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Saskia Brill

Between Science and the Expertise of the Elders

“Knowledge is not only powerful, it is political and it plays a central role in the struggle among social forces in places and spaces.”¹

Established forms of science and expertise seem to be increasingly flouted, and not only by climate-change deniers, creationists, or conspiracy theorists who refuse to accept anthropogenic climate change as “truth,” as Oomen describes in this volume. There are also militant ecological movements, who perceive that action is not being taken fast enough and who seek to “short-circuit” the scientific community and its expertise.² And paradoxically, there are scientists behind each of these interest groups, who are oftentimes accused of creating scientific results only to support their respective political arguments.³ However, they are usually not acknowledged as credible scientists by the majority of the established scientific community. This contradiction shows that for certain groups science has become something akin to a secular “religion” one can choose to believe in or not,⁴ depending on the promises it makes and the networks it is embedded in. So here we are, already on the threshold of a wired entanglement of scientific findings, political evaluations, economic interests, and diverging value systems which are hard to unravel when it comes to environmental policy making.

What Kind of Science Are We Talking About?

To grapple with the problem we are facing in this volume, namely how we can bring “science” back into climate communication and action, we should start by looking at what science is in the first place and what functions it fulfills. Therefore, I want to fall back on Latour’s image of the Janus-faced science:⁵ On one side, there is Science (with a capital

1 Gabriela Kütting and Ronnie D. Lipschutz, eds., *Environmental Governance: Power and Knowledge in a Local–Global World* (New York: Routledge, 2009), 9.

2 Bruno Latour, *Politics of Nature*, trans. Catherine Porter (Cambridge, MA: Harvard University Press, 2004), 4.

3 Naomi Oreskes and Eric M. Conway, *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming* (New York: Bloomsbury Press, 2010).

4 Latour, *Politics of Nature*, 223.

5 Bruno Latour, *Science in Action* (Cambridge, MA: Harvard University Press, 1987), and *Politics of Nature*.

S), a heavy homogenous body, capable of answering questions about the nature of the earth, humankind, and the interconnections between the two. Science in this sense thus has the power to create irrevocable truths. On the other side, we have the sciences (in lower case), consisting of a multiplicity of disciplines characterized by constant curiosity and the posing of questions about all matters of interest, whilst rejecting universal truths. Both of them are equally part of the same coin that we typically subsume under the term “science.” Depending on the stage of a research project and the perspective from which we look at it, one side or the other will be more obvious and visible. And between the two, claims for more decentered sciences as well as a more centralized Science can be located. While Lynda Walsh proposes finally leaving dusty old hegemonic Science behind, or at least covering it up with a thick cloth, so that it is on mute, Jeroen Oomen speaks for the old guy (even though he wants him to listen to his counterpart), as Science seems to be the only authority that we can still rely on.



Figure 1:
Biologists and indigenous experts taking herring egg samples.
Photo by the author.

Both approaches end up being highly political; each follows a very specific moral notion of what seems to be “right” or “necessary” for this planet, for us humans, and for the particular entanglement of nature and society that we are facing today. And since action seems to be so hard when confronting current climate and environmental challenges, trying to find a voice or a strategy that is stronger, more

convincing, or more authoritarian than the arguments of conspiracy theorists or environmental fundamentalists seems to be central to making any progress towards that goal. It may be that hard facts finally tell the conspiracy theorists they are wrong, or it may be the local knowledge holders who are out of the line of fire against the old hegemonic structures, thereby being seemingly more democratic. I argue that we have to deal with both approaches—a strong Science and more openness in the sciences—no matter what. Both sides can be empowering as well as harmful. And yes, as soon as we establish ourselves somewhere along the line, we will lose the benefits of the other end. But maybe it is not an “either-or” situation, but a case of “one after the other,” or even “both at the same time.”

Let me start with having a closer look at Science, the old hegemonic knowledge producer that doesn't accept any form of doubt or creativity. The one that holds the authority that nobody can go beyond. The one that, throughout most of its existence, has been created and used by the powerful—usually male, rich, educated, and white elites.⁶ The rightful critique here is that Science usually supports existing power relations and is closely linked to established formal bodies of expertise such as the Intergovernmental Panel on Climate Change (IPCC) or the United Nations Framework Convention on Climate Change (UNFCCC), and overlooks important concerns about how expertise is created and defined.⁷ These bodies consist of a network of professionals—epistemic communities—with an authoritative claim to policy-relevant knowledge within their respective domains.⁸ These professional networks have been in charge of defining the role of expertise in shaping international agreements on ozone layer protection, climate change, and other topics.⁹ These structures apply just as much to the knowledge underpinning environmental policy, which is assumed to be accurate, authoritative, and urgent.¹⁰ But the authority Science holds can equally be wielded by those with less power—the non-male, the non-rich, the non-educated, the non-white, etc., to adopt a Western binary framing—to give their specific forms of knowledge a framework and a language that can be understood and categorized beyond their narrower social context. Not to speak of all the indigenous scholars, for example, who have emerged as a strong academic force, challenging the long-established perspectives, methods, and language of Science from within.

Science . . .

To exemplify the diplomatic chances Science can offer thanks to its political standing, let me take you to Canada's Pacific coast. The region is populated by numerous indigenous nations that have been marginalized for centuries due to colonialism and the structures and politics it left behind. In the ongoing process of reconciliation, First Nations people

6 Latour, *Politics of Nature*, 20.

7 Tim Forsyth, "Democratizing International Environmental Expertise about Forests and Climate," in *Environmental Governance: Power and Knowledge in a Local-Global World*, ed. Gabriela Kütting and Ronnie D. Lipschutz, 170–85 (London: Routledge, 2009), 170.

8 Peter M. Haas, "Introduction: Epistemic Communities and *International Policy Coordination*," *International Organization* 46, no. 1 (1992): 1–35.

9 Forsyth, "Democratizing International Environmental Expertise," 170.

10 Forsyth, 170.

are claiming a greater say in political decision-making on matters that pertain to their traditional territories and social life, if not complete self-determination.¹¹

Many indigenous groups nowadays actively invite scientists from research institutions all over the world to investigate historical sites, natural resources, environmental alterations, and much more. For this purpose, they create administrative departments to oversee and carry out diverse research projects. Many even have their own permit systems, meaning that scientists must obtain permission from the First Nation claiming the area of research to be within their traditional territory, in addition to gaining approval from the state. Findings are oftentimes used in preparation for court cases involving Aboriginal rights and titles, as well as for all different kinds of negotiations with the provincial and federal governments and with corporations.¹²

Whether it is the discovery of one of the oldest ever uncovered settlements in North America, the rediscovery of ancient environmental management practices like clam gardens, or the intense observation of livestock developments such as herring populations; many of these findings “are an affirmation of what we already know,” says Kelly Brown, director of the Heiltsuk Integrated Research Management Department (HIRMD).¹³ Thus research in this context is generally not conducted on things that are completely unknown to the local communities. It is much more common for research to be carried out in close cooperation between scientists and local knowledge carriers. The results then show that local knowledge is not necessarily something completely separate from, or even opposed to, scientific knowledge. Even though both forms of knowledge might arise from completely different ontological backgrounds and are embedded in very different networks and power relations, they often end up reaching the same conclusions. These results “are unfortunately what the outside world wants” but “they really help the conversations we are having with other governments and the industry,” states Kelly

11 Amanda Morris, “Twenty-First-Century Debt Collectors: Idle No More Combats a Five-Hundred-Year-Old Debt,” *Women’s Studies Quarterly* 42, no. 1/2 (2014): 242–58.

12 Robert J. Muckle, *The First Nations of British Columbia: An Anthropological Overview* (Vancouver: University of British Columbia Press, 2014), 34.

13 Quotes from a personal conversation with the author in March 2017. On the discovery of the oldest uncovered settlement, see Randy Shore, “Heiltsuk First Nation Village among Oldest in North America: Archeologists,” *Vancouver Sun*, 28 March 2017, <http://vancouver.sun.com/news/local-news/heiltsuk-first-nation-village-among-oldest-in-north-america-archeologists>. On clam gardens, see Amy S. Groesbeck, Kirsten Rowell, Dana Lepofsky, and Anne K. Salomon, “Ancient Clam Gardens Increased Shellfish Production: Adaptive Strategies from the Past Can Inform Food Security Today,” *PLOS ONE* 9, no. 3 (2014): e91235. On observations of livestock development, see R. W. Tanasichuk, “An Investigation of the Biological Basis of Recruitment, Growth and Adult Survival Rate Variability of Pacific Herring (*Clupea pallasii*) from British Columbia: A Synthesis,” *Fisheries Oceanography* 26, no. 4 (2017): 413–38.

Brown. They can in sum lead to negotiations about treaties, land rights, resource management, and environmental protection, such as the Great Bear Rainforest Land Use Order¹⁴ or the ocean protection agreement that includes marine spatial planning and the development of a network of Marine Protected Areas.¹⁵

Thus, it appears that the authority Science holds is what enables it to affirm local knowledge, by approving it with standardized scientific methods and translating it into a more commonly understandable language. It is this transformation that makes local knowledge politically valuable.

. . . or rather sciences?

The examples above go beyond the notion that local community knowledge, in a general sense, is per se opposed to or oppressed by Science, and show how Science can also have empowering effects in today's world, as it has the authority to back up place-based knowledge. It therefore helps to communicate environmental and climate issues from remote or marginalized perspectives and areas.

But still, we should think about where we want to go from here. What role can scientists possibly play in present and future scenarios? How can they interact with politics and the economy to find an equilibrium between a general openness in the sciences and the diplomatic authority of Science? And how can we make sure that scientists revise the authoritative structures that exclude so many in the first place? One first step could be to make more apparent the politics that underlie the creation of knowledge that in turn underpins environmental policies, and to ask with whose participation and based on whose assumptions this knowledge has been created.¹⁶ I assume that the above-mentioned model of cooperation between scientists and local communities could also lead the way for future research projects.

14 British Columbia, Great Bear Rainforest Land Use Objectives Order, 2016, <https://www2.gov.bc.ca/gov/content/industry/natural-resource-use/land-use/land-use-plans-objectives/west-coast-region/great-bear-rainforest/great-bear-rainforest-legal-direction-agreements>.

15 Karin Larsen, "Trudeau and B.C. North Coast First Nations Announce Ocean Protection Agreement," *CBC News*, 21 June 2018, <https://www.cbc.ca/news/canada/british-columbia/trudeau-and-b-c-north-coast-first-nations-announce-ocean-protection-agreement-1.4715786>.

16 Forsyth, "Democratizing International Environmental Expertise," 182.

Each of the projects is constituted by a multiplicity of people from different disciplines and with different skills: from archeologists who excavate long-abandoned settlements or discover ancient clam-garden structures, to physicists doing radiocarbon dating, or biologists who observe clam behavior in different habitats or the quality of herring spawn. They all work jointly in their respective research groups; none can generate comprehensive results on their own. Moreover, these fields of interest wouldn't even exist without the knowledge of the Elders who pointed scientists in worthwhile directions, or the indispensable support of local knowledge carriers who know the territories like the back of their hands and therefore make it accessible to outsiders (which researchers usually are). The methodology and findings of these projects strengthen traditional knowledge, often transferred through oral histories, as a reliable source of information, without leaving any of their scientific accuracy behind. Additionally, the provincial and federal governments, as well as industry, are usually closely involved, depending on the subject of investigation and interest. These projects are cooperations in terms of knowledge sharing as well as knowledge creation.

Forsyth argues that in such cooperations—in the interactions between researchers, local knowledge holders, politicians, and company representatives—we can see the norms already embedded in certain notions of environmental causalities.¹⁷ They moreover offer chances to ask which social norms govern how we would like the world to be and what kind of societies we want to empower. Through these encounters, cooperations acknowledge that “facts” and “values” have to be evaluated simultaneously since they are inseparable when it comes to environmental questions. It is certainly not always clear in advance how these cooperations will unfold, and whether they will be successful or even peaceful. They can just as easily end up in complete misunderstanding, or face stagnation or even surrender. But through the process of cooperating, especially when facing conflicts, there is a chance to ask what kind of norms give rise to what kind of environmental expertise, rather than just seeking one correct answer concerning one specific issue. These inclusive, flexible forms of environmental knowledge production and governance based on coproduction do not reject out of hand any norms or desires concerning nature; not from other, less established experts, and maybe not even from the extreme ends of the political spectrum (from creationists to environmental fundamentalists). Rather, it would place them as one vision among the many that can guide environmental policy; but these have to be negotiated.

¹⁷ Forsyth, 180–81.

If we want to go one step further and follow Latour's request to include nonhumans in discussions about environmental policies, cooperations have to be understood even more broadly. Latour states that through the creation of laboratories and related techniques, scientists have invented forms of speech prosthesis that allow nonhumans to indirectly participate in the discussions of humans. In these constellations scientists are then the ones to take over the role of spokesperson for the nonhumans in question.¹⁸ If we were to say that the invention of speech prostheses and the accompanying role as a spokesperson is what makes someone an expert, other "local" knowledge holders might have analogously invented equivalent kinds of tools, but in different forms. Thus, discussions between different groups of experts in cooperative research projects can now go beyond the negotiation of standpoints from different human interest groups to incorporate what humans should argue for on behalf of their nonhuman protégés.

Which Way to Go?

This procedure will not erase existing power relations nor will it make communicating climate and environmental issues any easier. The integration of less established experts as well as nonhuman actors, however, may put scientific results on firmer political ground, supporting the search for more sustainable and socially just climate-change policies.¹⁹ That all finally sounds very much like a proposal for more sciences and less Science, instead of an intercession for "one after the other" or even "both at the same time." But with regard to the multiplicity of voices, we are in urgent need of a lingua franca, a diplomatic tool, which findings and arguments can be translated into and through: a common ground for scientific as well as political results, which is accessible to other environmental and political contexts. For this purpose, we need strong institutions that have the authority to translate and to build bridges. But, and that is the important point, that authority should come from the capability to reveal the discursive processes that lie behind the "facts and figures" these scientific institutions produce. This way we might be able to work towards valuable scientific research as well as democratic political action at the same time.

18 Latour, *Politics of Nature*, 64ff.

19 Cf. Forsyth, "Democratizing International Environmental Expertise," 183.

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