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**AFTERLANDS: A NOVEL.** Steven Heighton. 2006. Boston and New York: Houghton Mifflin. 406 p, illustrated, hard cover. ISBN: 0-618-13934-6. \$US25.00. doi:10.1017/S0032247407006845

Polar exploration narratives have inspired their fair share of novels, poems, and plays, particularly in the last few decades. The 'race' for the South Pole alone has generated an ongoing series of historical novels that blend documented event with creative extrapolation -Norwegian Kare Holt's Kappløpet, translated into English as The race (1976), and Beryl Bainbridge's Birthday boys (1991) are among the best known. These narratives explore contrasting, sometimes conflicting, interpretations of events, moving between different characters and points of view. By taking this approach, creative writers can short-circuit ongoing factual debates, highlighting possible subtexts behind official accounts, imagining the internal thoughts of key players, or providing the voice of marginalised or silenced participants. Even ships' cats can have a revealing perspective on events, as Caroline Alexander so winningly demonstrated in Mrs Chippy's last expedition (1997). Steven Heighton's Afterlands is one of the most recent, and certainly one of the finest, contributions to the rapidly growing genre of the polar historical novel.

Afterlands centres on the Polaris expedition led by Charles Francis Hall, which set out for the North Pole in 1871. The expedition went awry in myriad ways, not least the death — possibly the murder — of its leader. Hall sickened and died after returning from a sledging trip; the cause of his death — he claimed he had been poisoned has exercised researchers ever since. This episode, however, is mentioned only glancingly in Heighton's narrative. Afterlands concentrates on later events, when a group of 19 of the ship's company became stranded on an ice floe near Ellesmere Island after an aborted attempt to abandon ship during a storm. As a group, they were marked by their heterogeneity: two Americans (one white and one black), two Inuit couples and their five children, an Englishman, five Germans, a Swede, and a Dane. With no sign of Polaris, these castaways were forced to make their home on the drifting floe, living on their very limited supplies and anything the two Inuit men could catch, until they were rescued six months later off the coast of Labrador.

Heighton focuses on the internecine dynamics of power, desire, loyalty, and suspicion that characterize the multi-national group. The white American, George Tyson, is technically in command, but faces mutiny from several increasingly militant and nationalistic German-speakers, who have managed to bring firearms from the ship and strong-arm the other Europeans into supporting them. The

Inuit contingent are powerful due to their indispensable knowledge and skills, but are vulnerable to the convenient prejudices of the rest of the group ('We may well discover that the natives are naturally *adapted* to starvations of this sort. . . and should therefore actually receive a lesser ration than we.' [page 90]). The narrative oscillates between the points of view of three characters: Tyson; Tukulito (or 'Hannah'), the expedition's Inuit interpreter; and German immigrant Roland Kruger, caught between his dislike of his selfish, jingoistic countrymen, his hostility toward the self-righteous Tyson, and his growing feelings for Tukulito. Heighton keeps readerly sympathies constantly shifting; like the occupants of the ice floe, the reader is always wondering whom to side with and whose perspective to trust, until the only reliable knowledge is that any present surmises will shortly be replaced. The reader is left feeling that the jury is still — and always will be — out on all involved. As historical figures, they now live in the unstable 'afterlands' of others' interpretations.

This sense of ambiguity is fostered by the complex, multi-layered narrative structure. Afterlands comprises not only the central narrative, focalised through three different lenses, but also extensive extracts from Tyson's account of the expedition, Arctic experiences (1874), and snippets of his field notes (sometimes quoted verbatim, sometimes slightly altered); images from Tyson's book and contemporary broadsides; a map of the floe's drift; epigraphs from Conrad, Melville, Turgenev, and others; and Heighton's own prose-poems reflecting on his inconclusive search for historical traces of his subjects. This makes the novel sound overly busy, if not rather tediously postmodern; but somehow it all manages to work. The brief autobiographical asides, which could be annoyingly self-aware in other hands, have a disarming frankness and simple beauty. But most striking is Heighton's wonderful control of the narrative voice as it moves between and within different consciousnesses, providing the sense of assurance and narrative momentum needed to withstand the accumulated weight of the novel's paraphernalia. Textual layering and self-reflexivity notwithstanding, Afterlands is an entirely engrossing read.

As its title intimates, Afterlands is not just an attempt to imagine the experiences of the marooned group on the ice-floe; Heighton also extrapolates the three characters' remaining stories. He frames the central narrative with incidents from their later, sparsely documented, lives: we see Kruger's desperation provoked by Tyson's book, which cast the former in a villainous role; Tyson's own anxieties and regrets as his brief flicker of fame dies away; Tukulito's mixed feelings as her 10-year-old daughter Punnie, a musical prodigy, plays Mendelssohn before a charmed but condescending crowd. As the novel continues, Kruger's story dominates; the last quarter, which concentrates on his experiences in a Mexico over-run by militia, takes on a picaresque feel. This section, although constantly re-contextualising Kruger's Arctic experiences, feels overly long, detracting from the coherence of the narrative. The story could have finished a good deal earlier, with the superb evocation of Tukulito's passage into her own personal 'afterland.' But lives do not often conclude at the most elegant point; by following Kruger into Mexico, Heighton gives his narrative more the structure of a life than a novel.

The author of several books of poetry and short fiction as well as another novel, Heighton has been hailed as a new leading light of Canadian fiction, and those who read Afterlands will see why. As my expertise lies in the far south rather than the far north, I can not comment on the thoroughness of his research, or the extent of the liberties he takes with documented material. No doubt those better versed in the history of Arctic exploration will have stronger things to say about this. However, criticism of that sort would seem beside the point in a novel that foregrounds its own provisionality, presenting itself as a series of versions of events — an approach towards emotional understanding rather than historical truth. Such responses to polar expeditions will never replace rigorous, balanced, carefully argued non-fiction accounts; but they will continue to complement and complicate polar history. (Elizabeth Leane, School of English, Journalism, and European Languages, University of Tasmania, Private Bag 82, Hobart, Tasmania 7001, Australia.)

SCIENTIFIC UNCERTAINTY AND THE POLITICS OF WHALING. Michael Heazle. 2006. Seattle and London: University of Washington Press; Edmonton: Canadian Circumpolar Institute Press. xii + 260 p, hard cover. ISBN 0-295-98605-0. £38.95; \$US60.00. doi:10.1017/S0032247407006857

Since 1946 most pelagic whaling has been regulated under the International Convention for the Regulation of Whaling (ICRW), adopted in Washington, DC. The Convention is administered by the International Whaling Commission (IWC), which first met in 1949 and has been the principal forum for debate over the management regime that should be imposed on the industry. From the outset, the intention was that the IWC would be advised by a Scientific and Technical Committee (STC, split in 1951 into a separate SC and TC), so that regulation was based on the best available information about the biology of the quarry species and the status of their stocks.

In theory, such a framework should have guaranteed not only the survival of the world's great whales but their sustainable use for human benefit. In practice, the IWC has struggled since its very first meeting to measure up to its objectives. As is well known, between 1949 and 1970, catches in the Antarctic waters that were the main commercial whaling grounds declined, at first steadily and then catastrophically, and by the time the IWC adopted a moratorium on Antarctic commercial whaling in 1982 the industry had effectively destroyed itself. Many scientists and conservationists regard the ICRW and IWC as an object lesson in how not to conduct international regulation.

But the ICRW and IWC started with in-built weaknesses. First, like other international conventions, they protected the rights of the sovereign States Parties and this meant that to be effective decisions had to be reached by consensus. The ICRW allowed any Party that dissented from a decision to give notice within 90 days of its adoption that it would not be bound by it. This effectively meant that any one of the major whaling nations - at various times Japan, the Netherlands, Norway, the United Kingdom, and the USSR - could obstruct measures that clashed with what they perceived as their national interests (often tied closely to the need for a return on their investment in their whaling fleets). It meant that the quest for consensus led to weak compromises over overall (and later national) catch limits. It even meant in the early years that the Scientific Committee did not bother to propose quotas that it knew were too stringent to be accepted.

This book argues that a further, fundamental, problem arose because although the IWC was required to base its policies and limits on science, it used uncertainty over the numbers, reproductive rates, and survival of whales as a basis for rejecting the advice of the scientists. The arguments are familiar in fisheries today. The scientific consensus is that a stock is vulnerable, and that catch limits should be reduced. Those doing the fishery argue that there are plenty to be caught and that the scientists' figures are too uncertain to justify the economic cost of reduced harvesting. In the post-war period, whaling yielded valuable food oils and meat, and much money had been spent on factory ships and infrastructure. Many jobs were at stake. Each nation wanted to go on whaling until it had either got a reasonable return on its investment or found cheaper substitutes for its products, or both. And not all national scientists were beyond reproach: some indeed appear to have been chosen as national expert representatives on the SC because their views fitted the national political goal.

The author argues that scientific uncertainty was used in two ways during the history of the IWC. While the whaling nations were denying the need for stringent catch limits — at least until they had made as profitable as possible an exit from the industry — uncertainty was used to evade the scientific arguments for tighter catch limits. Later, the balance of proof was reversed and the 'Precautionary Principle,' originally formulated as an argument for preventing the discharge to the environment of potentially polluting substances, was prayed in aid as grounds for only permitting whaling at levels that would incontrovertibly safeguard species and stocks.

This shift in policy came far too late, and only after many years during which strengthening scientific evidence was denied while stocks declined. Methods for determining the age of whales improved. The decline of first humpback and blue whales, and then fin whales, became obvious. Smaller and less valuable sei and minke whales were targeted in turn. More effort was devoted to less return. The SC was strengthened in 1960 by the appointment of a 'Committee of Three' (later four)