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RESEARCH ARTICLE

Fox Trading and the Problem of Polar Bears in the Hudson's Bay Company: Arctic Human Ecology and Fur in a Global Value Chain, 1900–1940

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Abstract

Just before World War I, the Hudson's Bay Company (HBC) geographically expanded its trade in the Canadian Arctic to derive profits from Arctic fox fur and secure its position in a global value chain (GVC) delivering fur to metropolitan consumers. The "problem of nature" challenged the company's business venture. Furthermore, "nature" was made and remade by the HBC's own capital investments. The fox trade itself changed human ecology. Technology transfers to Inuit modified their hunting regimes to increase the company's returns of polar bear skins. Though these skins had high potential market value, modes of production introduced by the HBC to the Arctic precluded the company from sending high-quality products to metropolitan dressers. Within a changing Arctic human ecology, the HBC produced one highly valued commodity for the market while producing another from which it could derive only modest profit. The HBC's fox and polar bear trade at the onset of the last century suggests ways that business empires can set off complex and unanticipated changes in human ecologies and, therefore, the dynamics of nature and business at their very peripheries.

Keywords: Hudson's Bay Company; Arctic; environmental history; fur trade

Ever since the 1999 call of Rosen and Sellers, in this journal, for an "ecocultural history of business,"[1] environmental business historians have offered a wide range of analyses, with promising horizons found in global environmental history.[2] Many business historians, however, have largely devoted their studies to pollution and

[1] Christine Meisner Rosen and Christopher C. Sellers, "The Nature of the Firm: Towards an Ecocultural History of Business," *Business History Review* 73, no. 4 (Winter 1999): 577–600.

[2] See Andrew Smith and Kirsten Greer, "Uniting Business and Global Environmental History," *Business History* 59, no. 7 (2017): 987–1009, and articles in their special issue of *Business History*, (2017).

waste in the history of industrial capitalism. The toxic business legacies of production and consumption accumulating with global economic growth are no longer passed off as mere externalities. Moreover, business historians have now examined industry response to the growing public outcry against pollution and waste, offered transnational comparisons of firms investing in solving environmental problems, and assessed firms implementing initiatives, since the 1980s, in environmental stewardship and corporate social responsibility under the banner of sustainability.[3] That business history continues to devote much attention to the history of pollution and waste makes sense given the urgency of climate change, which centrally situates the historically polluting effects of business activity and consumerism in what is now recognized as the age of the Anthropocene.[4]

It is worth reconsidering more closely, however, the comprehensive vision of ecocultural business history proposed by Rosen and Sellers. They asked business historians to account more fully for the visible and invisible, direct and indirect consequences of material and energy flows derived from the natural world in business activities. In this, they asked historians to trace the "environmental metamorphoses" occurring in business, as well as the "operative notions of 'nature' and the 'natural' that guide and constrain such transactions."[5] Times seem propitious for business history to do that, given the ways that understandings of nature itself have evolved since the 1970s. Environments are rarely seen as "pristine" and are now understood to have been modified in significant ways anthropomorphically even before the advent of capitalist business enterprise. Though they did it on a different scale and for different purposes, traditional hunting and gathering societies extracted resources at scale and significantly transformed their lands into landscapes before capitalist markets and resource-extracting firms reached them, and long before their lands were formally colonized.[6]

This understanding of nature as an ever-changing dynamic of environmental processes is particularly relevant in Arctic business history, where the "problem of

[3] Ann-Kristin Bergquist and Kristina Söderholm, "Transition to Greener Pulp: Regulation, Industry Responses, and Path Dependency," *Business History* 57, no. 6 (2015): 862–884; Pierre Desrochers, "How Did the Invisible Hand Handle Industrial Waste? By-Product Development Before the Modern Environmental Era," *Enterprise & Society* 8, no. 2 (June 2007): 348–374; Magnus Lindmark and Ann Kristin Bergquist, "Expansion for Pollution Reduction? Environmental Adaptations of a Swedish and a Canadian Metal Smelter, 1960–2005," *Business History* 50, no. 4 (2008): 530–546.

[4] Ann-Kristin Bergquist, "Business and Sustainability: New Business History Perspectives," Working Paper 18-034 (Boston, MA, 2017), 5–26. Geoffrey Jones and Christina Lubinski, "Making 'Green Giants': Environment Sustainability in the German Chemical Industry, 1950s–1980s," *Business History* 56, no. 4 (2014): 623–649; Keetie Sluyterman, "Royal Dutch Shell: Company Strategies for Dealing with Environmental Issues," *Business History Review* 84, no. 2 (Summer 2010): 203–226; Ann-Kristin Bergquist and Kristina Söderholm, "Green Innovation Systems in Swedish Industry, 1960–1989," *Business History Review* 85, no. 4 (Winter 2011): 577–698.

[5] Rosen and Sellers, "The Nature of the Firm," 589.

[6] William M. Denevan, "The Pristine Myth: The Landscape of the Americas in 1492," *Annals of the Association of American Geographers* 82, no. 3 (Sept. 1992): 369–385; Stephen J. Pyne, "Fire Rings of Indigenous Canada," in *Awful Splendour: A Fire History of Canada*, ed. Stephen J. Pyne (Vancouver, BC, 2007), 16–50; Geoff Cunfer, "The Decline and Fall of the Bison Empire," in *Bison and People on the North American Great Plains: A Deep Environmental History,* ed. Geoff Cunfer and Bill Waiser (College Station, TX, 2016), 1–29.

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nature" has imposed itself in the extractive "nature-centered production" of organic and nonorganic natural resources.[7] Boyd et al. pointed out that businesses engaged directly in the nature–society interface do not simply succeed, fail, or cope with the particular dynamics of nature they encounter, but nature itself "is produced and reproduced within the circuits of capital accumulation."[8] Canada's Arctic nature continues to be produced and reproduced with the infusions of business capital. That was certainly the case after World War II, when large-scale capital supported mining and petrochemical ventures, coinciding with the Canadian federal government's administrative investments in northern development, the organization of wage labor workforces within new Arctic towns, and perhaps more importantly, a comprehensive land treaty being struck with Inuit people to establish the territory of Nunavut.[9] But even before World War II, smaller-scale capital in Arctic Canada and Labrador extracting organic natural resources, mostly sea and land mammals, made and remade nature. If Elena Baglioni, Liam Campling, and Elizabeth Havice have argued that sites of production within global value chains (GVC) would benefit from greater attention paid to their ecological dynamics,[10] this surely holds true in the case of organic natural resources extracted from the Canadian Arctic in the fur trade, which made and remade nature, often imperceptibly, around its very participants.[11]

To be sure, such made and remade nature significantly affected business ventures themselves. This article examines commodities made from Arctic nature in the business history of what was one of the longest surviving firms in global business history, the Hudson's Bay Company (HBC). At the turn of the 20th century, the company began building trading posts in the Arctic to exploit the rising international demand for Arctic white fox fur. "Nature" certainly imposed itself on the venture. Severe Arctic climate, cyclical furbearer populations, low carrying capacity ecologies, and stochastic changes in the availability of larger mammals providing subsistence to posted company men raised uncertainty in Arctic fur trading. But ecological dynamics, regardless of the strategies and decisions of HBC managers, expanded trade

[7] William Boyd, W. Scott Prudham and Rachel A. Schurman, "Industrial Dynamics and the Problem of Nature," *Society & Natural Resources* 14, no. 7 (2001): 555.

[8] Boyd et al., "Industrial Dynamics and the Problem of Nature," 561.

[9] John Hamilton, *Arctic Revolution: Social Change in the Northwest Territories, 1935–1994* (Toronto, ON, 1994); Michael I. Asch, "Capital and Economic Development," in *Native People, Native Lands: Canadian Indians, Inuit and Metis*, ed. Bruce Cox (Montreal and Kingston, 1988), 299–308; Morris Zaslow, *The Northward Expansion of Canada, 1914–1967* (Toronto, ON, 1988); on the environmental impacts of development, see John Sandlos and Arn Keeling, "Ghost Towns and Zombie Mines: The Historical Dimensions of Mine Abandonment, Reclamation, and Redevelopment in the Canadian North," in *Ice Blink: Navigating Northern Environmental History*, ed. Stephen Bocking and Brad Martin (Calgary, AB, 2017).

[10] Elena Baglioni, Liam Campling and Elizabeth Havice, "The Nature of the Firm in Global Value Chains," in *The Corporation: A Critical, Multi-Disciplinary Handbook*, ed. Grietje Baars and Andre Spicer (Cambridge, UK, 2017), 314.

[11] This article adopts "global value chain" analysis while acknowledging the important studies of "global commodity chains" (GCCs) first proposed by Terence K. Hopkins and Immanuel Wallerstein in their article, "Commodity chains in the world economy prior to 1800," *Review (Fernand Braudel Center)* 10, no. 1: 157–170. See, Peter Gibbon, "Upgrading Primary Production: A Global Commodity Chain Approach," *World Development* 29, no. 2 (Feb. 2001): 350–360. The more recent fur industry was analyzed as a GCC by Lise Skov, "The Return of the Fur Coat: A Commodity Chain Perspective," *Current Sociology* 53, no. 1 (2005): 9–32.

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beyond fox skins. Best perceived in the company's post journals kept diligently by traders until the early 1930s, the HBC's trade transferred technology to Inuit to encourage change in Arctic behavioral ecology. Novel technology allowed hunters to make decisions to both widen the repertoire of their subsistence regimes and hunt certain game more intensively. This modified hunting regime, as a result, influenced the organic returns Inuit made to company posts, including polar bear skins. These skins had potentially high international market value, but they were undermined in quality by the very nature of the HBC's fox trade. They consequently ranked low in demand and price among metropolitan dressers and their consumers. If changes to Inuit behavioral ecology produced one prized commodity for the market, it produced another gaining only mediocre profits for the company. In pursuit of commercial gain in Arctic Canada and Labrador, the HBC's fox and polar bear trades, then, suggests ways that business empires contributing to larger GVCs supporting the modern, globalized economy had the effect of making and remaking nature in wholly unexpected ways at their very peripheries.

The HBC in a Global Value Chain Supporting Fur Fashion

The HBC had traded white foxes for centuries at posts in lower latitudes of North America at Hudson and James Bay. However, the company expanded its post system northward into the Arctic biome when demand and prices for Arctic white fox skyrocketed. First as whalers in Hudson Bay, and then as independent traders in the Northwest Pacific coast and the Alaskan sea, Americans began trading Arctic foxes when their pelt prices rose spectacularly in the 1890s. Western Eskimoan-speaking Yup'ik and Iñupiat were likely the first North American Arctic people to specialize in trapping, some even abandoning coastal marine subsistence hunting to become market hunters and significantly change their material culture as they integrated themselves into the Euro-American market economy.[12]

In 1909, on the Ungava Peninsula in the Hudson Strait in the Eastern Arctic, the HBC opened Wolstenholme, its first post dedicated to the Arctic fox trade. Competition grew nearby after 1913 when the French company Révillon Frères started business at nearby Stupart Bay, and the Canadian Lamson-Hubbard Co. built a post almost side by side with the HBC's in 1920.[13] The HBC built Chesterfield Inlet post in northern Hudson Bay in 1911, followed by another one at Fullerton Harbor in 1913 and others during and just after World War I in the environs of Southampton Island and across the Foxe Basin in the Kivalliq region (Fig. 1).[14] The company initially depended largely on Aivilingmiut Inuit for its fox returns. While many Eastern Inuit ignored the fox trade to pursue their subsistence seal and caribou

[12] John R. Bockstoce, *White Fox and Icy Seas in the Western Arctic: The Fur Trade, Transportation, and Change in the Early Twentieth Century* (New Haven, CT, 2018), 16–50. On Inuit consumerism spurred by market fox hunting, H. W. Nicholson, "Fur Trading in the Arctic: Eskimos Getting Rich," *The Central Furrier* 10 (1926): 48–58.

[13] Wolstenholme, Administrative History, Hudson's Bay Company Archives, Winnipeg, MB, Canada [hereafter "HBCA"].

[14] See Andrew Goodwin, "Inuit and Newcomers: Trade and Animal Resources in the Kivalliq, 1900–1945" (MA diss, University of Calgary, 2022); for a chronology and geographic location of HBC Arctic posts, see Peter Usher, "Fur Trade Posts of the Northwest Territories: 1870–1970," (Ottawa, ON, 1970).

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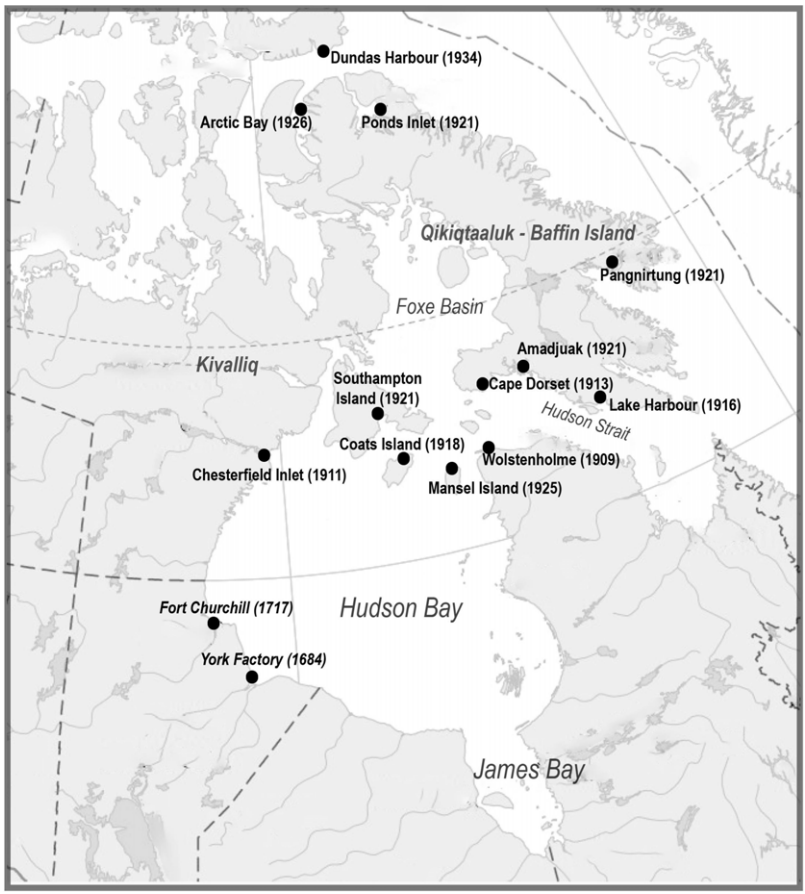

Figure 1. Hudson's Bay Company expansion into Canada's Eastern Arctic, 1909–1934.

seasonal hunting, bands of Aivilingmiut remained quite receptive to the material goods offered by newcomers, especially when the commercial whale hunt ended by World War I (WWI), and the increasingly unstable climate regime of the Eastern Arctic in the interwar period thinned and disrupted caribou herds. Widely dispersed geographically in very small, mobile settlements, the Aivilingmiut welcomed newcomers' goods and food to meet their needs in the face of an uncertain subsistence regime.[15]

The HBC expanded geographically into the fox trade as its predominance in the international fur industry declined. In its glory days of monopoly after chartering in 1670, the HBC sprawled impressively across North America, eventually extending posts as far as Hawaii, California, the Northwest Pacific coast, and the central Arctic to

[15] Renée Fossett, *In Order to Live Untroubled: Inuit of the Central Arctic, 1550–1940* (Winnipeg, MB, 2001), 170–176; 190–193.

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Labrador.[16] After losing its monopoly in 1870, the HBC's reserve funds and recourse to London capital markets gave it some resilience to hold its own in the increasingly competitive fur trade. By the interwar years, however, it was clearly struggling. Though the company set the pace of London fur sales and London constituted the center of the world's fur industry before WWI, the British fur sector began losing its place to New York and St. Louis by 1925. The company concurrently contended with American, Canadian, and French trading rivals to secure between only 30% and 40% of Canadian-traded furs by the mid-1920s.[17] Among 74 posts established in the Arctic between 1920 and 1924, only 34 belonged to the HBC.[18]

Most uncertain was the HBC's place in a GVC largely directed by metropolitan firms catering to consumer demands in the international fur market. The HBC traded furs from Indigenous people in North America and brokered them to value-adding intermediaries. At auction and through private sales, the company sold raw skins (flensed and dried) primarily to London wholesalers and dealers, who in turn sold them in fur dressing and dyeing districts in London, Leipzig, New York, and St. Louis. The HBC sold lower-grade "trash" skins to Eastern European and even Russian handlers while the finer ones eventually reached large fur manufacturer-retailers and smaller boutique furriers in Paris, London, and New York. These furrier-manufacturers both responded to and set fashion trends among consumers.[19]

But "nature" ultimately determined the HBC's source supply of furs. Furbearer animal ecologies mattered a great deal. To be sure, the HBC's Arctic fox trade contributed to a grievous global depletion of furbearers and wrecked ecological havoc in peripheral commodity "frontiers."[20] But it also triggered changes to the Inuit food hunt and prompted decisions among participant fur trappers to expand their dietary breadth and in doing so, hunt certain animals within their hunting ecology acquiring new importance in the Canadian Arctic.

[16] See Ann M. Carlos and Frank D. Lewis, *Commerce by a Frozen Sea: Native Americans and the European fur Trade* (Philadelphia, PA, 2010); Harold Innis, *The Fur Trade in Canada: An Introduction to Canadian Economic History* (Toronto, ON, Revised Edition, 1999); Arthur J. Ray, *Canadian Fur Trade in the Industrial Age* (Toronto, ON, 1990); Arthur J. Ray, *Indians in the Fur Trade: Their Role as Trappers, Hunters, and Middlemen in the Lands Southwest of Hudson Bay 1660–1870* (Toronto, ON, 2nd ed., 1998); E. E. Rich, *The History of the Hudson's Bay Company*, 3 vols. (London, UK, 1960).

[17] Ray, *The Canadian Fur Trade in the Industrial Age*, 143; 166–167; on the 1920s fur industry, see Harold Innis, *Fur-Trade of Canada* (Toronto, ON, 1927).

[18] David Damas, *Arctic Migrants/Arctic Villagers: The Transformation of Inuit Settlement in the Central Arctic* (Montreal and Kingston, 2002), 27.

[19] George Colpitts, "The Domesticated Body and the Industrialized Imitation Fur Coat in Canada," in *Contesting Bodies and Nation in Canadian History*, ed. Patrizia Gentile and Jane Nicholas (Toronto, ON, 2013), 138–140; Jonathan Faiers, *Fur: A Sensitive History* (New Haven, CT, 2020), 72–78.

[20] Moore's conception of "commodity frontiers" is applicable to the HBC's Arctic trade, Jason W. Moore, "Sugar and the Expansion of the Early Modern World Economy: Commodity Frontiers, Ecological Transformation, and Industrialization," *Review (Fernand Braudel Center for the Study of Economies, Historical Systems, and Civilizations)* 23, no. 3 (2000): 409–413; and Jason W. Moore, "'Amsterdam is Standing on Norway' Part I: The Alchemy of Capital, Empire and Nature in the Diaspora of Silver, 1545–1648," *Journal of Agrarian Change* 10, no. 1 (2010): 26–68; Jason W. Moore, "'Amsterdam Is Standing on Norway' Part II: The Global North Atlantic in the Ecological Revolution of the Long Seventeenth Century," *Journal of Agrarian Change* 10, no. 2 (2010): 188–227; on furbearer depletion, see John F. Richards, *The Unending Frontier: An Environmental History of the Early Modern World* (Berkeley, CA, 2003), 463–546.

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Such changes to Inuit hunting regimes can be better understood in behavioral ecology, a discipline of anthropology drawing on both human evolutionary behavioral and economic theory. Behavioral ecology can offer ways to explain how hunters optimize their returns of wild foods—both plant and animal—available to them but, importantly, not controlled by them.[21] In hunter-gatherer seasonal rounds, hunters make choices between taking game immediately for its caloric energy payouts or conserving their own energy to pursue other resources offering comparatively greater rewards. Hunters typically work within ecological "patches" where the game resources within them determine whether hunters focus on several different species (a generalist hunting regime) or only a few or even one species (a specialist regime). Such decisions tend to maintain a near-optimal dietary breadth. Hunters typically make the decision to move into new patches as former ones decline in payouts and/or switch to broaden or narrow their food hunt as circumstances dictate. Importantly, behavioral ecology models can help business historians make sense of the impact of new technology apt to raise the value of lesser-prized resources within hunting regimes.[22] Models also help explain how hunting cultures can engage with new market economies. Human ecologists have indeed reframed understandings of Indigenous participation in the history of the fur trade. Though the trade offered valuable novel goods to them, Indigenous hunters likely chose to trap furbearers of low subsistence value only when important game animals provided them food security to free up their time and energy to engage in commercial hunting.[23]

The Polar Bear Skin Market and the HBC

Though the HBC prioritized the fox returns to its Arctic posts, it traded other organic resources from Inuit, including fish, fowl, and caribou meat to support its own men and traded commodities that included seal skins, seal blubber, furs of smaller animals, and polar bear skins. It had traded some of the latter at its earliest posts in James and Hudson Bay.[24] Cree, Algonquian, and, later, Athapaskan Dene hunters, however,

[21] Bruce Winterhalder and Douglas J. Kennett, "Behavioral Ecology and the Transition from Hunting and Gathering to Agriculture," in *Behavioral Ecology and the Transition to Agriculture*, ed. Douglas J. Kennett and Bruce Winterhalder (Berkeley, CA, 2006), 3.

[22] See the models offered in human behavioral ecology (HBE) summarized in Winterhalder and Kennett, "Behavioral Ecology and the Transition from Hunting and Gathering to Agriculture," 6–17; Robert H. MacArthur and Eric R. Pianka, "On Optimal Use of a Patchy Environment," *The American Naturalist* 100, no. 916 (1966): 603–609; for another useful summary, see Bruce Winterhalder, "The Behavioural Ecology of Hunter-Gatherers," in *Hunter-Gatherers: An Interdisciplinary Perspective*, ed. Catherine Panter-Brick, Robert H. Layton and Peter Rowley-Conwy (Cambridge, UK, 2001), 12–38. Bruce Winterhalder, "The Analysis of Hunter-Gatherer Diets: Stalking an Optimal Foraging Model," in *Food and Evolution: Toward a Theory of Human Food Habits*, ed. Marvin Harris and Eric B. Ross (Philadelphia, PA, 1987), 311–339. Bruce Winterhalder, "Boreal Foraging Strategies," in *Boreal Forest Adaptations: The Northern Algonkians*, ed. A. Theodore Steegmann, Jr. (New York, 1983), 201–241. E. J. Smith tested the validity of HBE models in respect to modern foraging practices of Inuit in northeastern Hudson Bay in *Inujjuamiut Foraging Strategies: Evolutionary Ecology of an Arctic Hunting Economy* (New York, 1991).

[23] Bruce Winterhalder, "Canadian Fur Bearer Cycles and Cree-Ojibwa Hunting and Trapping Practices," *The American Naturalist* 115, no. 6 (1980): 870–879.

[24] David Thompson recounted Dene trading only a few polar bear pelts at Fort Prince of Wales (Churchill) in the early 19th century. Joseph Burr Tyrrell, ed., *David Thompson's Narrative of his Explorations in Western America 1784–1812* (Toronto, ON, 1916), 14–16.

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traded to the company many more, sometimes thousands, of black, brown, and grizzly bear skins annually for their profitable sales in the London fur market.[25] More northerly shield posts raised the company's returns of polar bear skins after 1885. By that point, demand for polar bear skins rose in the fur market. Metropolitan consumers wanted heavy fur pelts for sleigh and carriage robes. By the 1890s, polar bear pelts, along with buffalo, bison, tiger, leopard, and even lion pelts also served as fashionable and practical interior rugs or wall decorations in large apartments and homes of the upper-middle and upper-classes in Europe and North America.[26] Polar bears pelts gained additional popularity as an exotic animal product associated with imperialism and the high adventure of big game hunting. The rise of steamship tourist-sports hunting services in the 1890s, especially from Norwegian ports, spurred to a spectacular scale the polar bear trophy hunt in Spitsbergen Island and the coasts of Eastern Greenland.[27] The polar bear pelt acquired considerable cachet in households, even as a purchased rather than hunted product, to lay in front of open fireplaces in parlors, studies, and living rooms. The most impressive rugs were snow white and fully "raised," that is, they included the head and paws of the animal in the rug.

Given the rise in consumer demand, HBC skin prices increased by the end of the 19th century. Norwegian, Russian, and Swedish skin suppliers, however, dominated the new market. The Danish government monopoly, the Royal Greenlandic Trade Department (Kongelige Grønlandske Handel, or KGH), annually sold anywhere from 30 to 100 Greenland polar bear skins in Copenhagen. These were consistently considered "of finer quality and condition than in any part of the world," as Henry Poland wrote in 1892 in *Fur-Bearing Animals in Nature and Commerce*. He estimated that those sold the year before were valued between £10 and £30 (British pounds sterling) each. [28] Poland contrasted them with HBC polar bear skins selling in London the same year, earning only £1 15 shillings (s) to £8 10s. While KGH skins were "well flayed by the natives in prime winter condition" and "generally in perfect condition, and remain white," Poland stated HBC skins were "of little value, as they are badly flayed, being without paws and claws."[29]

The poor standing of HBC polar bear skins is suggested in the outcomes of the company's 1904 and 1907 auctions in London. The 55 HBC skins auctioned in 1904 had only three of high quality, fetching £10, £15, and £19 10s, respectively. The other 52 sold on average for £2 2s. The 1907 sales were even more disappointing: of 96 polar bear skins catalogued, the 6 finest sold for as low as £6 and the highest for £12 10s. The rest sold at an average of £1 8s.[30] Further limiting their use in the market, most of these HBC skins did not include their head or paws. In 1904 and 1907, of 151 skins, only two still had heads attached.

[25] See William Row's notes on HBC bearskin auctions between 1734–1822, in William Row Senior, Sons & Co. Fonds, E.324/1 HBCA.

[26] Richard Davey, *Furs and Fur Garments* (London, UK, 1895), 102–103.

[27] Michael Engelhard, *Ice Bear: The Cultural History of an Arctic Icon* (Seattle, WA, 2016), 70–94.

[28] Henry Poland, *Fur-Bearing Animals in Nature and Commerce* (London, UK, 1892), xliv and 159.

[29] Poland, *Fur-Bearing Animals in Nature and Commerce*, 159.

[30] Final sales are recorded in the company's catalogues for these years. Auction Catalogue of Fur Trade Produce, 14–17 Mar. 1904 A.54/715; and *Ibid*., 11–14 Mar. 1907, A.54/750 HBCA.

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Poland had reasons to praise Greenland bear skins. As early as 1888 the Copenhagen auction offered wares of superb quality: 31 of 47 Greenland skins that year sold in "pure white" condition, only 4 were of substandard quality.[31] Danish bear skins also ranked higher in quality than those from Norway at the Copenhagen fur exhibition later in the year.[32] In 1893, the *Fur Trade Review* reporting on a Copenhagen sale noted that of 59 Greenland salted bear skins, 35 were classified as "white," and 6 others were "lightly yellow." Only 15 were classified as "yellow," indicating that the animals' body fats during its skinning had tainted the fur. The overall quality of the skins was borne out in their realized prices after auction: the skins sold for an average of £10 3s. The best skin, measuring over 14 feet in length, sold for £34 10s. Only 4 of the 59 skins did not have heads or feet attached, but even these sold for between £9 3s and £9 10s.[33] Yet not all KGH bear skins were of the best quality. At the Copenhagen auctions in 1891 and 1905, the KGH sold bear skins notable for their overall low standard.[34]

All the same, Danish bear skins arrived at market in typically far better condition than those from HBC posts. Greenlandic Inuit undoubtedly took greater care to skin and prepare bear skins for the market. Poland believed Greenlanders cleaned skins in snow after flaying, "thus preventing the oil from turning them yellow."[35] Only attentive and time-consuming field skinning could deliver skins to traders that included an animal's head and paws.[36] Moreover, Greenlandic trading stations and settlements seem to have been better supplied with water for further cleaning, better drying facilities, and sufficient stores of salt, the latter a requisite preservative to transport to dressers skins with heads and paws still attached.[37]

More importantly, given the much longer Danish colonization of Greenland itself, the KGH bearskin trade was well integrated into Inuit subsistence economies. After 1774, the monopolized trade and the proliferation of trading settlements and outposts first in West Greenland, and by the late 19th century, a new settlement in East Greenland, introduced profound change to Inuit culture to facilitate Greenland's "resource enclosure," as Mark Nutall has characterized it.[38] By the early 19th century, the majority of West Greenland coastal Inuit were involved with the trade and had

[31] "Greenland Company's Sale," *Fur Trade Review* 15, no. 7 (2 Feb. 1888): 77.

[32] "Exhibition at Copenhagen," *Fur Trade Review* 16, no. 1 (1 Aug. 1888): 255.

[33] The grading, size, and color of each skin appear in "Royal Greenland Company," *Fur Trade Review*, 20, no. 6 (1893): 134; the realized auction prices are listed in "Royal Greenland Company, *Fur Trade Review* 20, no. 8 (1893): 174.

[34] "There were no good [bear]skins in this year's collection," "Greenland Company's Sales," *Fur Trade Review* 18, no. 7 (Feb., 1891): 101; the highest price paid for only one of the 121 skins sold in 1905 was $151," "Foxes and Polar Bears," *Fur Trade Review* 33, no. 9 (Apr. 1905): 297.

[35] Poland, *Fur-Bearing Animals in Nature and Commerce*, 158–159.

[36] See Peary's description of the time and effort needed to skin a bear with its head and paws attached in Arctic conditions: Robert E. Peary, *Northward over the 'Great Ice'* (London, 1898), 69.

[37] The importance of using copious quantities of water to clean polar bear fur, with even a recommendation to use gasoline, and the need for salt for raised bearskins, see Albert Lord Belden, *The Fur Trade of America: And Some of the Men Who Made and Maintain It* (New York, 1917), 453; A. B. Farnham, *Home Manufacture of Furs and Skins* (Columbus, OH, 1916), 47; 132–133; A. F. Wallace, *Sorting, Grading and Curing Furs* (Milwaukee, WI, 1910), 62–64.

[38] Nuttall, *The Shaping of Greenland's Resource Spaces: Environment, Territory, Geo-Security* (London, UK, 2023), 35–36. On settlements and outposts see Jens Dahl, *Saqqaq: An Inuit Hunting Community in the Modern World* (Toronto, ON, 2000), 12–31; see *Greenland: Handbook No. 132* (London, UK, Historical Section, 1920), 13–14.

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become "to a considerable extent dependent on trade goods to supplement their diet and mode of production."[39] At a time when the HBC was only introducing fox trading to many areas of the Eastern Arctic in Canada, a majority of Greenland Inuit had converted to Christianity, adopted literacy in the Inuit Kalaallisut language, traded at monetized posts, and oriented their hunting regimes to settlements and trading outposts. Beyond a dependency on firearms, many Greenlanders were increasingly using fabrics, foodstuffs, and luxury goods in exchange for commodities they diverted from their subsistence hunting.[40] KGH traders themselves had an incentive to send the highest quality bear skins to market since they enjoyed shares of their own posts' annual profits.[41] Greenlandic Inuit, too, had an incentive to better prepare skins as KGH offered significantly higher prices for "whole, large, well-processed bearskins,"[42] and in the late 19th century, traders were paying in kroner progressively higher prices for best quality polar bear skins, anywhere from kroner (kr) 30 in 1894 to kr 75 in 1919 and kr 100 in 1938.[43] Though the bearskin trade, overall, represented a minimal source of income for most Greenlanders,[44] in districts where seal skin trading was disallowed and/or when fox populations were nonexistent, such as in the East Coast settlement of Angmagssalik established in 1894, polar bear skins offered Greenlandic Inuit a means of procuring expensive and luxury goods otherwise not available to them.[45]

By comparison, and despite its centuries of business experience handling fine furs, HBC London sales of polar bear consistently fetched low auction prices. When the company sold its skins through C.M. Lampson & Co. auctions in 1912, of the 160 changing hands, the HBC's polar bears realized low prices, many fetching merely £1–2. A buyer noted them having "bad yellow," "singey" and flattened hair, and suffering from bad cutting. Tellingly, the highest auction prices that year were given to skins from Greenland accompanying the HBC's, fetching from £8 to £25 each.[46] The HBC's disappointing polar bear sales continued to the onset of World War I. Quite typical, skins achieved £1 8s 8 pence (d) on average in 1917, and attained, at most, £6 1s 7d, in 1910 (Fig. 2).

Recognizing It Had a Problem

The HBC recognized its polar bear problem. With the company's poor London sales throughout the 1920s, the Winnipeg-based Fur Trade Commissioner in 1928 suggested that HBC bear skins be dressed cheaply in Canada and sold in the US rather than in Europe. The company's governor, however, tasked his Development Department to

[39] Nuttall, *The Shaping of Greenland's Resource Spaces*, 35.

[40] Axel Kjær Sørensen, *Denmark-Greenland in the Twentieth Century* (Copenhagen, 2007), 16–17.

[41] Finn Gad, *The History of Greenland III: 1782–1808* (Kingston and Montreal, 1982) *The History of Greenland*, 27, 290–291.

[42] Bear hunting "as a source of income was of no importance to Greenlandic populations, representing, at best, special income to an individual hunter who happened to kill one." Gad, *The History of Greenland*, 290.

[43] Ejnar Mikkelsen and P. P. Sveistrup, *The East Greenlanders' Possibilities of Existence, Their Production and Consumption* (Copenhagen, 1944), 161, 203.

[44] Gad, *The History of Greenland*, 191.

[45] The Angmagssalik trade produced on average 78.5 skins annually between 1898 and 1939. Mikkelsen, *The East Greenlanders' Possibilities of Existence*, 93–94.

[46] Auction Notes, C.M. Lampson & Co. 11–28 Mar. 1912, Fur Auction Catalogues, H2-264-1-2 HBCA.

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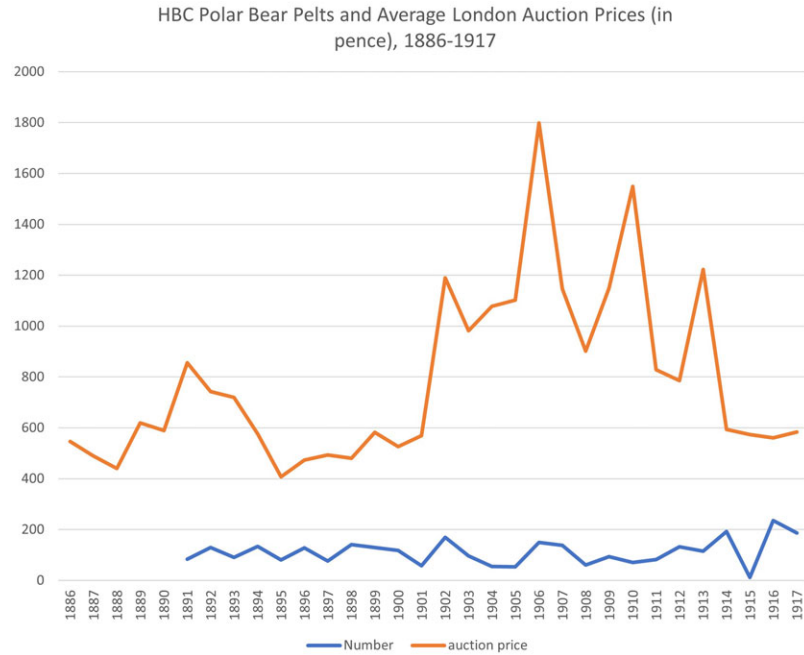

Figure 2. Number and auction prices of HBC polar bear skins, 1886–1917.
Source: A.63/8, HBCA.

look into the matter. Created in 1925, the company's Development Department was charged to use science and technology to raise the quality of the HBC's products, create new ones, and develop markets for them, while applying modern business methods to achieve greater efficiencies in its managerial organization.[47] With a dedicated laboratory at its command and a fur section run by an expert, L.J. McMillan, one of the department's first scientific investigations had already focused on the issue of taint, or yellow staining, that degraded the auction price of the company's furs, particularly of white furs, such as those of Arctic foxes and polar bears.[48] With microscopic analysis revealing the crusting and discoloration caused by grease and fat smearing an animal's fur after skinning, Charles Townsend, the department's director informed the company's governor in 1925 that it was "absolutely necessary that Post Managers should be charged with cleaning every fur immediately as it comes into their hands." He suggested that "the clerks or native labour at the Posts can do this work in that it is simplicity itself."[49] With the Development Department returning to

[47] Robrecht Declercq, "Natural Born Merchants: The Hudson Bay Company, Science and Canada's Final Fur Frontiers," *Business History* 65, no. 5 (2023): 920–934; Anne Morton, "'We Are Still Adventurers,': The Records of the Hudson's Bay Company's Development Department and Fish and Fish Products Department, 1925–1940," *Archivaria* 21 (1985): 158–165.

[48] "Re: Spoilt furs such as Arctic fox, skunk, polar bear, etc." 20 Nov. 1925, Development Department, Furs-Common, 1925–1927, A.95/31 HBCA.

[49] Townsend to the Governor, "Re: Furs," 9 Dec. 1925, A.95/31 HBCA.

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Figure 3. The HBC Development Department's promotion of Canadian polar bear rugs, Harvey Nichols, London, 1929.
Source: A.95/9/1, HBCA.

the issue of quality control in 1928, L.J. McMillan framed the governor's instructions to the company's Labrador district manager, reminding him of the company's policy "in the improvement of all productions at Posts," and to "pass special instructions to the Post Managers for all the Posts where polar bears are obtained, to ensure a high grade production." With Greenland, Norwegian, and Siberian bear skins coming to London "in a much better condition, cleaner and very much whiter than the products from our own posts," managers should take steps "immediately upon receipt at the post to remove all oil and grease from the hair" of bear skins arriving.[50]

But poor-quality skins still reached London. To do more with them, Townsend's department attempted to finish skins and directly market them as rugs to consumers. A skin that fetched only an average £2 14s at auction might therefore sell for £11 16s if the company dressed a skin and sold it under the HBC label, as McMillan believed.[51] In the first quarter of 1929, the company produced its first finished rugs, "flat," "half-raised" (with the skin's leg portions), and "raised" (with its heads and paws). Under the HBC trademark, they retailed in select outlets, including London's Harvey Nichols and Harrod's (Fig. 3). Other finished rugs were sent to the company's Canadian department stores, targeting, foremost, American tourists. It is difficult to know whether the initiative was soundly planned. Even before the crash of the New York

[50] J. Chadwick Brooks to District Manager, 30 Jan. 1929, Development Department Dossier, Polar Bears 1928–1930, A.95/9 HBCA.

[51] L. J. McMillan to Mr. Townsend, 2 May 1930, A.95/9 HBCA.

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Stock Exchange, Harvey Nichols made only a few sales. After the crash, Harrod's saw a collapse in demand for its "serious goods" and little interest in polar bear rugs. The "general financial depression prevailing" was likely to blame for the disappointing sales, but Harrod's general manager also felt that consumers found the raised and half-raised rugs "too cumbersome for the average house and occupy too much floor space."[52] At other London stores, consumers did not want a white rug "on account of the way it shows the dirt," while at another store these pelts were "Victorian and out of date."[53] The product met with similar disappointments at the HBC's Canadian department stores. Simpson's department store in Toronto failed to find any market for them, too.

With the switch to shorter-haired and smaller pelt furs for cars by the mid-1920s—Arctic fox was one of them[54]—and at a time when the polar bear proved beyond the means and practical needs of most middle-class consumers, the HBC's bear skins could only find a market through specialized dealers purchasing raw skins to dress for consumers not buying them in department stores. But here, again, the quality of the skins coming from HBC posts remained a problem. The HBC's governor repeated his instructions in 1929 for managers to urge their traders to do better: at the very least, "the principal thing to ensure is that the hair side of the skin should be kept clear of grease and oil."[55] The Development Department, meanwhile, assessing the results of the 1929 auctions, was still not seeing improvement in quality. Of 211 offered in October, the "greater part" went unsold, and the few that did went for between £3 and at most £8. With 500 now on hand for the February auction, there were real doubts about their prospects. Beyond the market uncertainty in the now-depressed economy, Townsend reported to the governor that he "would further point out that the polar bears from Greenland all come in perfectly white condition, in fact they are recognized as the finest quality which are placed on the market. This indicates clearly the unsatisfactory way in which our posts handle polar bears."[56] His department was aiming, again, to prepare "specific instructions with regard to the treatment of polar bears at the posts this year."[57]

But the governor and the company's officials were not perceiving that the root causes of its polar bear problem lay at fox trading posts. Put simply, the nature of the company's fox trade, by significantly changing behavioral ecology in Canada's Arctic, precluded the shipment of higher-quality polar bear skins to London.

Changing Behavioral Ecology in the Arctic Fox Hunt

In 1925, the HBC's London office had sent Charles Townsend, the director of its new Development Department, to inspect the company's posts operating in Canada's

[52] J. Drummond-Hay to Mr. Townsend, 17 Dec. 1929, A.95/9 HBCA.

[53] J. Drummond-Hay to Mr. Townsend 28 Mar. 1930, A.95/9 HBCA.

[54] On the use of fox as auto fur, see Elizabeth Ewing, *Fur in Dress* (London, UK, 1981), 119.

[55] J. Chadwick Brooks to District Manager, 30 Jan. 1929, Development Department Dossier, Bears, 1928–1930, A.95/9 HBCA.

[56] Charles Townsend to Governor, "Ranger Seals and White Bears at the Public Auction Sale, 2 Feb. 1929, Development Department, Sealing, 1929, A.95/101 HBCA.

[57] Charles Townsend to Governor, "Ranger Seals and White Bears at the Public Auction Sale, 2 Feb. 1929, Development Department, Sealing, 1929, A.95/101 HBCA.

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Arctic dedicated to the Arctic fox trade. At one of them, on Southampton Island, Townsend assessed the post's subsidiary products which "did not impress him"—the post's barrels of quite poorly rendered seal oil on the one hand and some 250 polar bears on the other. He urged the post's traders to improve their products and even think of new resources to export from the region.[58]

Southampton Island's operations, however, were not easy to improve upon. Posts in Canada's Arctic, while returning sometimes spectacular numbers of Arctic fox, were in fact substantially increasing the company's returns of polar bears, which, in turn, rated poorly on the global fur market. Traders undoubtedly prioritized fox over bear skins in the trade, given the much larger profits realized to posts from fox fur in annual accounting. In the James Bay district, including Attawapiskat, Moose Factory, Albany, and Great Whale River, for instance, posts collected 139 and 181 bear skins in 1918 and 1919, respectively, selling at auction for CDN $4573 and $7097, at an average of CDN $32.90 and $39.21 per skin; the same years, these posts sold 21,360 and 13,124 Arctic fox skins, worth CDN $995,589 and $626,277 respectively (at an average of CDN $46.61 and $47.72 per skin respectively).[59]

Townsend's admonition to Southampton Post traders to simply improve the quality of its bear skins, however, was far more difficult a task than he anticipated. The fox trade stimulated returns of polar bear skins that overwhelmed the small labor forces and resources at posts, which in turn affected these pelts proportionally. In his comprehensive survey of the polar bear trade in Canada's Arctic, William Barr explained that the remarkable surge of polar bear skins traded in the 1910s to the end of the 1920s coincided with the proliferation of HBC posts in the Arctic during this time.[60] But the increase was not due simply to more trading posts. Inuit were hunting bears with new technology that significantly transformed their subsistence hunting. In the Kivalliq region in 1909, at the company's first fox post at Cape Wolstenholme, and others in Hudson Bay and Foxe Basin by the early 1920s, the same trend was apparent: the overall expansion of the fox trade equated to a larger number of poor-quality polar bear skins.

In the case of Wolstenholme Post, it took years before Inuit, who were widely dispersed in the region, to even learn about its existence and begin orienting their marine and caribou hunting to the trade. In the post's first year, without Inuit to hunt fox and with some 140 leghold traps on hand, the four men posted at Wolstenholme themselves trapped an astounding 541 foxes. By 1912, Inuit bands were choosing to hunt within the post's purview, but they were still calculating the risks and benefits of gaining close trading relationships with the HBC. Devoting substantial energies to fur trapping was out of the question, even if a post could offset some Inuit subsistence shortfalls with canned and dry goods imported only once a year by steamer. Climate variability after WWI thinned and widely dispersed caribou herds, and Inuit in highly mobile small camps depended largely on "ecological patch" opportunities opening in different places season by season, whether within coastal walrus and seal populations, or inland caribou herds. These HBC posts, too, were small, with sometimes only a

[58] A. Dudley Copland, "Harvesting the Northern Seas," *The Beaver* 305, no. 3 (Winter 1974): 42.

[59] Department Annual Reports, 1919, RG 3/1A5 HBCA.

[60] William Barr, *'White Beares of a Monstrous Bigness,': A Historical Survey of Polar Bear Population Dynamics and Use in the Northwest Territories* (Yellowknife, NT, 1996), 37–39.

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trader and apprentice posted there, and poorly supplied. Posts often opened only to close after a few years if foxes became unavailable. Inuit themselves might leave a post's business altogether to trade with HBC competitors or move into the purview of another HBC post farther afield.

Traditionally, Inuit hunted foxes and used their pelts minimally as trimmings and garment decoration, mostly far less than caribou and seal skin, especially since foxes did not yield substantial food for Inuit diets.[61] When they did hunt foxes, Inuit used two kinds of traps—the *pullat,* or box trap, and *ullisauti,* or tower trap—both requiring time and labor to construct out of stone or ice.[62] Asking them to focus energies on an animal peripheral to their food hunt, then, the company had to advance Inuit steel traps to use within their seasonal seal floe-ice hunting, and boats to increase the scale of summer seal hunting to supply winter caches. As the market fox hunt spread in the Arctic, certainly within Kivalliq in the early 20th century, so did steel traps. In areas such as Lake Harbour and Wager Bay, Inuit laid them out in traplines across floe ice, where Arctic foxes spent much of their winter scavenging from polar bears themselves hunting seals, while remains of hunted seals could also be left as bait for foxes.[63] Fox trapping along the coast, or inland along rivers, depended on trappers having access to caches of seal meat, which could only be provisioned through an intensified summer seal hunt as greater access to boats and firearms allowed Inuit hunters to maximize their seal returns.[64] Ringed seal was a key Inuit food source during winter. Setting traps for foxes could be combined with a floe-ice seal hunt or provide technological inputs to facilitate expanded summer hunting to maintain food resources. The post's fox trade, then, transferred new trapping technology and initially capitalized on the Inuit's territorial overlap with scavenging foxes without interfering with an important element of the Inuit subsistence regime.

The Arctic fox trapping season usually lasted between November and early April, after foxes had completed their fall color morph, but before their spring molt. During October, traders kept a close eye on the foxes around the post to determine whether they were entering their "prime" for the market, that is, gaining a thick, white, winter coat.[65] In the mid to late summer, Inuit at the post hunted caribou, bears, seals, and walruses when they became available to build up their own winter caches and increase the post's own supplies, as was the case at Coats Island soon after it was built in 1918.[66] Only when fox fur morphed completely did posts distribute traps to begin the Inuit hunt, with the best foxes usually caught early in the season before the winter

[61] John Bennett and Susan Rowley, *Uqalurait: An Oral History of Nunavut,* (Montreal and Kingston, 2004), 67–68.

[62] Bennett and Rowley, *Uqalurait*, 67–68.

[63] Wager Inlet Post Journals, 22 Mar. 1926, 1925–1926, B.492/a/1. 6 Mar. 1927, 1926–1927, B.492/a/2 HBCA. Bockstoce, *White Fox and Icy Seas*, 18; Kemp, "Inuit Land Use in South and East Baffin Island," 132; Welland, "Inuit Land Use in Keewatin District and Southampton Island," 89, Donna Naughton, *The Natural History of Canadian Mammals* (Toronto, ON, 2012), 392–393.

[64] Carol Brice-Bennett, "Inuit Land Use in the East-Central Central Canadian Arctic," in *Inuit Land Use and Occupancy Project, Vol.1*, ed. Milton Freeman Research Limited (Ottawa, ON, 1976), 64–67.

[65] Chesterfield Inlet Post Journal, 20 Oct. 1938, 1938–39, B.401/a/11. Wager Inlet Post Journal, 6 Nov. 1930, 1930–31, B.492/a/7 HBCA.

[66] See activities reported Sept. through mid-Oct., 1918, Coats Island Journal, B.404/a/1 HBCA.

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fur was damaged or rubbed down by the foxes' day-to-day activities.[67] Preparation and transportation of quality fox skins was paramount to secure higher prices, and traders encouraged Inuit trappers to bring both a good quantity and high quality of furs, praising them for trading furs that were "in marvelous condition."[68]

Most trapping was done by camps "attached" to the post in quite informal ways. The company struck agreements among some bands to move them to live and hunt in the environs of a new post. For instance, in 1918, Baffin Island Inuit were moved to Coats Island to support local Inuit in the fox hunt. More simply, Inuit encampments nearby or even as much as 3 weeks' travel distance, not only maintained relationships with the post through regular visits with furs but also provisions to trade, integrating further fox trapping into their own varied hunting strategies. They also came to posts when their own subsistence hunt faltered. Given carry-over provisions to help their camps, large numbers of Inuit visited posts when seal or caribou hunting completely failed in winter. Families arrived to "'mug up' for a bit of food," sometimes over extended periods before returning to their hunting territories. In very dire periods of starvation, a post was switched to formally ration camps.[69]

Within the Arctic biome, the trade was unpredictable from one year to the next, even at posts where fox populations were known to be large. Foxes took bait from traps often only when they were facing food scarcity. Foxes would not take bait if they were well supported by scavenges of seal and caribou carrion left at polar bear kill sites.[70] Trap-wary foxes learned to avoid traps or to steal bait from them unscathed. They also moved unpredictability near or far in their wide-ranging regional migration. Even if foxes were abundant near posts before their prime to the point of becoming a nuisance to posts, they could disappear immediately after their color morph when they moved onto winter ice or inland to follow caribou herds, far from a post's trappers. More critically, fox populations rose and fell in natural cycles every 5–7 years within the purview of posts, but the trade itself could wipe out local populations to force a post's closure. Some Inuit more substantially integrated fox hunting into their seasonal rounds to significantly alter aspects of their food hunt. The comprehensive Inuit Land Use study of the 1970s, drawing from Inuit oral history, identified bands changing their hunt to divert energies to fox hunting. At Repulse Bay, for instance, oral history affirmed that fox trapping made winter breathing-hole seal hunting less important to Inuit in the region, who maintained seal hunting along the coast and rivers on floe ice. Winter camps moved from the sea "fast" ice to these coasts and rivers where foxes were hunted.[71] At Pelly Bay, seal hunting became more intensive during the summer after the fox trade provided Inuit with boats.[72] At Gjoa Haven, too, winter seal hunting became secondary to fox trapping, while seals were more intensively hunted during the summer. Coastal trapping camps combined caribou and seal hunting.[73] At Wager Bay, both breathing-hole and floe-edge coastal

[67] Bockstoce, *White Fox and Icy Seas*, 43.

[68] Chesterfield Inlet Post Journals, 9 Dec. 1930, 1930–1931, B.401/a/6; 4 Dec. 1933, 1933–1934, B.401/a/9; 17 Nov. 1938, 1938–1939, B.401/a/11 HBCA.

[69] See 6 Mar. 1920, Cape Dorset Journal, B.397/a/2 HBCA.

[70] See 21 Nov. 1910, Wolstenholme Journal, B.368/a/2, HBCA.

[71] Brice-Bennett, "Inuit Land Use in the East-Central Canadian Arctic," 64.

[72] Brice-Bennett, 67.

[73] Brice-Bennett, 78.

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winter hunting continued while fox trapping became a significant economic activity.[74] Fox trapping at Lake Harbour, meanwhile, could switch to the mainland where caribou were hunted, or continue on sea ice where breathing-hole seal hunting occurred. Traps would be set in the vicinity of breathing-hole hunting, with seal remains being used as bait in traps.[75]

Yet, these altered food regimes also increased Inuit polar bear hunting. Traditionally, Inuit minimally hunted polar bears, but fox trapping likely increased the numbers of bears they encountered, especially when Inuit devoted more energy to caribou hunting. *Nunuk* was central to Inuit mythology and cosmology. Young Inuit earned their manhood and became *Inumariit* (real Inuit) with social status after they killed their first polar bear.[76] Although Inuit males and even females might defensively kill bears when they entered and attacked their camps, polar bears typically avoided humans and lived in the peripheries of the Inuit food hunt. Male hunters had to go out of their way on expeditions to kill these terrifically dangerous animals, and their hunt depended on sled dogs. A hunter first tracked and chased a bear by dog team and then freed his dogs to harass a bear and hold it at bay. At that point, the hunter, with considerable courage, killed it with a spear or staff affixed with knives.[77] Dog sled teams continued to support bear hunts even after snowmobiles came into use in the 1970s; a lead dog was used to harass a bayed bear before an Inuit hunter killed it with a high-powered rifle.[78]

The overall health and size of dog sled teams at that time had a direct bearing on the polar bear hunt.[79] Only healthy teams could track a bear over large distances, especially once it began fleeing a hunter. But dog sled teams themselves required substantial food inputs. In times of scarcity, dogs starved, and camps facing their own food crises often had to eat their dogs, thus reducing their own mobility to curtail not only the bear hunt but also all subsistence hunting at a distance and the fox hunt itself.

There were reasons why Inuit hunted more polar bears while engaged in the commercial fox trade. Bears now became direct competitors with Inuit for the foxes they hunted. Bears interfered with traplines, stole chunks of seal fat used as baits, and killed and ate trapped foxes. Polar bears posed real danger when they were attracted to the pork, beef, butter, lard, bacon, and even tallow candles stored at posts, in food caches, or supplied to Inuit fox trapping camps.[80] When posts built up enormous walrus food caches in summer and fall, or when they amassed large stocks of seal fats

[74] Welland, "Inuit Land Use in Keewatin District and Southampton Island," 95.

[75] Kemp, "Inuit Land Use in South and East Baffin Island," 132.

[76] George Wenzel, *Sometimes Hunting Can Seem Like Business: Polar Bear Sport Hunting in Nunavut* (Edmonton, AB, 2008), 9.

[77] E. W. Hawkes, *The Labrador Eskimo* (Ottawa, ON, 1916), 83; Canadian Arctic Expedition, *Report of the Canadian Arctic Expedition, 1913–18* (Ottawa, ON, 1919), 124.

[78] George Wenzel, "Inuit and Polar Bears: Cultural Observations from a Hunt near Resolute Bay, N.W.T.," *Arctic* 36, no. 1 (1983): 90–94.

[79] Elmer Ekblaw noted that "Good dogs are necessary to successful bear hunting," "The Material Response of the Polar Eskimo to their Far Arctic Environment," *Annals of the Association of American Geographers* 18, no. 1 (1928): 10.

[80] See the bears that raided an Inuit trapping camp, 20 Oct. 1910, and a bear consistently taking trap baits, 16 Dec. 1910, and a bear eating five foxes in traps, 6 Jan. 1911, Wolstenholme Post Journal, B.368/a/2 HBCA.

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for spring rendering, bears raided posts quite brazenly.[81] Traders and Inuit killed polar bears on sight around posts, less for the pelt trade, than to reduce a threat to life and property, or gain supplies of dog feed when it might otherwise run low. At their own camps, Inuit used bear meat to support their dog teams. When they killed a bear, Inuit tended to cache its meat and fat and, if feasible considering its dimension and enormous weight, they carried the skin by team to trade at posts.

The fox trade introduced more than traps to shift the technology of Inuit hunting and prompt greater polar bear killing. Especially after WWI, HBC posts opening in the Kivalliq transformed the subsistence hunt in significant ways. The fox trade allowed for more intensive subsistence hunting to provide larger food caches and offset nutritional shortfalls, and also to better support dog sled teams. Even before the war, in 1910, Wolstenholme's goods included six dozen glass snow goggles that effectively protected their wearers from snow blindness in the spring hunt on ice. Of undoubted value in the caribou, walrus, and polar bear hunts, telescopes also grew as a staple of the trade, especially after the war. Indeed, the contemporary Arctic explorer, Vilhjalmur Stefansson, believed that for caribou hunting, a telescope was as important as the rifle. It was used primarily to identify in the very far distance caribou in small bands moving otherwise imperceptibly on the horizon.[82] In the 1920s, numerous posts—Wolstenholm, Chesterfield Inlet, Fort Chimo, Lake Harbour, Coats Island, and Port Burwell—added brass telescopes to their annual trade requisitions.[83]

To better support Wolstenholme's Inuit hunters, the post not only requisitioned dozens of fox traps but also as many steel files of various sizes and butcher knives.[84] It was in 1920 when the rifle trade truly expanded in shotguns, .22 rifles, and, most impressively, .303 high-powered rifles. Now-released army surplus ammunition accompanied the firearms: some 2000 .303 British cartridges (soft point) and another 1000 .303 slug cartridges, 6000 .303 Savage soft point cartridges, and 25,000 other rifle cartridges of smaller caliber (.30, .38, and .44, as well as .22). Wolstenholme requisitioned another 29,000 cartridges of various calibers from Canada for its Savage, Winchester, and British army rifles.[85]

This crucial technological shift through the fox trade benefited Inuit in their subsistence hunt of seal and walrus populations in fall and winter, and caribou herds in summer and fall, especially to provide the means of food caching. Long-distance and higher caliber rifles, telescopes, ammunition, butcher knives, and other steelware made the caribou hunt more productive when herds were sighted at a distance. Walrus, typically hunted minimally and with difficulty by spear, could be hunted very effectively in the fall season with .303 rifles, and, thus, provide large payouts for winter caches, especially to support larger dog sled teams. At Coats Island in August 1919, the trader and an Inuk hunter used rifles to wound eight walruses and kill three of them. "Walruses are very slow on the ice . . . a man with a good long line could kill a

[81] See the bear that "paid us a call" on two nights to "feed among our fat" at Cape Dorset, 28 Feb. 1916, Cape Dorset Post Journal 1913–1938, B.397/a/1 HBCA.

[82] Vilhjalmur Stefansson, *The Friendly Arctic: The Story of Five Years in Polar Regions* (New York, 1921), 279.

[83] Chesterfield Inlet, Chimo, Lake Harbour, Coats Island and Port Burwell, Copies of Orders to Suppliers (A–E, and F–Z), Outfit Years 1920–1922, A.28/177–178 HBCA.

[84] Wolstenholme House Copies of Orders to Suppliers (F–Z), A.28/177–178 HBCA.

[85] Requisitions from London and Canada to Wolstenholme Post, Outfit 1920, Indents for Wolstenholme Outfit Years 1910–1924, A.28/157 HBCA.

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bunch of them easy," the trader remarked. The walruses they killed availed 2 tons of meat, sufficient for four large caches.[86] These were but the first of other walruses killed that month. They were best hunted with .303s, since the same trader noted that Inuit still using .44s a few days later against another walrus needed 10 shots to kill it.[87]

Similarly, at Cape Dorset Post (built in 1913), the fox trade quite decisively changed human ecology in the region as technology allowed Inuit to more intensively hunt the hundreds of walruses that appeared unexpectedly on the ice in a nearby bay, or dozens of beluga whales cramming inlets. Baffin Island Inuit were more numerous in the region and many readily joined the post's fox trade in growing numbers to gain such technology.[88] They brought 7 tons of walrus meat to the post to cache in August 1915.[89] In July 1916, the post had amassed a staggering 17 tons of walrus meat from that year's spring hunt, and its surpluses grew to 35 tons after Inuit brought yet more supply by boats lent by the post.[90] Such surpluses were cached to support the post's own dog teams and those of Inuit pursuing the fox hunt later in the winter.

The technological shift availing large food caches helps explain how Inuit could now choose to hunt more polar bears. Rifles certainly made the polar bear hunt less risky since the animal could be killed at a much safer distance, even if even a .303 did not necessarily kill an animal with a single shot.[91] Inuit clearly gained more security hunting bears with rifles and dogs.[92] It was likely the technological shift supporting subsistence hunting, itself raising the health of dog teams, that significantly changed hunting regimes and the bear hunt itself. Carole Brice-Bennett suggested the importance of these bundled technologies in the early 20th century fur trade. Firearms "increased the productivity by facilitating sea mammal hunting in summer and hunting from the floe edge in winter and spring," and in so doing, shifted energies from traditional winter seal breathing holes to mainland fox trapping. [93] As Inuit oral history suggested in the Pelly Bay area, "Extensive polar bear hunts were not possible prior to the use of firearms, because an average of only two or three dogs could be maintained by a hunter using traditional technology. The larger game returns that resulted from more successful rifle hunting raised dog populations and, consequently, allowed Inuit greater mobility to pursue polar bears."[94]

Polar Bear Curing Problems

With this new technology, Inuit provided posts with more polar bear skins. At Coats Island, in the fall of 1918, the HBC's "deer hunters" returned with a plentiful supply of caribou meat, along with eight polar bears.[95] On October 16, a family traded no less

[86] 4 Aug. 1919, Coats Island Post Journal, B.404/a/1 HBCA.

[87] 12 Aug. 1919, Coats Island Post Journal, B.404/a/1 HBCA.

[88] The post's Christmas celebrations hosted 50 Inuit in 1913, 86 in 1914, 70 in 1915, over a hundred in 1918, and over 150 in 1920. See 26 Dec. entries in these years, Cape Dorset Post Journals, B.397/a/1-2 HBCA.

[89] 21 Aug. 1915, Cape Dorset Post Journals, B.397/a/2 HBCA.

[90] 15 July 1916, Cape Dorset Post Journals, B.397/a/1 HBCA.

[91] See the multiple shots needed to kill a single bear at Coats Island reported 28 Oct. 1919, Coats Island Post Journal, B.404/a/1 HBCA.

[92] Coats Island Post Journal, B.404/a/1 HBCA, "Tomorrow we shall go again for the first one [sighted] and sure to take a couple of dogs."

[93] Brice-Bennett, "Inuit Land Use in the Eastern-Central Canadian Arctic," 63.

[94] Brice-Bennett, 67.

[95] 9 Oct. 1918, Coats Island Post Journal, B.404/a/1 HBCA.

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than 13 bear skins with another 8 in its camp. In its first 6 months of operation, by December 30, 1918, the post recorded 19 bears traded, with almost a hundred Arctic fox. Although the following year saw fewer bears on the island, with only 14 traded, in January 1921, it had 35 skins in storage, and by April 1922, over 70. Inuit generally encountered these bears while hunting caribou or they had the dog teams and food caches to pursue them specifically. On September 24, 1920, an Inuit camp returned from a bear hunt with 12 skins, "large and small," bringing their own total to 21 that fall.[96] One of the more successful bear hunters within a fox-trapping camp at Coats Island in 1920 was Powyangie. He likely gained considerable status within his camp when, though "only a young boy yet," he killed 12 bears by early October 1920.[97] Another older Inuk in Powyangie's camp, Soo, was not far behind in his own polar bear kills. The two, in fact, came to disagreement over the skins they claimed for the trade after together killing nine bears on a single hunting excursion earlier in the fall.[98] Though there is no evidence that the polar bear lost its cosmological and cultural significance, the bundled technologies supporting subsistence hunting regularized a more intensive polar bear hunt.

Given that subpopulations of polar bears did not extend evenly across the Eastern Arctic, and that bears migrated considerable distances to hunt their own game patches, some posts received few if any bear skins over successive years. However, when bears migrated into a post's fur-trapping hinterlands, their skins arrived at a post in numbers that easily overwhelmed traders. Here, the HBC's modes of production in the fox trade, and the new technologies altering Inuit subsistence regimes, compromised the profitability of the company's polar bear skins.

Inuit delivered heavy and large bear skins, roughly skinned and still needing scraping to be stored frozen at the post during the winter months, few retaining their heads and paws. The bear skins were too heavy, thick, and large to work with at posts over winter months. Rather, they accumulated in a frozen state in a post's storehouse. All required hurried curing in the spring when temperatures began thawing them. Much smaller fox skins, arriving in a similar state, could be flensed and hoop-stretched throughout the winter even within a post's limited interior space. They could then be hung up for air freshening and bleaching in spring sunlight. By contrast, bear skins began melting all at once and then required sustained and uninterrupted warm spring temperatures to dry them after being scraped. When posts accumulated only 10 or 12 polar bear skins, such as at Cape Dorset in 1916, the Inuit at the post might have cured them reasonably well. In warm May temperatures in 1915, skins cured at Cape Dorset over 2 full weeks.[99] In 1918, however, variable spring temperatures delayed the start of bear-skin curing at the post. With the pelts sitting in a likely damaging semi-frozen state throughout May and most of June, their drying only really started June 27, to be packed by July 11.[100]

At least Cape Dorset had a wood supply to build drying frames. Many posts did not have wood at all and were at a loss as to how to stretch skins uniformly and dry them

[96] 24 Sept. 1920, Coats Island Journals, B.404/a/2 HBCA.

[97] 5 Oct. 1920, Coats Island Journals, B.404/a/2 HBCA.

[98] 17 Nov. 1920, Coats Island Journals, B.404/a/2 HBCA.

[99] Bears skins were "put into frames" May 10 and "taken off frames" 25 May 1915, Cape Dorset Post Journals, B.397/a/2 HBCA; see the framing and drying of bearskins between 16 and 29 May 1917, Cape Dorset Post Journals, B.397/a/2 HBCA.

[100] See 27–11 July 1918, Cape Dorset Post Journals, B.397/a/2 HBCA.

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efficiently before they rotted. Before snow and ice fully melted, even sufficient fresh water might not be available to wash skins thoroughly. Meanwhile, posts rarely had supplies of salt to cure raised skins. At Coats Island, such conditions made an abundance of polar bear skins a liability by the spring. In 1919, their curing started on April 25, when skins were moved from frozen storage and thawed enough for Inuit women to start "baking fat off the bear skins and cleaning skins ready for spreading" on May 8. The first skin was stretched that day on a frame made from boat oars, "the only lumber I have," the post's trader lamented in his journal. Other skins were simply nailed to the side of the post's exterior walls. Skin stretching continued until May 16, when the post completely ran out of available lumber and pegged skins to the ground, "Husky style," likely degrading the fur with moisture and poorly drying them.[101]

Inconsistent spring temperatures seriously imperiled drying. In 1920 at Coats Island, for instance, Rosie, the sister of one of the Inuit camp hunters, began washing the bear skins on 12 May, working with them before needing to stop on 15 May—it was too cold to thaw the skins.[102] She resumed flensing and stretching the skins the next day until 27 May, when it was again too cold. According to the post's trader in 1921, it required 3 full days of uninterrupted warmth to dry a single skin properly at Coats Island that year. He was thankful for the weather finally clearing since "our bear skins are all thawed and some of them will soon be spoiling if we don't get fine weather to dry them."[103] He added, "I wish we had about 20 stretchers for bear skins, I can only muster three frames using oars." The bear skins subsequently traded over that summer—out of their prime—were certainly poorly cured. When a post manager looked over the summer bear skins in September, he found "most of them are badly tainted being put away half dry."[104] Problems at Coats Island only compounded in 1922 when it acquired over 70 skins during the winter and all of them began thawing in early April. Throughout the month, cold weather stopped women from drying them and by 26 April, the trader said, "no weather for drying bear skins, it is now the last of April and we have about 70 bear skins to clean and dry."[105] Even by 26 May, the post had dried only half of them, raising doubts about prospects of profit in the post's entire polar bear returns in 1922.

Conclusions

With its business expansion into the Eastern Arctic, the HBC sought to confirm its place in the international fur industry and consolidate its position within a GVC delivering furs from points of supply to consumers in Europe and North America. In the Arctic fox trade, the HBC contended with the "problem of nature," whether the reality of lower carrying capacity Arctic ecology or human ecology joining Inuit to an economic activity that hinged upon the narrow margins of energy they could derive from organic life in the Arctic. Inuit in the Eastern Arctic were widely dispersed in mobile camps, and, in a period of climatic instability, faced challenges in their

[101] 12 May 1919, Coats Island Journal, B.404/a/1 HBCA.
[102] 12–15 Apr. 1920, Coats Island Journal, B.404/a/1 HBCA.
[103] 4 May 1921, Coats Island Journal, B.404/a/1 HBCA.
[104] 25 Sep. 1920, Coats Island Journal, HBCA, B.404/a/1 HBCA.
[105] 13 Apr., 26 Apr., 26 May 1922, Coats Island Journal, B.404/a/2 HBCA.

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subsistence hunting. Inuit depended on ecological patches year-by-year in different marine and land mammal habitats. In the Kivalliq region, they were receptive to HBC traders offering new technology in return for fox skins; yet, they would only provide them within their own subsistence hunt, which traditionally did not prioritize fox as a food or fur animal. The fox trade ultimately depended on Inuit camps integrating trapping within their subsistence regimes. The fox trade had unforeseen impacts on Arctic human ecology, however, owing to the technology it transferred. Inuit acquired traps to use within their winter seal hunt and, more consequentially, other bundled technologies that raised the productivity of their subsistence hunting. High-powered rifles, ammunition, butcher knives, telescopes, and even snow goggles, along with a trader's canned and dry goods to offset occasional periods of food scarcity, allowed Inuit to more intensively hunt both foxes and animals availing food surpluses, especially in summer and fall to build up caches.

Where new hunting regimes were established, fox trappers traded polar bear skins. However, Inuit modes of production, mobility, and dispersion across a post's hinterlands moved these skins to posts in a way that made it difficult for traders to see that they were properly skinned, flensed, and dried. While they succeeded in respect to their trade in fox skins, HBC traders typically sent low-valued polar bear skins to London. From London, Charles Townsend might have believed that it was "simplicity itself" for post traders to see that traded skins were skinned and cured carefully to avoid tainting and yellowing.[106] But the posts' indirect working relations with Inuit fox trappers, and traders' scarcity of labor placed them in the unenviable position of handling frozen, stockpiled bear skins that thawed rapidly in spring temperatures. That these skins arrived in larger numbers because of the fox trade aggrieved the problem. Most posts lacked requisite materials to cure polar bear skins properly, whether abundant water for washing skins and degreasing them, wood for stretching and framing them to dry, or salts to preserve raised skins. A low-quality HBC bear skin, then, appeared at London auctions to fetch low prices, whether 10 or 20 skins from Cape Dorset that suffered from decomposition and tainting in very late spring temperatures or the 20, 35, or over 70 skins from Coats Island where wood frames could not even be built to properly dry them. One can only wonder about the quality of Southampton Island's 250 polar bears in 1925, clearly not impressing Townsend inspecting the post. The HBC's polar bear returns suggest transformations of behavioral ecology occurring within "commodity frontiers" in the peripheries of GVCs. The HBC's governor and the company's Development Department experts could not simply direct post traders to ship better product. They were also unaware of the ways that nature was being made and remade in their company's capital investment in Arctic commodity export. In the fur trade's technological transfer, the HBC, within a GVC ultimately delivering products to consumers from Arctic nature, spurred changes to human behavioral ecology to influence the very quality and potential profits to be had in fox and bear skins from the Canadian Arctic in unexpected ways.

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[106] Townsend to the Governor, "Re: Furs," 9 Dec. 1925, B.404/a/2 HBCA.

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