Anthropocene Slow TV: Temporalities of extinction in Svalbard

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#### Abstract

In Norway, slow television, an internationally popular format that approaches Nordic noir in export value, has been primarily concerned with entertaining viewers by showing Norwegians (and interested outsiders) their own country. The January 2020 NRK release of its slow TV programme Svalbard minutt for minutt (Svalbard Minute by Minute) focuses on this Arctic region, juxtaposing striking images of its native fauna with the remarkably wellpreserved ecological crime scenes of its Anthropocene pasts. Svalbard Minute by Minute constitutes a daring mash-up of nation-branding nature programme and extractivist history

documentary, via both non-fiction modes of place and process views, in which the two strains reinforce one another to pose difficult questions about the future for viewing audiences.

## **Keywords**

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The latest in the Norwegian national broadcaster NRK's world-famous *sakte-TV* or 'slow TV' series *Minutt for minutt (Minute by Minute)* (NRK 2009- present) specials, aired from 31 January to 9 February 2020, takes the viewer on a close to ten-day, round-the-clock real time boat tour around the nation's northernmost territory, the Svalbard archipelago. Unlike previous editions of this series, *Svalbard minutt for minutt (Svalbard Minute by Minute)* (2020) was shot in August but broadcast with a six-month delay to coincide with the centennial of the treaty that ceded this Arctic territory to Norway. The broadcast explains that the timing takes advantage of the longer days at that latitude, where in January there would be little or no actual daylight. In addition, a technical reason for not broadcasting live was patchy television transmission coverage when located so far north. This was a much-discussed departure from the other slow TV shows, which were broadcast live even when

complications arose (the 2017 series spotlighting the annual reindeer migration stalled out for several days when the herd's alpha female did not feel like walking).

But in addition to introducing a pre-taped broadcast, this series also upped the ante on its continuing exploration of human entanglements with 'nature' and the environment in Norway, juxtaposing striking images of its native fauna with the remarkably well-preserved ecological crime scenes of its Anthropocene pasts. When asked about whether the programme could be regarded as a contribution to the eco-political debate about where to draw the boundaries delineating the Arctic ice front, the producer Thomas Hellum answered affirmatively. In his view, it is also an intervention in current debates concerning the Arctic North, climate issues, animal welfare, and tourism (Fyen 2020: 2). In other words, the production can clearly be regarded as quite political.

The production was highly successful in terms of audience numbers: during the days *Svalbard Minute by Minute* was broadcasting, a total of 2.3 million viewers were watching, for an average of 80 minutes per viewer. NRK reported that the viewers often said they had turned on the broadcast just to check out what the production was all about, and ended up being mesmerized by its scenes of nature (Børstad 2020). NRK decided not to geoblock the broadcast, resulting in a global audience including a community of online viewers sharing their experience under the hashtag #nrksvalbard on Twitter. Even though the broadcast was not live, the production was undertaken by a crew of 26 filming in real time aboard on the passenger ship MS Spitsbergen to simulate a live recording of the journey the 140 passengers onboard were enjoying. The only thing added after the journey ended was a voice over (Heiervang 2020).

As Andreas Jahn-Sudmann and Frank Kelleter argue, a defining feature of seriality is the phenomenon of *Überbietung* or one-upsmanship, whereby each new entry in a series (of film sequels or television seasons, for example) must do more — in some sense — than its predecessors in order to keep up with viewer demand for novelty alongside fan service (Jahn-Sudmann and Kelleter 2012: 207). Norwegian slow TV tradition originated with the first show's instant popularity: NRK's marathon documentary *Bergensbanen minutt for minutt* (*Slow TV: Train Ride Bergen to Oslo*) (2009) celebrating the 100th anniversary of the Bergen-Oslo train line and rooted in the public broadcaster's mission to uphold its national mandate (Thomson 2017: 477). As a production of the national broadcaster, NRK's slow television seeks to perform and display Norwegianness, both for a fascinated domestic audience and for a curious and growing number of international viewers (Jørgensen 2014: 104-06; Puijk 2015: 103-06). Norwegian slow TV programmes have followed the coastal

ferry Hurtigruten along its 134-hour journey from Bergen to Kirkenes (aired in June 2011) or traced the twelve-hour process, one cosy November evening in 2013, of producing a wool sweater from the start (sheep shearing) to the finished garment. *Reinflytting minutt for minutt (Reindeer Migration Minute by Minute)* in 2017 documented the reindeer migration in northern Norway, allowing NRK to shine a light on Sámi culture through interviews, music and historical interludes.

This article will examine how the Svalbard iteration of the *Minute by Minute* series advances the conventions established in earlier iterations of the show, even enacting a form of self-homage, as it is primarily a document of the Norwegian Hurtigruten ship, the Spitsbergen, as it sails around the rugged archipelago (see Figure 1). But the series here outpaces previous programmes, as it oscillates between travelogue elements — fulfilling the expectations of a fond 'armchair' portrait of Norwegian nature and reinforcing a tendency towards 'Nordic environmental exceptionalism' (Hennig et al. 2018: 3-8), which has often relied upon 'nature' couched in a highly mediated format (Jørgensen 2014: 96), and also featuring several segments that constitute more ambivalent meditations on transnational extractivist pasts and their traces in the Norwegian present, referencing implicit threats of extinction across multiple temporalities. In this, Svalbard Minute by Minute also deviates from the focus found in a recent Norwegian Arctic documentary, *Bjørnøya* (*Bear Island*) (Grjotheim and Wegge 2014), and an NRK TV series sharing the same title (2014), both of which centre attention on the presumably unspoiled nature of the North. In both, 'threat' is addressed in a highly visible form: it is washed ashore on the island from the outside world, plastic bottles and fishing gear n the documentary film and oil spills from shipwrecks and oil drilling in the TV series.

[insert Figure 1 here]

Figure 1: The 2020 NRK series *Svalbard minutt for minutt (Svalbard Minute by Minute)* follows the Hurtigruten coastal ferry on its journey around the archipelago, enacting a form of self-homage that nods to the earlier blockbuster programme, 2011's *Hurtigruten minutt for minutt (Hurtigruten Minute by Minute)*, which tracked the entire route of the ferry from Bergen to Kirkenes. *Svalbard minutt for minutt (Svalbard Minute by Minute)* (2020), Norway: NRK. Screen grab. Courtesy of NRK.

## Place-making, nature and Svalbard

Svalbard occupies a hallowed place in popular culture as an exotic, far-north location where anyone walking outdoors must carry a rifle in case of polar bear attacks. Recently it was

featured as a location in HBO's 2019 series His Dark Materials, an adaptation of the beloved Philip Pullman novels, starring a gruff but tender-hearted polar bear warrior king named Iorek Byrnison. The same year it was a prominent setting in the third season of the Norwegian eco-thriller Okkupert (Occupied) (2016-2019). It has also been the setting of other films and television series, including the thinly fictionalized locale of Fortitude in the UKproduced Nordic noir-esque series of the same name (2015-18). Listeners of the supernatural horror drama podcast *The White Vault* (2017-20) will also recognize Svalbard as the location where the mysterious disappearance of an expedition team takes place. Svalbard has been in the news headlines for less glamorous reasons: record high Arctic temperatures have endangered the polar bear population as well as the Global Seed Vault, a repository designed to preserve samples of thousands of the world's seeds as corporate agricultural consolidation and climate change threaten them with extinction (see Hennig 2019). Meltwater seepage from unprecedented thawing in the surrounding permafrost caused an embarrassing kerfuffle among the architects and administrators of the storage cellar (Carrington 2017: n. pag.). As a contemporary media location, then, Svalbard represents a complex set of connotations involving extreme weather, adventure, exoticism, mystery, extinction and climate change.

Svalbard Minute by Minute's days-long journey exploring the islands and fjords of Svalbard features plenty of footage reminiscent of television nature documentary series, and these visuals constitute the show's chief viewing pleasures. Sightings of landscapes and fauna that most people can only experience in this mediated form of edutainment are interspersed with facts and commentary from guides and experts. Although Svalbard is part of Norway, most residents of the mainland have never been there and know it only through its media representations. And even among Norwegians, familiar with cold weather, snow, ice and short winter days, Svalbard is regarded as the exotic North. This widespread impression is largely constructed through television's visual and narrative descriptions of the archipelago's harsh topography and its wildlife, with a particular emphasis on the majestic polar bear, arguably the prime attraction in Svalbard Minute by Minute (see Figures 2, 3 and 4) and an already familiar avatar in environmentalist representations of threatened nature.

Polar bears are a paradigmatic example of 'charismatic species', a term deployed by conservation biologists to express the concept of nonhuman charisma, or 'the distinguishing properties of a non-human entity or process that determine its perception by humans and its subsequent evaluation' (Lorimer 2007: 915). The media cliché of the starving polar bear now haunts most media appearances of the apex predator, since the overused image has been imprinted as a synecdoche of extinction in the minds of most contemporary media audiences

(see Chaudhuri 2012; Munger 2019; Stanley-Becker 2019). The loss of sea ice hunting grounds threatens their survival, making them apt symbols for anti-climate change campaigns, and they are featured in the recent Greenland-set Nordic noir series *Tunn is (Thin Ice)* (2020). Within documentary film discourse, too, the leitmotif of the polar bear dominates not only big-budget international nature TV productions such as the BBC series *Hunt* (2015), narrated by David Attenborough, which dedicated one episode entirely to Arctic predators, but also the oldest known filmed depictions of the North.

# [Insert Figures 2, 3 and 4 here]

Figure 3	
Figure 2	Figure 4
Caption for figures 2, 3 and 4	

Figures 2, 3 and 4: *Svalbard Minute by Minute* makes the most of the exotic northern fauna with telephoto and drone photography, capturing images of animals most viewers will never see face to face, including intimate close-ups of Arctic foxes frolicking along deserted beaches, walruses lounging on beaches and polar bears napping on mossy knolls. *Svalbard Minute by Minute* (2020), Norway: NRK. Screen grab. Courtesy of NRK.

Cameras have been included in Arctic explorers' equipment from the start of the twentieth century, playing an important part in the race towards the North Pole. According to Jan Anders Diesen, visual material produced by explorers found expression in a variety of forms, including documentation of the landscape and animal life incorporated in newsreels, scientific films, travelogues and documentaries (Diesen 2012: 275). Among these, the early film 1906 The Wellman Polar Expedition — Set Out from Bergen to Spitzbergen (Urban 1906) follows the American explorer Walter Wellman's northward journey along the coast of Norway, crossing the Norwegian Sea from the mainland and arriving at his destination, Svalbard. The film portrays the explorers' camps as the northernmost border of human civilization, a place where bold men risked their lives trying to reach the North Pole, living in fear of polar bear attacks. At the same time, early twentieth-century Svalbard was already a tourist destination, with travel advertisements by major steamship companies commonly appearing in newspapers (see Diesen and Fulton 2007).

In the 1930s, Norwegian oceanographer and government fisheries official Thor Iversen made non-fiction films about the far North with titles like Svalbardtokt ('Svalbard expeditions') (ca. 1930), *På jakt etter Nautilus* ('Stalking the Nautilus') (1931) and *Hvor* isbjørnen ferdes ('Where the polar bear wanders') (1936). Iversen's 1936 travelogue features the Northern seascapes near the island of Hopen and a polar bear hunt,<sup>2</sup> depicted step by step: sighting a bear with two cubs, shooting the mother, capturing the cubs, skinning the bear and butchering and curing the meat (Sørenssen 2017: 128-30). As Bjørn Sørenssen argues in his study of 'Where the polar bear wanders', Iversen thus combined the two prominent modes of 'the aesthetics of view' characterized by Tom Gunning: the place film and the process film (2017: 130). With this combination, Iversen's travelogue pioneered a complex documentary form. As Sørenssen states, "[o]ne interesting aspect of the travel film is the amazing consistency of the format, from the earliest days in the 1890s into the period of the sound film" (2017: 126-127), and the aesthetics of view remains a key feature in later Arctic documentaries, most recently in two 2014 productions, the feature-length Bear Island and NRK's slow TV series of the same title. In the feature-length film, three brothers, two of them passionate surfers, all of them loving snowy hills, travel north in pursuit of the best Arctic waves for surfing. The temporal anchoring in the present is punctuated by intimations of the future, represented by one of the brother's unborn child and the seashore they rid of garbage and plastic, thus symbolically purifying it for future generations. This emphasis on the present is also central to the television series, which combines travel film (the journey to the Arctic) with process film (the six-month shift working at the meteorology station) and the reality TV format's focus on relationships among the nine people working there, while also addressing the viewer with instant reflections on-screen (Iversen 2015: n. pag.). Throughout the uninterrupted 'real-time' televised journey of Svalbard Minute by Minute, temporality is mostly fixed in the present (albeit six months earlier), but its confrontations with the past, represented by still visible traces of the Anthropocene embedded in the landscape, constitute another novel feature of this slow TV programme.

## **Documenting signifiers of the Anthropocene**

The wild, desolate landscape fascinated scientists (biologists, palaeontologists, glaciologists, geologists), explorers and adventurous tourists back in the early 1900s – and it still does today. Although Longyearbyen, with a population of approximately 2100 inhabitants, is a modern city with a university campus, it also still marks a border between human civilization and the Arctic wilderness. During NRK's 60 years of making television programmes,

Svalbard has been a frequently recurring subject in long-running nature programmes like *Ut i naturen* ('Out in nature') (1992-present) with presenters wondering at the mystery of the archipelago's uniqueness, 'the Svalbard appeal'. In 'Out in nature', however, one issue has grown more urgent over the years: climate change -- how it has already affected the nature and wildlife of the polar regions and what to expect in the (near) future if no action is taken. Given the viewing contexts for contemporary audiences, the baseline awareness of climate change provides an unavoidable 'climate unconscious' that colours the viewing experience of shows like this, even when they are not explicitly 'about' climate change or environmental degradation (Leyda forthcoming 2021). This widespread awareness lends recent nature programmes about Svalbard, including the *Bear Island* productions, a distinctly environmentalist voice compared to earlier wildlife programmes. Thus, in the context of NRK's nature documentary programming before the 2020 *Svalbard Minute by Minute*, the archipelago has already been a site for inquiry into the damaging effects of human actions on the strikingly beautiful landscapes and wildlife, including the polar bear and many other land and sea species.

In addition to captivating images of polar bears and walruses lounging along the beaches, other segments of Svalbard Minute by Minute focus on the historical exploitation of local wildlife over the centuries as humans hunted Arctic animals to the brink of extinction, chasing the profits of the global trade in animal-derived products. The most prominent example is another 'charismatic species' that has been frequently portrayed in conservation appeals, the whale. The islands of the Svalbard archipelago served as shore stations for international whaling expeditions throughout the seventeenth century (see Hacquebord 2001). NRK cameras captured startling images of the material traces of this early industry based on natural resource extraction: stretches of shore along Bellsund where long ago whales were butchered, their meat removed and blubber rendered into oil. The mounds of whale bones still mark the location of this labour, which left behind only what could not be profitably sold (see Figure 5). After the industry developed methods for processing the whales at sea, such shore stations with their blackened stone fire pits and ghastly bone mounds were abandoned. Although hundreds of years old, these remains signal an Anthropocene continuity of the past and present, bearing out Nicholas Mirzoeff's assertion: 'In the Anthropocene, all past human history in the industrial era is the contemporary. No location is outside the Anthropocene, although some are affected far more than others' (Mirzoeff 2014: 215).

Indeed, the appearance of the piles of whale bones in the series, shortly after drone cameras picked up a pod of Beluga whales frolicking in the azure waters, makes for a stark

memorial of the long and complicated entanglements of human and animal that have drawn people to the remote archipelago for centuries. As Graham Huggan points out:

Whales straddle markedly different versions of the past, bringing together the *longue* durée of capitalist modernity (the all-too-human basis for whaling history) with the still longer stretch of an age that both predates and dwarfs human presence (the other-than-human reaches of prehistoric time). (Huggan 2018: 3)

As a charismatic species (see Albert et al. 2018), whales have been instrumentalized as symbols of the danger of extinction; Huggan associates them 'with the perception that time is fast running out, and that whales consequently represent a kind of planetary last chance in the face of impending catastrophe' (Huggan 2018: 3). The prominence of the human and more-than-human entanglements portrayed in the symbolic images of polar bears and whale bones further amplifies the way the series activates viewers' pre-existing awareness of environmental issues without directly pointing to them.

[Insert Figure 5 here]

Figure 5: Old heaps of weathered whale bones attest to the centuries-long transnational extraction industries that took the Arctic as a site for resource exploitation long before public concerns over possible extinction designated its charismatic megafauna as endangered species. *Svalbard Minute by Minute* (2020), Norway: NRK. Screen grab. Courtesy of NRK.

Svalbard Minute by Minute mediates Anthropocene extinctions in another segment: a classic 'ruin porn' tour (to use the term Siobhan Lyons employs [2018]) of the abandoned Soviet coal mining settlement at Pyramiden on the ninth day of the broadcast. Established by Swedish mining concerns, then sold to the Soviets in the 1920s, this large company town was abandoned in the 1990s (see Figures 6, 7 and 8). The eerie images of the built environment in decay offer a mournful, nostalgic take on the industrial past of its former inhabitants: we are led on a tour of the kitchens, basketball court, swimming pool, music room and other living spaces where up to 1000 miners and their family members faced a challenging sojourn in the far North. Even earlier, rougher experiences of frontier endurance can only be imagined as the camera lingers over a dilapidated wooden building along with the abandoned mining equipment that peppers the landscape around Pyramiden. As Siobhan Lyons argues, modern ruins fascinate us because 'they inspire in us a rational paranoia that taps into our own

eventual demise', signifying to us 'the inevitability of human extinction, refocusing the terrain of "ruin" away from the ancient world and towards the imminent future' (2018: 1). As a new contribution to the media archive of overt and implied extinction narratives connected both to Svalbard's wildlife and to human life, the NRK series mediates past extraction industries that thrived and then died out, from the early whaling stations to the disturbingly recent abandoned mines, while at the same time it premediates versions of our own possible futures.

[Insert Figures 6, 7 and 8 here]

Figure 6	
Figure 8	Figure 7
Caption for figures 6, 7 and 8	

Figures 6, 7 and 8: Over the past centuries, Svalbard's coal deposits attracted mining concerns from many nations, including the former Soviet Union, which developed a settlement, now abandoned, at Pyramiden for miners and their families, complete with community schools, pools and dining halls. *Svalbard Minute by Minute* (2020), Norway: NRK. Screen grab. Courtesy of NRK.

Theorizing across disparate time periods can raise awareness about the fragility of the ecologies and economies that human societies develop, destroy and (sometimes) restore. Environmental humanities researcher Patricia Yaeger argues for a deeper awareness of our place in the Anthropocene through a thought experiment: an alternative form of literary-historical periodization. A literary scholar, she proposes that instead of categorizing (Anglophone) literary history in terms of aesthetic and cultural demarcations like Romanticism or Victorianism, we think in terms of literature of the whale oil period or of the coal period. To read Dickens while foregrounding the prevalent sources of energy during his time opens up new pathways to understanding his work and our own aesthetic lineages (Yaeger 2011: 306-10). The emerging field of energy humanities takes as axiomatic that

the next steps in addressing environmental crisis will have to come from the humanities and social sciences — from those disciplines that have long attended to

the intricacies of social processes, the nature and capacity of political change, and the circulation and organization of symbolic meaning through culture. (Szeman and Boyer 2017: 3)

Although, to be sure, not all television viewers will be watching Svalbard Minute by Minute with Anthropocene entanglements of the human and the more-than-human at the forefront of their minds, we concur with Christopher Oscarson that Scandinavian documentaries (including both film and television productions) can frame and even foment the 'exploration of the deep human embeddedness in landscapes, environments and systems that challenge traditional notions of nature and categories of time and space that frame subjectivity' (2017: 218). Echoing viewers of earlier *Minute by Minute* programmes, many audience members reported that they were mesmerized by the spectacles of nature, including both the wildlife and the landscape of Svalbard, when they began watching (Børstad 2020; see also Puijk 2015: 104). One reason for that could be that in Svalbard Minute by Minute you signed in for a slow, almost contemplative audiovisual journey in which you first had to decide whether you wanted to explore the mediated landscape, and second, for how long. In addition to experiencing the vast territory and the long shores of Svalbard island, a possible reward might be the sights of a polar bear in its natural habitat, whales breaking the water surface, a colony of seals lounging on the beach or even the fascinating ruins of past human activities. Contemporary television nature programming such as this series push the kind of explorations described by Oscarson further and build momentum towards wider public understanding of human legacies of extractivism and engines of extinction (including our own). Watching the frolicking animals and the sublime Arctic land- and seascapes juxtaposed with the material remnants of earlier extractivist endeavours in Svalbard Minute by Minute can nudge viewers to reflect on 'how and why we got here and how we envision our unthinkable future', as film scholar Jennifer Fay puts it (2018: 12). Especially in its inclusion of the heaps of weathered whale bones and eerily empty mining town, the Svalbard iteration of the *Minute by Minute* series enables viewers to make connections between those fading traces of human economies and the delights of the flora and fauna we now expect from this internationally successful series. Bringing television and cinema studies into conversation with environmental humanities should ensure that popular screen cultures take up their rightful place at the heart of debates about human pasts and possible futures.

#### References

- Børstad, Sanna Drogset (2020), '2,3 millioner nordmenn har vært på Svalbard den siste uka trygt plassert hjemme i egen stue', *Tromsø e-avis*, 12 February, <a href="https://www.itromso.no/pluss/eksklusiv/2020/02/12/23-millioner-nordmenn-har-v%C3%A6rt-p%C3%A5-Svalbard-den-siste-uka-%E2%80%93-trygt-plassert-hjemme-i-egen-stue-21071771.ece. Accessed 15 October 2020.</a>
  - Carrington, Damian (2017), 'Arctic stronghold of world's seeds flooded after permafrost melts', *Guardian*, 19 May,

    <a href="https://www.theguardian.com/environment/2017/may/19/arctic-stronghold-of-worlds-seeds-flooded-after-permafrost-melts">https://www.theguardian.com/environment/2017/may/19/arctic-stronghold-of-worlds-seeds-flooded-after-permafrost-melts</a>. Accessed 14 June 2020.
- Chauduri, Una (2012), 'The silence of the polar bears: Performing (climate) change in the theater of the species', in W. Arons and T. J. May (eds), *Readings in Performance and Ecology*, London: Palgrave-Macmillan, pp. 45-57.
- Diesen, Jan Anders (2012), 'Nordover med filmkamera: Fra Wellman til Nobile', *Nordlit* 29, Special Issue: 'Narrating the High North', pp. 243-78, <a href="https://septentrio.uit.no/index.php/nordlit/issue/view/206">https://septentrio.uit.no/index.php/nordlit/issue/view/206</a>. Accessed 14 June 2020.
- Diesen, Jan Anders and Fulton, Neil (2007), 'Wellman's 1906 polar expedition: The subject of numerous newspaper stories and one obscure film', *Polar Research* 26:1, pp. 76–85, <a href="https://doi.org/10.1111/j.1751-8369.2007.00007.x">https://doi.org/10.1111/j.1751-8369.2007.00007.x</a>. Accessed 14 June 2020.
- Fay, Jennifer (2018), *Inhospitable World: Cinema in the Time of the Anthropocene*, New York: Oxford University Press.
- Fyen, Stian (2020), 'Kjedelig, som livet selv', Dagsavisen, 10 February, p. 2.
- Hacquebord, Louwrens (2001), 'Three centuries of whaling and walrus hunting in Svalbard and its impact on the Arctic ecosystem', *Environment and History* 7:2, pp. 169-85.
- Heiervang, Camilla Helen (2020): 'Noe av det treigeste vi har laget', *Aftenposten*, 30 January, p. 47.
- Hennig, Reinhard (2019), 'An Arctic archive for the Anthropocene: The Svalbard Global Seed Vault', in S. K. Frank and K. A. Jakobsen (eds), *Arctic Archives*, Bielefeld: transcript Verlag, pp. 197–218, <a href="https://doi.org/10.14361/9783839446560-013">https://doi.org/10.14361/9783839446560-013</a>. Accessed 14 June 2020.
- Hennig, Reinhard, Jonasson, Anna Karin and Degerman, Peter (eds) (2018), Nordic

  Narratives of Nature and the Environment: Ecocritical Approaches to Northern

  European Literatures and Cultures, Lanham, MD: Lexington.

- Huggan, Graham (2014), 'Notes on the postcolonial Arctic', in C. Zabus (ed.), *The Future of Postcolonial Studies*, London: Routledge, <a href="https://doi.org/10.4324/9781315882796">https://doi.org/10.4324/9781315882796</a>.

  Accessed 14 June 2020.
- Huggan, Graham (2018), Colonialism, Culture, Whales: The Cetacean Quartet, Environmental Cultures, London: Bloomsbury Academic, <a href="https://doi.org/10.5040/9781350010925">https://doi.org/10.5040/9781350010925</a>. Accessed 14 June 2020.
- Huggan, Graham and Tiffin, Helen (2015), *Postcolonial Ecocriticism: Literature, Animals, Environment*, 2nd edition, London and New York: Routledge.
- Iversen, Gunnar (2015), 'Å være i stillheten om *Bjørnøya* og nye tendenser i den polare ekspedisjonsfilmen', *Montages*, 15 June, <a href="https://montages.no/2015/06/a-vaere-i-stillheten-om-bjornoya-og-tendenser-i-den-nye-polare-ekspedisjonsfilmen/">https://montages.no/2015/06/a-vaere-i-stillheten-om-bjornoya-og-tendenser-i-den-nye-polare-ekspedisjonsfilmen/</a>. Accessed 14 June 2020.
- Jahn-Sudmann, Andreas and Kelleter, Frank (2012), 'Die Dynamik serieller Überbietung:

  Amerikanische Fernsehserien und das Konzept des Quality TV', in F. Kelleter (ed.),

  Populäre Serialität: Narration Evolution Distinktion. Zum seriellen Erzählen seit

  dem 19. Jahrhundert, Bielefeld: transcript Verlag, pp. 205–24.
- Jørgensen, Finn Arne (2014), 'The armchair traveler's guide to digital environmental humanities', *Environmental Humanities* 4: 1, pp. 95-112, <a href="https://doi.org/10.1215/22011919-3614944">https://doi.org/10.1215/22011919-3614944</a>. Accessed 14 June 2020.
- Leyda, Julia (forthcoming 2021), 'Post-air-conditioning futures and the climate unconscious', in J. Leyda and D. Negra (eds), 'Contemporary Television and/in the Banal Anthropocene', *Screen* 62:1.
- Lorimer, Jamie (2007), 'Nonhuman charisma', *Environment and Planning D: Society and Space* 25:5, pp. 911-32, https://doi.org/10.1068/d71j. Accessed 1 December 2020.
- Lyons, Siobhan, (ed.) (2018), *Ruin Porn and the Obsession with Decay*, Cham: Springer International Publishing, <a href="https://doi.org/10.1007/978-3-319-93390-0">https://doi.org/10.1007/978-3-319-93390-0</a>. Accessed 14 June 2020.
- Mirzoeff, Nicholas (2014), 'Visualizing the Anthropocene', *Public Culture* 26: 2, pp. 213–32, <a href="https://doi.org/10.1215/08992363-2392039">https://doi.org/10.1215/08992363-2392039</a>. Accessed 4 July 2020.
- Munger, Sean (2019), 'Avoiding Dispatches from Hell: Communicating Extreme Events in a Persuasive, Proactive Context', in Filho, W. L., Lackner, B. and McGhie, H. (eds), Addressing the Challenges in Communicating Climate Change Across Various Audiences, Berlin: Springer, pp. 115-29.

- Oscarson, Christopher (2017), 'Cinematic landscapes of the Anthropocene: Scandinavian documentary film at the turn of the twenty-first century', *Journal of Scandinavian Cinema* 7:3, pp. 217–23, <a href="https://doi.org/10.1386/jsca.7.3.217\_1">https://doi.org/10.1386/jsca.7.3.217\_1</a>>. Accessed 14 June 2020.
- Puijk, Roel (2015), 'Slow television: A successful innovation in public service broadcasting', Nordicom Review 36: 1, pp. 95-108, https://doi.org/10.1515/nor-2015-0008. Accessed 14 June 2020.
- Stanley-Becker, Isaac (2019), 'A "mass invasion" of polar bears is terrorizing an island town. Climate change is to blame', *Washington Post*, 11 February, <a href="https://www.washingtonpost.com/nation/2019/02/11/mass-invasion-polar-bears-is-terrorizing-an-island-town-climate-change-is-blame/">https://www.washingtonpost.com/nation/2019/02/11/mass-invasion-polar-bears-is-terrorizing-an-island-town-climate-change-is-blame/</a>. Accessed 14 June 2020.
- Szeman, Imre and Boyer, Dominic (2017), *Energy Humanities: An Anthology*, Baltimore: Johns Hopkins University Press.
- Sørenssen, Bjørn (2017), 'Thor Iversen and Arctic expedition film on the geographical and documentary fringe in the 1930s', in E. Frisvold Hanssen and M. Fosheim Lund (eds), *Small Country, Long Journeys*, Oslo: Nasjonalbiblioteket, pp. 116-35.
- Thomson, C. Claire (2017), "What we do is not art, it is definitely storytelling", An interview with producer Thomas Hellum on NRK's *Minutt for Minutt* television series', *Aniki: Portuguese Journal of the Moving Image* 4: 2, pp. 471–79, <a href="https://doi.org/10.14591/aniki.v4n2.344">https://doi.org/10.14591/aniki.v4n2.344</a>. Accessed 14 June 2020.
- Yaeger, Patricia et al. (2011), 'Editor's Column: Literature in the ages of wood, tallow, coal, whale oil, gasoline, atomic power, and other energy sources', *PMLA* 126: 2, pp. 305–26, https://doi.org/10.1632/pmla.2011.126.2.305. Accessed 14 June 2020.

# Film, television and podcast references

Bergensbanen minutt for minutt (2009), Norway: NRK.

Bjørnøya (2014), Norway: NRK/Høyem.

Fortitude (2015-18) UK: Sky Atlantic.

Grjotheim, Edda and Wegge, Inge (2014), *Bjørnøya*, Norway.

His Dark Materials (2019), USA: HBO.

Hunt (2015) UK: BBC.

Hurtigruten minutt for minutt (2011), Norway: NRK.

Iversen, Thor (ca 1930), Svalbardtokt, Norway.

Iversen, Thor (1931) *På jakt etter Nautilus*, Norway.

Iversen, Thor (1936), Hvor isbjørnen ferdes, Norway.

Minutt for minutt (2009 - present), Norway: NRK.

Okkupert (2016-19), Norway: TV2/CMore.

Reinflytting minutt for minutt (2017), Norway: NRK.

Svalbard minutt for minutt (2020), Norway: NRK.

*The White Vault* (2017-20), USA: Fool and Scholar, <a href="https://whitevault.libsyn.com/">https://whitevault.libsyn.com/</a>. Accessed 14 June 2020.

Tunn is (2020), Sweden: TV4.

Urban, Charles (1906), 1906 The Wellman Polar Expedition—Set Out from Bergen to Spitzbergen, UK.

Ut i naturen (1992-present), Norway: NRK.

<sup>1</sup> NRK's streaming site archives all the past episodes of *Minute by Minute* as well as other slow TV programming. This series can be seen at https://tv.nrk.no/serie/svalbard-minutt-for-minutt.

<sup>&</sup>lt;sup>2</sup> This film precedes the designation of polar bears as an endangered species by 37 years.