

actually explored by the members of his Western Base under Frank Wild.

These errors – and numerous others that I found – give me concerns about the accuracy of all the entries. Thus, although

it is a handsomely produced and bound book, it is not one that I feel I could confidently use as an authoritative source. (Beau Riffenburgh, Scott Polar Research Institute, University of Cambridge, Lensfield Road, Cambridge CB2 1ER.)

THE ARCTIC IN THE ANTHROPOCENE. EMERGING RESEARCH QUESTIONS. Henry P. Huntington and Stephanie Pfirman (editors). 2014. Washington: National Academies Press. xiii + 210 p, illustrated, soft-cover. ISBN 978-0-309-30183-1. \$58.00.

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For nobody remotely interested in the polar regions or the climate the claim of the Arctic being a ‘bellwether for rapid environmental change’ (page 16) is unknown. Given the significance of these changes for the global eco- and human systems the Arctic has moved from being a periphery to a focal point of research. To this end, in the first decade of the 21st century groundbreaking research has been conducted, for example in the *Arctic climate impact assessment* or the *Arctic human development report* showing the interconnectedness of the Arctic with the rest of the world while at the same time undergoing changes with a speed unknown in other areas of the world.

The National Research Council, the operating arm of the United States’ National Academy of Sciences, in its challenging report *The Arctic in the anthropocene*, conducted by 17 different authors, aims to go beyond the traditional understanding of research in the Arctic based on already produced knowledge. Instead it aims to provide meta-guidance on ‘emerging’ research questions. To this end, four types of information are tackled to identify these emerging questions: 1. What *we know* about the Arctic, forming the basis of future enquiry. 2. What *we know we need to know* drives current research. 3. What *we think we don’t know* (or *what some know that others don’t*) contains knowledge that is often overlooked or not frequently shared. And 4. What *we don’t know we don’t know*, describing the element of surprise and the open mind, leaving sufficient room to be able to tackle future surprises in Arctic developments and research (page 3). To this end, the report notes: ‘Our task in this report is to assess what we can do now in Arctic research that is new and to identify those questions that we will regret having ignored if we do not invest in answering them soon’ (page 17).

Indeed, this is a very interesting and very valuable approach. The methodology to address the main chapter of the report, the *Emerging research questions*, therefore encompasses five categories that set the scope for the meta-data provided in this report: The ‘evolving Arctic’ deals with the impacts of reduced sea ice on systems depending on frozen and ground water. The ‘hidden Arctic’ deals with the boundaries that expand with diminishing ice and what could be irretrievably lost. The ‘connected Arctic’ appraises Arctic change through a global lens with regard to environmental systems. The ‘managed Arctic’ in essence does the same politically and socially while the ‘undetermined Arctic’ addresses human preparedness to abrupt and unexpected changes. Under each of these categories, except for the ‘undetermined Arctic’, the National Research Council has identified 5–6 questions which it deems crucial in determining future research for the Arctic.

The outcome is a truly multidisciplinary assessment of Arctic research that is certainly of very high interest for all disciplines. While not delving too deeply into the different questions presented, the report could be considered to give advice to researchers engaged in the Arctic Council’s working groups. For example, those questions of all categories in which the social dimension is embedded can easily be taken as a hint towards the Arctic Human Development Report II, currently in progress under the Sustainable Development Working Group. Similarly, the natural sciences angle of the research questions could be taken as an incentive to conduct a new Arctic climate impact assessment.

All in all *The Arctic in the anthropocene* is not only relevant and interesting for researchers, but also for students in their early stages of Arctic research. This is because there is a wealth of information contained in these 200+ pages that is fundamental for the understanding of Arctic environmental and socio-ecological systems. This being said, this reviewer cannot in full confidence substantiate the ‘emerging research questions’ on the provided bases. Or in other words, it is not entirely clear in how far the presented questions may constitute agency-driven frameworks for potential research. While it would go beyond my expertise to evaluate the natural sciences angle, in the social or political sciences questions nothing too revolutionary can be discovered. For example, the authors ask under the ‘connected Arctic’: ‘How will changing societal connections between the Arctic and the rest of the world affect Arctic communities?’ Indeed, this is a highly relevant question and it is without a doubt a crucial part of *ongoing* Arctic research and has by and large dealt with extensively already in 2005, for example, by Stammer in *Reindeer nomads meet the market* (Stammer 2005). Directly or indirectly, the substantial body of anthropological literature dealing with Arctic communities has aimed to tackle this issue. It is therefore hardly an ‘emerging research question.’

Similarly, in the category of the ‘managed Arctic’ the authors ask: ‘Will local, regional, and international relations in the Arctic move toward cooperation or conflict?’ It seems fair to say that a large part of *ongoing* research on the political developments in the Arctic is founded on this question. There are countless examples for articles and books that focus on conflict or cooperation in the Arctic, most famously done in *Wither the Arctic? Conflict or cooperation in the circumpolar north* by Oran Young (Young 2009). Once again, therefore, this is hardly an ‘emerging research question.’

An area seemingly absent in the considerations of the authors is that of legal developments in the Arctic. None of the research questions presented here seems to take legal developments into consideration. This is a pity as especially in the still emerging field of polar or Arctic law there is a need for long-term research and associated long-term research questions which indeed we might regret having ignored. The relevance of the legal dimension in Arctic and polar research is best exemplified in the impressive volume *The law of the sea and the polar regions* (Molenaar and others 2013), also highlighting the

ongoing research on the above mentioned ‘emerging research questions.’

The advisory role of the National Research Council comes particularly to the fore in the fourth chapter of the report, *Meeting the challenges*. This chapter seems to target policy-makers and funding institutions as it provides the rationale for sustainable interagency and international collaboration in order to generate balanced and accessible circum-Arctic knowledge. As a significant contributor to this knowledge the authors consider traditional ecological knowledge (TEK) in order to be better prepared for the unknowns of Arctic research. Unfortunately, the authors fail to adequately address the social and political dimension of TEK and merely note that ‘this information source has not been fully utilized’ (page 127). Here, this seemingly natural science-based report could have further emphasised the need for ‘decolonising methodologies’ (Tuhiwai Smith 1999) in natural sciences in order to avoid western-dominated power relations in Arctic community-based research (see for example Procter 2005). Indeed, also the claim that ‘[n]atural and social scientific study can provide an objective basis’ (page 165) does not correspond to anthropological and legal research in which ‘objectivity’ has been an issue of a wider body of literature (in anthropology, see for example Thapan 1998; in law, see for example Husa and Van Hoecke 2013).

As mentioned earlier, it is impossible for me to evaluate the urgency and acuteness of the natural sciences-based questions of this report. But with regard to the social and legal sciences, *The Arctic in the anthropocene* could not convince. So, judging from a social and legal vantage point, while providing very important basic information, those having been engaged in Arctic research for a while will not find groundbreaking new knowledge or inspiration, both with regard to the ‘hows’ of conducting research and the presented

research results themselves. It is thus to conclude that the importance of this report lies in its advisory position for funding-providers and policy makers. Also (under)graduate students may find stimulation for conducting their own research. The significance of the report to tackle ‘emerging research questions’ in a wider Arctic epistemic context however remains doubtful. The report can be accessed online for free here: https://download.nap.edu/login.php?record_id=18726&page=http%3A%2F%2Fwww.nap.edu%2Fdownload.php%3Frecord_id%3D18726. (Nikolas Sellheim, Faculty of Law, University of Lapland, PO Box 122, 96101 Rovaniemi, Finland (nikolas.sellheim@ulapland.fi)).

References

- Husa, J. and M. Van Hoecke (editors). 2013. *European Academy of Legal Theory Series: objectivity in law and legal reasoning*. Oxford: Hart Publishing.
- Molenaar, E. J., A. G. Oude Elferink and D. Rothwell (editors). 2013. *The law of the sea and the polar regions. Interactions between global and regional regimes*. Leiden & Boston: Martinus Nijhoff Publishers.
- Procter, A. H. 2005. Konstruktion von Machtstrukturen und traditionellem Wissen im nördlichen Kanada [Construction of power structures and traditional knowledge in northern Canada]. In: Bauer, S., S. Donecker, A. Ehrenfried and M. Hirsperger (editors). *Bruchlinien im Eis. Ethnologie des zirkumpolaren Nordens* [Break lines in the ice. Ethnology of the circumpolar north]. Münster: LIT Verlag. 208–244.
- Stammler, F. 2005. *Reindeer nomads meet the market*. Münster: LIT Verlag.
- Thapan, M. 1998 (editor). 1998. *Anthropological journeys: reflections on fieldwork*. New Delhi: Orient Longman.
- Tuhiwai Smith, L. 1999. *Decolonizing methodologies. Research and indigenous peoples*. London & New York: Zed Books Ltd.
- Young, O. R. 2009. Wither the Arctic? Conflict or cooperation in the circumpolar north. *Polar Record* 45 (1): 73–82.

HOOSH: ROAST PENGUIN, SCURVY DAY, AND OTHER STORIES OF ANTARCTIC CUISINE.

Jason C. Anthony. 2012. Lincoln, NE and London: University of Nebraska Press. 286 p, illustrated, softcover. ISBN 978-0-8032-2666-1. US\$ 26.95.
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Jason C. Anthony’s book is a welcome addition to a comparatively small field. Although food is often the subject of intense interest in expedition narratives, few authors (with some exceptions, including Tom Griffiths’ *Slicing the silence* (Griffiths 2007)) have examined Antarctic cuisine in depth. Whereas biochemist Robert E. Feeney’s *Polar journeys* (Feeney 1997) took a more scientific approach to the subject, replete with nutritional tables, Anthony offers a potted history of Antarctica from the perspective of the dining table. His account is heavily informed by his own time working in the Antarctic between 1994 and 2004: indeed, the book’s intention is, in part, to ‘give voice to [the] neglected majority’ of support workers, often ignored or obscured in the accounts of ‘explorers, journalists, historians, and scientists’ (page xv).

As its title implies, *Hoosh* takes a great interest in the privations and unconventional menus of Heroic Age cuisine. Its first four chapters provide a valuable cook’s eye view of the period, from Louis Michotte’s ‘boardlike’ (page 19) pastries on *Belgica*

to the hastily boiled concoctions gulped down by Shackleton and his companions aboard *James Caird*. Anthony’s rendering of the era’s expeditions is commendably ecumenical, dwelling on lesser-known explorers (he is particularly taken with the unconventional Rozo, chef to Charcot’s French Antarctic Expedition) as well as the iconic quartet of Amundsen, Mawson, Shackleton and Scott. This section is frequently fascinating, studded with facts and anecdotes that help to give a fuller flavour of Antarctic life a century ago: anyone wondering what Scott means when he talks about a seal *galantine* will find their curiosity satisfied here. However, Anthony’s flippant approach to the Heroic Age (‘eccentric men gambling with their lives for often rarified [sic] goals’ (page 40)), will irk some. Although quick to praise Amundsen (‘the most professional and shrewd of polar explorers’ (page 83)) and Shackleton, the book follows Roland Huntford’s lead on Scott: in the same paragraph as Shackleton leads ‘a remarkably stoic attempt to reach the South Pole’, Scott’s Southern journey on the *Discovery* expedition is described as ‘an abortive sledging trip across the Ross Ice Shelf’ (page 5).

Hoosh loses some of its impetus in its middle chapters, as Anthony concedes: ‘[t]he history of Antarctic food loses some of its drama after the heroic age’ (page 94). Nevertheless, his account of the expeditions and endeavours from Byrd to Fiennes and Stroud is entertainingly told, tracing the continent’s shift from wilderness to workplace. Although Phillip Law, head of