical, and ineffectual margins, and this is reflected in the similar paucity of alternatives to emerge from within the present system. The absence of meaningful alternatives also brings into question the possibility of shared public action at the global scale, in the absence of a shared understanding of the environment.

Valkeapää and Vehkalahti present their study of Finnish perspectives on forest policy, which is notable for its attempts at inclusiveness. Considering the progressive nature of these efforts, they might form a template for creation of participatory and negotiated knowledge in order to improve human relations with the environment. However, their analysis raises troubling questions about the role of power in the knowledge creation process. The respondents' levels of active participation reflect their own perceived expertise or social standing. While highlighting the role of asymmetric social relations of power and knowledge in mediating environmental knowledge, the potential of mere policy changes to translate into actual participation is brought into question.

Daniel Bultmann builds upon an interesting case study of the Cambodian experience of actively creating a socialist and utopian environment under the Khmer Rouge regime. The human tragedy in the form of famines, and untold suffering, that was

unleashed through the attempts to create an ideal environment, based on political ideals in the 1970s may seem an outdated aberration in the present day. Yet, this is also a cautionary tale for the future, as we attempt to radically transform human relations with the environment in an attempt to avert disastrous environmental change. The attempt to place power in the service of a knowledge whose truth has been established might appear logical. But even if the legitimacy of future utopias is based on scientific fantasy, as opposed to socialist dogma, the outcome may be no less disastrous, unless this environmental knowledge is truly ethical and attempts to counter existing social inequalities, of knowledge, and of power.

Serhat Uenaldi, in his opinion piece, argues for the importance of including environmental considerations in the field of international relations, where perhaps the most unabashedly unequal power relations between nations can be observed. He suggests that even in the self-serving arena of competing nation-states, it is necessary to consider the environment in terms of security interests that bind otherwise competing nations. Simon Dalby (2003) however has cautioned against a simple reading of the emerging concept of “environmental security” and has pointed out that in addition to the specifics of the local context, it is important to consider the imperial relations of knowledge and power that continue to play a role in environmental conflicts.

All contributors have addressed some of the biggest questions regarding the environment and our own relations with it coming from different disciplines, and very different approaches. In this they point the way forward, for the complexity of the interactions of knowledge power and the environment calls for innovative research approaches that are both transdisciplinary and transcultural in nature.

## References

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