

Life on Earth

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Valorization Addendum

In my dissertation *Life on Earth*, I have studied the negotiations between groups of scientists and policymakers over the role of experts in international nature conservation during the 1960s and 1970s, the so-called *environmental age*.⁷¹⁵ During these two decisive decades for international environmental policymaking, pleas to devise international regulations to protect the global environment were increasingly prominent in the international fora of science and politics. Following a group of leading conservationists at the International Union for the Conservation of Nature (IUCN) through the changing context of international policymaking from the late 1950s to the mid-1980s, I have unraveled the interlacing of scientific approaches to nature protection and the domain of politics. Yet, my findings do not only pertain to past debates. Similar questions on how to balance the protection of nature with the demands of a growing world population—and whom to trust or burden with the responsibility—remain at the core of present-day environmental policymaking. Still, we appeal to politically neutral and universal science to tackle global environmental problems, while solutions and expert roles remain intrinsically linked to political and often locally grounded decisions on how we want to live with nature.

In the following I would therefore like to elaborate further on the current relevance of my topic and argue for four agenda points for future environmental humanities research and policymaking. For each point I will moreover point out what my colleagues and I have already undertaken during the course of the project. First, on the level of environmental discourse and policymaking, my research problematizes the feasibility of large international policy goals. Second, regarding scientific approaches to environmental problem-solving, I argue for new approaches to interdisciplinarity across the soft and hard science divide. Third, concerning the roles of environmental experts, my research supports arguments for a rethinking of boundaries between expertise and advocacy. Fourth, I point out the role of environmental humanities scholars in reviving the short memory of environmental groups and institutions, in order to advance environmental discussions and programs in future.

INTERNATIONAL ENVIRONMENTAL AGENDAS AND THEIR FEASIBILITY

If the usefulness of history as a discipline lies in a better understanding of the things we struggle with at present, one of this dissertation's contributions is unraveling the legacy of concepts related to the global environment, or environmental problems, which continue to dominate environmental policy debates today. In particular, I would like to argue that research as carried out in this dissertation may help in tackling one of the pitfalls found in present-day international environmental agenda setting. In 2015, the UN introduced a set of 169 global targets to succeed the Millennium Development

⁷¹⁵ E.g., Höhler (2015).

Goals that expired in the same year.⁷¹⁶ Praised by many, the initiative continues to reap criticism. In particular, the ambitious set of goals has been criticized for its messiness and ambiguity, aiming at combatting hunger, poverty, and climate change, while improving education and health at the same time.⁷¹⁷

In line with these critical voices, in my chapters I have argued that until now agendas to finding all-encompassing environmental narratives and comprehensive perspectives could not be translated into feasible programs. I have shown how on the one hand, concepts such as environmental limits or sustainable development have served as linguistic bridges between different groups of actors. At times, however, these concepts were carriers of very diverse interpretations, camouflaging these differences over long periods of time. Especially, in the case of *sustainable development* I have demonstrated that two large players of the environmental field IUCN, and the United Nations Environmental Program (UNEP), continue to promote two partly opposite interpretations of sustainable development in the form of biodiversity and ecosystem services.⁷¹⁸ In particular, my research suggests that in order to take action, scientists and policymakers need to understand the differences in perspectives and agendas rather than hide them behind synthetic concepts.

Bringing to light these different perspectives was one of the core objectives of our work during the Nature's Diplomats project. In one academic article we have stressed the long history and the changing nature of the conservation community and the international discourse on environmental protection.⁷¹⁹ In other publications we have discussed different environmental agendas behind the common conservation strategy to create national parks, as well as diverse controversies behind the ecological key concept of the ecosystem.⁷²⁰ Furthermore, we have tried to discuss the many coexisting interpretations of environmental concepts also with nonacademic audiences. In January 2016 we organized a public conference, to which we invited both former and current experts of IUCN, journalists, students, and members of local environmental groups, to discuss notions such as sustainable development, environmental expertise, and nature conservation.⁷²¹ In this context, an important outcome was a shared understanding of the need to recognize and foster inter- and intra-organizational diversity of standpoints when it comes to defending environmental priorities and solution strategies.

⁷¹⁶ UN (2015).

⁷¹⁷ E.g., Stafford Smith (2014); Lang and Heasman (2015).

⁷¹⁸ E.g., compare IUCN (2015); UN (2016, 9, 37, 39).

⁷¹⁹ De Bont, Schleper, and Schouwenburg (2017, forthcoming).

⁷²⁰ Schleper and Schouwenburg (2017, forthcoming); Schleper (2017).

⁷²¹ Schleper and Schouwenburg (2016).

ENVIRONMENTAL SCIENCES AND INTERDISCIPLINARITY

My second agenda point relates to the scientific approaches currently used to tackle global environmental degradation and climate change. In particular, I argue that a deficit of interdisciplinarity persists in present-day scientific approaches to protect the global environment. In the past two decades, with the accumulation of more and more scientific evidence for human-induced climate change, planetary thinking and earth systems research have received a new impetus, for example in the concept of the *Anthropocene*, in many ways echoing the systems project of the 1960s and 1970s.⁷²² In this regard, interdisciplinarity, bringing together social and natural science perspectives, has been one of the aims of several current initiatives on climate change and sustainable development.⁷²³

Nevertheless, like the systems discussions of the past, also the ones of today tend to keep the domains of the natural and social sciences apart – although they claim to do otherwise. On a disciplinary level, both natural and social scientists might talk about the Anthropocene as interlinking human and natural systems. However, rather than meeting one another in a shared conceptual trading zone, the discussions of the two groups often remain concerned with separate topic areas. Research efforts across larger disciplinary clusters remain scarce.⁷²⁴ Especially social scientists and humanity scholars have claimed the Anthropocene as a concept to discuss the societal dimension of global climate change, without necessarily drawing on input from the natural sciences. The exclusion works both ways. At several other occasions, natural scientists have objected that the humanities' pursuit of a *good Anthropocene* downplays the hard scientific evidence of widespread global disaster toward which we are firmly heading. Some of these authors take the phrase *good Anthropocene* at face value, mistaking the environmental ethics project for a value judgment or an interpretation that proposes unrestricted human intervention as a positive thing.⁷²⁵ Not only in the Anthropocene debate, but also in the closely related discussions on climate change, social futures are still only vaguely addressed, although they will need much planning, managing and imagining. So far, the domains of hard and social sciences remain strictly divided in bodies such as the Intergovernmental Panel on Climate Change (IPCC). Within the IPCC, social sciences are mainly represented by a few quantitative economists, while the whole panel is moreover dominated by natural scientists.⁷²⁶ We are far from an interdisciplinary approach that is able to bridge the soft and hard science divide. Research like mine therefore suggests that we need to rethink the intellectual and institutional contexts, in which environmental interdisciplinarity has been pursued so far.

⁷²² Maslin and Lewis (2015); Crutzen and Stoermer (2000); McNeill and Engelke (2014).

⁷²³ E.g., Griggs et al. (2013).

⁷²⁴ Greschke and Tischler (2014, 8).

⁷²⁵ See Dalby (2016). For a strong critique on the *good Anthropocene*, see Romm (2014).

⁷²⁶ Corbera et al. (2016); Victor (2015).

While working on my PhD, I have explored new ways for interdisciplinary research when participating in the second Anthropocene Campus, a teaching and learning experiment, organized in Berlin by the Haus der Kulturen der Welt and the Max Planck Institute for the History of Science, in April 2016.⁷²⁷ Cooperating with professionals, academics, and students from fields ranging from humanitarian aid, to humanities, engineering and computer science, new ideas for teaching and understanding the global environment were formulated and tested. In two contributions to the Campus's website I stress the need for a new way of bringing together systems thinking and environmental politics.⁷²⁸ In late 2016 and early 2017, my experiences from the Campus and parts of my own research findings moreover fed into proposals for a potential bachelor program in Environment and Society Studies at the Faculty of Arts and Social Sciences of Maastricht University. In this bachelor program students would be trained to contribute to natural science debates on the global environment from a social science perspective.

EXPERT ROLES AND SCIENCE ADVOCACY

The third point I would like to make relates to environmental expert roles. In the past, scholars on environmental expertise have often promoted the ideal of the expert as an "honest broker," advising on different policy options, potential consequences, yet never intervening in the policy process itself.⁷²⁹ As I have demonstrated, also recent discussions on the Anthropocene and in climate science seem to return to traditional ideas on universal and neutral expertise in environmental issues.⁷³⁰ With my dissertation, however, I would like to support existing counter-arguments, claiming that in times of climate controversies, scientists' attempts to stay out of politics might not be the right strategy. Recent political changes in the country with the second highest carbon dioxide emissions globally have made this even clearer.⁷³¹ Since Donald Trump has taken office as President of the United States, references to climate change have disappeared on various government websites, funds have been cut for the Environmental Protection Agency (EPA), and well-known climate sceptics have been appointed to decision-making positions, in part directly responsible for US environmental policy.⁷³²

While I am writing this addendum on the societal relevance of my dissertation, scientists in different parts of the world take to the streets, as for example a few days ago in Boston at the occasion of the annual meeting of the American Association for the Advancement of Science, an America-based international NGO and the publisher of *Sci-*

⁷²⁷ Haus der Kulturen der Welt and Max Planck Institute for the History of Science (2016).

⁷²⁸ Devasher, Pfender, and Schleper (2016a); Schleper (2016b); Schleper (2017).

⁷²⁹ Pielke (2007).

⁷³⁰ E.g., Renn, Laubichler, and Wendt (2014).

⁷³¹ Union of Concerned Scientists (2014).

⁷³² E.g., Davenport (2017); Milman (2016).

ence.⁷³³ Among them also Naomi Oreskes, historian of science and co-author of *The Merchants of Doubt*.⁷³⁴ In this book, Oreskes and Michael Conway show how a small number of loud-voiced, anti-science climate change deniers pose a threat to the silent scientific consensus on the global warming. Since 2010, especially Oreskes has argued on various academic and public stages that scientific facts do not speak for themselves in issues like climate change, encouraging researchers to speak up publicly for science and the societal threats of global warming.⁷³⁵

Based on my research I support Oreske's line of argumentation. My dissertation has shown that in the past, environmental scientists, in their insistence on their apolitical expertise made themselves a target for the political sensitivities of the period, as they disregarded the changing role of experts in post-colonial policymaking. Understanding that science can never be independent of its social context, my findings suggest that by bringing different arguments for science and for environmental protection back to the expert table, not only the support for science can be strengthened, but also more inclusive and diverse solutions can be found. One way this can be done, I have highlighted in a piece on climate change fiction on the public history of science blog *Shells and Pebbles*, in which I show how Oreskes and Conway combine their work as researchers with their roles as climate "sentinels" or gatekeepers.⁷³⁶

ENVIRONMENTAL HUMANITIES AND NEW COOPERATION

My previous three recommendations pertained to the relevance of historical research like mine to current debates on environmental policymaking, scientific approaches to the environment, and environmental expert roles. The final point I would like to make focuses on how my dissertation can give shape to future research conducted by historians of science and the environment. In particular, this point pertains to the potential benefits of new cooperation between the environmental humanities and nature protection agencies. From our interaction with nature protection organizations at the occasion of our project, my colleagues and I noticed how institutional and disciplinary memories are often very short. In the course of the project, we have talked to different generations of conservationists at organizations such as IUCN, the Wereld Natuur Fonds (WNF), or the International Council of Scientific Unions (ICSU). Striking in this respect was not only the lack of continuity in experts' institutional awareness, but also the cyclical nature of discussions on nature conservation. It seems as if arguments made for conservation often disappear into oblivion for a little while to then resurface again.

⁷³³ In Washington, but also in the Netherlands, the UK, France, Germany, Ireland, Switzerland and Belgium scientists are currently planning Marches for Science on Earth Day (22 April) 2017 (e.g., Griffin 2017).

⁷³⁴ Wessel (2017); Oreskes and Conway (2010).

⁷³⁵ E.g., Oreskes (2013).

⁷³⁶ Schleper (2015).

In my conclusion, I have pointed to some of these parallels between discussions in the 1960s and 1970s on systems thinking and intellectual approaches to the Anthropocene today in terms of the interconnectedness of society and the environment. Further examples include arguments about natural stability, systems of interdependence, and human stewardship for nature. In general, then, my dissertation suggests that a stronger cooperation between historians and environmental organizations hold the potential to improve environmental discussions and agendas today.

Already during our project, my colleagues and I have cooperated with the press office of IUCN by writing a number of short essays on several key themes in science-based nature conservation and the organization's history, including topics such as ecosystem conservation, biodiversity, national parks, or IUCN's complicated relation with indigenous communities.⁷³⁷ However, more work remains to be done. I therefore propose that by cooperating with environmental organizations, pointing out the continuities from past environmental discourses and by showing where the fault lines lay and lie, environmental humanities scholars can help scientists, administrators, and policymakers in generating more reflexive discussions in the future.

⁷³⁷ Schleper and Zwahlen (2016); Schleper (2016a); De Bont (2016); Schouwenburg (2016).