The Lure of the Northwest Passage:
From Heroic Explorers to Modern Cruise Tourists

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Abstract

For centuries, explorers sought a marine shortcut from Europe to Asia, across the top of North America, to expedite trade. This longed-for sea route, known as the Northwest Passage (NWP), became a sort of “holy grail” of ocean navigation, but attempts to traverse it were repeatedly blocked by ice and harsh conditions, resulting in lost lives and ships. The NWP was finally transited by Roald Amundsen in 1906, but the route was judged to be of no commercial value. The often-overlooked indigenous residents along the passage had survived in the region for over a thousand years and continued to persevere. New technology and climate change prompted a return to the NWP later in the century. As longer, warmer summers decrease sea ice and open the passage, interest in shipping, mining and cruise tourism has increased. Cruise transits have shown steady growth since the 1990s. In 2020, seven full NWP cruise transits were planned, as well as ten partial transits, until Canadian Arctic cruises were cancelled for the year due to health concerns related to Corona Virus 2019. Despite increasing cruise traffic, the NWP remains unpredictable and these cruises are not without risk, in terms of environmental contamination, interference with local cultures, physical danger, and possible disappointment. After tracing the historic lure of the NWP, this project asked why cruise passengers are increasingly lured there. A marketing analysis, passenger survey (N=65) and three focus groups determined that tourists are primarily drawn to the NWP to trace the path of explorers, observe Arctic scenery, visit local villages and view wildlife. Nationality and gender play a role in motivation to visit, but top motivations closely mirror advertisements. The percentage of respondents reporting no disappointment in the trip was high (83%), while wildlife viewing was the aspect most reported to be disappointing (9%). The project concludes that while NWP cruises carry risk, they should be allowed to continue with additional restrictions.
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Introduction

“Of problems connected with Arctic research, the navigation of the passage to the north of the American Continent has been by far the most interesting to humanity”
Roald Amundsen
(Amundsen 1908, 102).

Figure I-1
Map of the Northwest Passage
(Encyclopædia Britannica 2019)

The search for a northern passage to expedite trade, from the Atlantic to the Pacific Ocean, began soon after the European discovery of America in 1492. (See Figure I-1.) For more than 400 years, governments, naval officers and seamen risked, and often lost, their fortunes and lives in the pursuit. The quest, which has been labeled both courageous and foolish, was hampered by scant knowledge of geography, weather, currents and sea ice movement in the Arctic. The Arctic remained an empty spot on the map for centuries, and Europeans were ill-equipped for the harsh conditions they encountered. The most mythologized attempt to find the passage was the 1845 expedition of Sir John Franklin, commanding *HMS Erebus* and *HMS Terror* and 129 men. Franklin, his ships and all of his men were lost. The ensuing search for the
party would involve 30 expeditions, many of which involved rescues of the searchers and more abandoned ships. Norwegian Roald Amundsen finally conquered the passage in 1906 but the route was deigned commercially impractical. (See reference map at Figure I-2.)

Today, the Arctic is the fastest warming location on the planet. Warmer temperatures, triggered by climate change, are opening the passage, not only to commercial shipping but also to expedition cruise passengers, who are anxious to reach remote destinations.

![Reference Map, Arctic Canada](image)

**Figure I-2.**
Reference Map, Arctic Canada (Moen 2020)

Full and partial Northwest Passage (NWP) cruises are increasing, but the journey involves both risk and potential disappointment. Cruise risks include difficulty navigating uncharted waters, insufficient search and rescue capability, environmental impacts, damage to
historic monuments and interference with indigenous cultures. Potential disappointment includes changed itineraries and missed landings due to unpredictable ice which, though diminishing, can still block access. Nevertheless, the number of cruise operators planning passages is increasing each year and more travelers are paying high fares to fill the ships. (See sample cruise itinerary at Figure I-3.)

![Figure I-3. Sample Northwest Passage Cruise Itinerary (Abercrombie 2020a)](image)

Why are so many drawn to this remote region, and does the experience live up to their expectations? This project examines the lure of the NWP, both historic and current, the evolution and marketing of NWP cruises, the motivations of passengers, and the risks of traversing the passage. It also draws on personal observations from a partial transit cruise I took in September 2019.
“...[T]he Arctic was a complete unknown to Western man, a huge blank on the map...” (Hayes 2003, 6)

Chapter 1. The Dream of a Northwest Passage

*Of Maps and Men.* I grew up fascinated by my father’s National Geographic maps. I would spread them out on the floor and plan fanciful trips around the world. Today it is hard to imagine what it was like not to have even a general map of parts of the Earth, but such was the state of human knowledge until the late 19th century. Maps evolved over millennia, as our “conception of the world” changed (Quill 2015). We know that the Norse colonized Iceland around 870 A.D. and Greenland by 980 A.D, but the Norse “had no cartographic tradition” (Hayes 2003, 7). Their discoveries, including establishment of a settlement in Newfoundland, around 1000 A.D., were unknown to most Europeans until the 1600s (Hayes 2003; Ledger et al. 2019).

The maps of the 1400s were still based on Ptolemy, who first employed mathematics, latitude and longitude in mapmaking, around 150 A.D. (O’Connor and Roberts 2002). These maps did not extend to the Arctic, which was unknown, stopping short of the top of Europe (Vaughn 1994). The 1482 world map, below, faithful to Ptolemy, includes only a quarter of the earth. It depicts China in the east, the Fortunate (Canary) Islands farthest west, a sea between Europe and Asia, and Africa joining in landmass to Asia in the south (British Library 2020a). (See Figure 1-1.) This was the extent of the West’s knowledge of the world.

Seeking a shortcut to the East, Portuguese explorer Bartolomeu Dias defied Ptolemy’s map by sailing around the Cape of Storms (later renamed the Cape of Good Hope) in 1488 (Mariners Museum 2019a). An updated map, published by Henricus Martellus in 1490, is considered the “last view of the old world” (British Library 2020b). (See Figure 1-2.)
Figure 1-1.
Ptolemy’s Map of the World, 1482
(British Library 2020a)

Figure 1-2.
Henricus Martellus Map of the World, 1490
(British Library 2020b)
Christopher Columbus knew the world was not flat and reckoned he could sail west from Europe directly to Asia (Miller 2018). It is likely that Columbus consulted the Martellus map, which vastly underestimated the earth’s circumference, before setting out in 1492. That map may be why he believed he was near Japan when he landed in the Bahamas (Quill 2015).

The 1507 map by Martin Waldseemuller was the first to depict the new world, “forever changing the European understanding” of the planet (Library of Congress 2014). Waldseemuller named the new land “America,” after Italian Amerigo Vespucci, who recognized it to be a separate continent on his 1501 voyage (Library of Congress 2014). (See Figure 1-3.) This was also the first map to represent the Atlantic and Pacific oceans as distinct bodies of water (Library of Congress 2014).

With a new continent in the way, Europeans sought to define its coast and extent, and to find a way through or around it to Asia. John Cabot (born Giovanni Caboto in Genoa), a contemporary and competitor of Columbus, correctly reasoned the journey would be shorter to
the north, since the distance between latitudes diminishes toward the poles (Rasky 1976). English King Henry VII backed his voyage, and in 1497 Cabot landed his small ship on the northern coast of North America, most likely somewhere between Nova Scotia and Newfoundland (Princeton 2004b; Rasky 1976). His most important discovery was not silk or spice, but the cod fishery of the Grand Banks (Rasky 1976; Princeton 2004b).

Italian Giovanni da Verrazano led an expedition for France to chart the east coast of North America, from around Cape Fear to Narragansett Bay, in 1524 (National Humanities 2006). He recognized that the new land might be valuable in its own right but failed to find the way through he was looking for (Williams 2009). Frenchman Jacques Cartier followed, unsuccessfully probing the Gulf of St. Laurence and St. Laurence River for a passage in the 1530s (Vaughan 1994).

It was now apparent that if a passage existed, it must be farther north, in what would prove to be an icy, forbidding world, at least to Europeans. The ensuing quest for a Northwest Passage (NWP) has been called a “story ‘of maps and men’” because it grew from this age of exploration, in which Europeans competed to fill in the world map and to find the quickest trade route to Cathay (China) (Princeton 2004a).

**Indigenous Inhabitants.** It must be acknowledged that indigenous peoples had lived in the Arctic for millennia and were well adapted to the conditions. The first people of the NWP are thought to have migrated across the Bering Sea from what is now North Eastern Russia, across Alaska, through Canada, and east to Greenland between 12,000 to 20,000 years ago (Vaughn 1994; Moltke et al. 2015). Now known as the Paleo-Inuit, they included the pre-Dorset and Dorset people, the Saqqaq and the Ipiutak (Tackney et al. 2019). The Saqqaq are believed to have
reached western Greenland as early as 2500 BC, where they were replaced by the Dorset, who also migrated east through the NWP, around 800 BC (Moltke 2015). These early people employed a variety of adaptations, both marine and terrestrial, to thrive in the harsh Arctic conditions for thousands of years (Tackney 2019; Choi 2014).

The Paleo-Inuit are thought to have been replaced by a new migration of people, known as the Thule, or Neo-Inuit, between the 12th and 14th centuries. The Thule, a genetically distinct people, brought new technology from Asia via the NWP, such as dog sleds and sinew-backed bows, and pioneered whale hunting (Choi 2014). As the search for the NWP intensified and European explorers entered what they considered “terra incognita” (unknown territory), they were unaware it had been settled for thousands of years. Some Europeans offered trade and friendship, but many dismissed the indigenous people as “savages” (Potts 2010). Consequently, they failed to learn basic lessons that could have aided their explorations and saved their lives.

A Costly Venture. The general outline of the new continent had been sketched by the mid-1500s, but the Arctic remained a mystery. In 1569, Gerardus Mercator released his world map, which included new details of the east coast of North America and a rough depiction of the continent. (See Figure 1-4.) This map employed the first “Mercator projection,” which stretches the poles to make the map lie flat with its lines straight. This allows sailors to follow a true bearing rather than having to make course corrections. Stretching the top and bottom of the map, however, magnifies land closer to the poles (Giaimo 2017). This map also contained an inset of the north pole, considered the first map of the Arctic. Depicting four lands, divided by four rivers, pouring into a whirlpool at the center, it was based on the account of a monk who claimed to have traveled there in the 1300s (Hayes 2003). A magnetic rock in the center falsely accounted for the
magnetic compass pull near the pole. (See larger image at Figure 1-5.) Though it is based on myth and supposition, it clearly includes a northern passage (Giaimo 2017).

Figure 1-4.
Gerardus Mercator Map of the World, 1569
(Giamo 2017)

The English took a leading role in the search for the NWP during the reign of Queen Elizabeth I (Vaughn 1994), though interest was still “stimulated by geographical speculation and commercial ambition” (Williams 2009). Martin Frobisher, a former pirate, searched an inlet in Baffin Island, now known as Frobisher Bay, in 1576 (Vaughn 1994). Instead of the NWP, he found rocks, which he thought contained gold, and carried them back to England. Frobisher also encountered the indigenous people of Greenland, killing several and taking at least two as prisoners (Williams 2009). (See Figure 1-5.) Frobisher’s rocks generated excitement and funding, before they were found to be worthless, and his voyages have been called a “costly fiasco” (Williams 2009, 32).

“The consummate scientific navigator of his time,” John Davis, ventured up the west coast of Greenland to search for the NWP in 1585 (Vaughn 1994, 139). On his first voyage, he
found Cumberland Sound, north of Frobisher Bay (Vaughn 1994). Davis’ third voyage, in 1587, passed 72° North (N), above the Arctic Circle. While not finding the NWP, he declared its existence “most probable” (Williams 2009, 38) and explored the crucial strait between Greenland and Labrador that would take his name (Princeton 2004d).

Mercator’s son published one of his most important works, an atlas including this colorful version of his Arctic map, after his death in 1606. (See Figure 1-5.)

![Gerardus Mercator Arctic Map, 1595](Canadian Geographic 2019)

In 1607, Henry Hudson attempted to sail across the North Pole to China, reaching 80° N (Williams 2009). Thwarted by ice in his two attempts at a North East Passage, across the top of Europe, he finally set his sights on the NWP. He determined that the Hudson River, in present-day New York, did not offer an outlet (Williams 2009). In 1610, he traversed the icy Hudson Strait and entered Hudson Bay, before being frozen into the southern end. Hudson and his demoralized crew were the first to overwinter in search of the NWP; they would not be the last.
They broke free of ice in mid-June 1611, but fearing Hudson had no intention of heading home, the crew mutinied and set him adrift to die with his son and seven other men (Williams 2009).

Hudson’s former First Mate, Robert Bylot, navigated the ship back home and was pardoned by the British Admiralty. In 1616, he was given his own ship to explore Hudson Bay (Princeton 2004f). Sailing with expert pilot William Baffin, they proved the bay was not an entrance to the NWP, explored the water now known as Baffin Bay, reached Smith Sound, the passageway to the North Pole, at 78° N, and found Lancaster Sound, the eventual gateway to the NWP, at 74° N (Rasky 1976). Baffin quickly emerged as the dominant force on the mission, and eventually received most of the credit for the success of the voyage, though his findings would be disregarded for almost 200 years (Rasky 1976).

The western entrance to the NWP was not fully neglected during this time, either. In the mid-1600s, Russian Semyon Dezhnev probed for the NWP from the Pacific side, finding a strait between Asia and America, but his report of the discovery was lost in the Russian archives (Climate Policy Watcher 2015; Vaughan 1994). Dane Vitus Bering, employed by Russia, rediscovered the strait in 1728, but turned around, and Capt. James Cook generously gave it Bering’s name 50 years later (Vaughan 1994). Cook sailed into the western opening of the NWP, through Bering Strait, to Icy Cape, at 77° 44’ N, a point short of the northern tip of Alaska, in 1778 (Princeton 2004c).

Around this time, with the NWP still not mapped, European interest turned to fur trapping in Hudson Bay. The Hudson’s Bay Company (HBC) was chartered in 1670 for that purpose (Williams 2009). French fur trappers began competing in the early 1700s and formed the North West Company in the 1780s, which outpaced the HBC by the early 1800s (Brandt
2010). Both companies established an extensive presence along the Bay over the next 80 years, which would serve as bases for further exploration of the area (Williams 2009).

**Mapping the Arctic.** Commercial whaling in European Arctic waters in the 16th and 17th centuries depleted whale populations there and forced whalers to the east and west coasts of Greenland, where they gained “the most valuable experience of Arctic waters” (Williams 2009, 79). The cause of the NWP was embraced anew in the early 1800s when English whaler William Scoresby, Jr. expressed his opinion that the ice had changed (Vaughan 1994). Despite their expertise, whalers lacked the status of British Naval Officers, and the Admiralty passed over Scoresby in favor of naval Capt. John Ross when they dispatched an ambitious expedition to sail through the NWP, from the Atlantic to the Pacific, in 1818 (Vaughan 1994).

Ross confirmed the existence of Baffin Bay, then sailed to Lancaster Sound before inexplicably turning around, claiming the sound was a bay, blocked by mountains. (See Figure 1-6.) His chief officer, William Edward Parry, refuted his claim. Ross was disgraced, and Parry was selected to lead the next attempt (Williams 2009; Brandt 2010).

![Figure 1-6.](image_url)

"Passage Through the Ice, June 16, 1818 Lat. 70.44 N"
Sir John Ross, 1819 (Princeton 2004k)
Second Secretary of the English Admiralty, John Barrow, intent on keeping part of his peace-time navy employed, launched an assault on the NWP on two fronts (Brandt 2010). Parry would explore by sea while young First Lieutenant John Franklin would lead a land assault, to map the Coppermine River, from its source, south of the Arctic Circle, to the Arctic Sea (Brandt 2010). For his part, Parry entered Lancaster Sound in 1819, achieving the westernmost point at the time, 113° 46’ West, and conducting the first naval wintering above the Arctic Circle, at Melville Island (Princeton 2004j; Vaughn 1994). (See Figure 1-7.)

As prepared as the ships were, the crew still endured the “gloomy prospect which would sometimes obtrude itself on the stoutest heart” (Vaughn 1994, 186). His ships were not released from the ice until August 1820 (Vaughn 1994). Following tips from Inuit he met, Parry sailed toward an island he named Banks Land, the last large island between him and the Beaufort Sea.
heading west, but he could not make it through the choking ice (Vaughn 1994). Running short of provisions, he turned his ships for home. Parry made three subsequent expeditions, but none matched the achievements of his first (Vaughn 1994). Through all of these efforts, the “demythologizing of the Arctic…by explorers and whalers” continued (Princeton 2004i).

Franklin’s orders called for him to sail for Canada, then known as British North America, in 1819, with only a few men, and to hire more when he arrived, but he found men and provisions in short supply (Brandt 2010). He and his small team set out from York Factory, an HBC post at the bottom of Hudson Bay, in September 1819, severely under-resourced, and dependent on donations from HBC and help from Yellow Knife Indian guides and hunters the entire way. They endured “a hard slog with dogs and sleds, on snowshoes” for hundreds of miles, in temperatures as low as -50° F (Brandt 2010, 101). (See Figure 1-8.) A year later they neared the mouth of the Coppermine and constructed lodgings they dubbed “Fort Enterprise.”

![Map of Franklin's First Arctic Expedition, 1819-1822](Brandt 2010)
After traveling down the Coppermine River to Coronation Gulf in the summer of 1821, a core team of 20 men embarked in canoes “on a journey of hundreds of miles along an unknown coast where they would have to live off whatever bounty the land and the sea produced” (Brandt 2010, 125). (See Figure 1-8.) They reached the Hood River, after traveling over 500 miles and making thorough inspections of Bathurst Inlet and Melville Sound, on August 24, 1821. Already suffering from hunger and cold, they began a 200-mile trip, mostly overland, back to Fort Enterprise (Brandt 2010).

Franklin and five others reached the Fort but found it empty and without provisions (Brandt 2010). They survived on pulverized bones, animal skins, and the leather from boots, until Yellow Knife hunters arrived with food. In all, 11 men died, most from starvation, though two were murdered and the perpetrator was killed in self-defense (Princeton 2004e).

The survivors returned to York Factory in July 1822. Franklin later wrote: “thus terminated our long, fatiguing, and disastrous travels in North America” (Princeton 2004e). Despite the disaster, Franklin was hailed as a hero, and would forever be known as “the man who ate his boots” (Brandt 2010, 142).

Remarkably, Franklin agreed to make another overland survey of Canada in 1825, but this time on his own terms. He planned the expedition to chart the Makenzie River, west of the Coppermine, for over a year, caching equipment and facilities along his intended route (Brandt 2010). Franklin’s second expedition was well manned, provisioned and equipped, and charted over 1100 miles of coastline along the sea he named the Beaufort Sea (Princeton 2004e). His farthest point west in 1826 was just 160 miles from the eastward advance of Adm. Frederick Beechey’s party, which had rounded the top of Alaska (Brandt 2010). (See Figure 1-9.) Progress in mapping was being made, and Franklin remained convinced it was possible to sail
through the NWP, but the Admiralty and the English public were growing weary. The explorers seemed so close to completing the map, but “ice had defeated them all” (Brandt 2010, 217).

Figure 1-9.
British Officers’ Map of the Arctic, 1828 (Labels Added)
Narrative of a Second Expedition to the Shores of the Polar Sea, Sir John Franklin (Princeton 2004g)

A Fateful Voyage. Nearing retirement at the age of 80, Sir John Barrow made a last attempt to achieve his dream of conquering the NWP in the early 1840s (Williams 2009). He urged the First Lord of the Admiralty not to give up the search “after so much has been done, and so little now remains to be done” (Williams 2009, 267). This was a time of great optimism, when “Great Britain as a nation was unstoppable, a juggernaut of industrial growth and social change…” (Brandt 2010, 301). James Clark Ross, the nephew of John Ross, had recently returned from a three-year exploration of Antarctica, meaning his ice-strengthened ships, HMS Erebus and HMS Terror, were available (Vaughn 1994). The younger Ross was the natural choice to lead another assault on the NWP, but he declined, citing his age - he was forty-five (Vaughn 1994; Brandt
Barrow’s next choice was James Fitzjames, an officer below the rank of Captain who had never been to the Arctic, but he was deemed unsuitable to lead the expedition (Brandt 2010).

The next candidate was Sir John Franklin (Hayes 2003), who was determined to lead this next Arctic expedition, despite being “almost fifty-nine, a corpulent figure who had not been in the Arctic for seventeen years…” (Williams 2009, 269). But he was also “a national hero, a man whose name everyone knew,” and he was “forthright, honorable, old school, and this was definitely an old-school kind of project…” (Brandt 2010, 300). In the end, Franklin got the appointment with little dissent (Vaughan 1994). Francis Crozier, who had been second in command to James Clark Ross in Antarctica, would command the Terror, while Fitzjames would be second in command aboard the Erebus (Brandt 2010).

The Erebus and Terror were equipped with steam engines and newly developed screw propellers (Hayes 2003). “How could the ice stop them now?” (Brandt 2010, 301). Fitzjames selected most of the crew from among the many eager applicants and each ship had a whaling captain aboard as an ice master (Brandt 2010). The ships were further-reinforced and stocked with three years’ worth of food, libraries, a daguerreotype camera, and an organ (Brandt 2010).

Franklin and company set out from England in May 1845. His orders were to enter Lancaster Strait, then “to penetrate to the southward and westward in a course as direct toward Bhering’s Strait as the position and extent of the ice, or the existence of land, at present unknown, may admit” (Williams 2009, 272). The ships stopped near Disko Bay, Greenland, where they posted letters, in early July (Williams 2009) and were spotted in northern Baffin Bay by whalers in late July 1845 (Hayes 2003). No further messages were received in England. They had disappeared into the icy North. “Only the Inuit would ever see the ships and their crews alive again” (Williams 2009, 277).
“The promised short cut between oceans had become a nightmarish labyrinth in which ships and men disappeared without trace, and would-be rescuers had to be rescued themselves.”

(Williams 2009, xviii)

Chapter 2. The Reality of the Northwest Passage

_The Search for Franklin._ We now know that Franklin’s expedition sailed into Wellington Channel as far as 77° N, then returned to Beechey Island for the first winter (Hayes 2003). In 1846, his ships sailed south, where they were caught in ice near the tip of King William Island and remained trapped through the following summer (Hayes 2003). They had made “yet another random foray into the heart of whiteness…” (Brandt 2010, 330). After two long winters, the harsh environment and scurvy were taking a toll, and sailors were dying, including Franklin himself, who perished on June 11, 1847 (Hayes 2003). Some endured longer. Abandoning ship, Crozier led 105 survivors south to Victory Point on King William Island, in April 1848, where they left notes on their movements, then continued on, with the last dying near what is now known as Starvation Cove (Hayes 2003). (See Figure 2-1.)

We know these things because unprecedented search and rescue operations were undertaken. In 1847, with no news of the Franklin Expedition, the Admiralty developed a three-pronged search plan, designed to triple the chances of finding them (Crouse 1934). James Clark Ross would follow Franklin’s intended course into Lancaster Sound, hoping to reach Parry’s farthest point west, while _HMS Herald_ and _HMS Plover_, already in the Pacific, would sail for Bering Strait, in case Franklin had gotten that far (Williams 2009). At the same time, John Richardson and HBC trader and surgeon Dr. John Rae, would search the coast between the Mackenzie and Coppermine rivers, Franklin’s old stomping grounds (Williams 2009). Lady
Jane Franklin offered the magnificent sum of £2,000 to any whaler locating and assisting the party (Crouse 1934; Williams 2009).

Figure 2-1.
“The supposed track of Franklin…drawn by Leopold M’Clintock in 1859.”
(Hayes 2003)

James Clark Ross sailed with future NWP notables, LTs Robert McClure and Francis M’Clintock (McClintock) (Crouse 1934). Their ships, *Enterprise* and *Investigator*, encountered heavy ice at the entrance to Barrow Strait, and wintered on Somerset Island, a strategic point at the confluence of four channels (Williams 2009). From there, Ross and McClintock set out in sledges, searching 500 miles of land, the first of nearly 100 sledge trips, covering 40,000 miles, by frozen-in crews, to search for Franklin through the coming years (Williams 2009, 284). The following summer, Ross attempted to reach Melville Island, but his expedition was blocked by ice and he returned to England in November of 1849. (Crouse 1934). The land and Pacific prongs of the search fared no better.
Search efforts, including rescues of stranded searchers and more abandoned ships, continued, some funded by the Admiralty, others funded privately, including two funded by American merchant Henry Grinnell (Williams 2009). (See Appendix I.) Still others were funded by Lady Jane, who “was unremitting in her efforts to elucidate further the fate of her husband…” (Vaughn 1994, 159). In 1850 there were as many as 15 ships searching for Franklin, from both ends of the NWP (Collinson 1889). Ice conditions forced most of the ships to Beechey Island that year, where Franklin’s 1845-1846 winter camp and three graves were discovered. (See Figure 2-2.) Although two rock cairns were found, no message from Franklin was located (Brandt 2010).

Ships routinely overwintered and left messages for any survivors or other ships making contact with local inhabitants. The search and rescue operations also afforded an opportunity to continue mapping the Arctic and to interact with the Inuit inhabitants. The David M. Rubenstein Rare Book & Manuscript Library, at Duke University, contains a collection of papers and
drawings from John Simpson, the surgeon on the *HMS Plover*, which includes items from the search. (See Appendices IIA (message cards) and IIB (drawings)).

In April 1854, while exploring Boothia Peninsula, John Rae met an Inuk man who told a story of 30-40 white men who had died of starvation near a large river, ten to twelve days journey from where they stood (Berton 1988). The man sold Rae a gold cap band he was wearing, which he said came from where the men died, and Rae offered a reward for any other relics found. When he returned to his base in the fall, Rae was met by more Inuit possessing “a treasure trove of relics, easily identifiable as having belonged to Franklin and his men” along with enough information for Rae to conclude the dead men had been found near the Great Fish River (Berton 1988, 267). Rae returned to England to collect a £10,000 reward and to report his findings, including stories he heard from Inuit of cannibalism among the men. His report incensed the public and author Charles Dickens, who wrote a scathing rebuttal (Berton 1988). Surely British naval officers and seamen would never break their moral code. Recent scientific analysis indicates Rae’s stories may have been true (Mays and Beattie 2016).

At least five expedition ships were abandoned in 1854 alone. That year, Robert McClure and his men, having been locked in ice in the Prince of Wales Strait, on the western side of the NWP, since 1850, travelled by sledge across the ice to Beechey Island. Here they joined others who had abandoned ships searching for Franklin and were taken home by relief ships (Crouse 1934). McClure was heralded as the first European to cross the Northwest Passage, though he did much of it by sled rather than ship (Crouse 1934).

During the summer of 1855, HBC explorers James Anderson and James Stewart traveled the Back River by canoe, where they met Inuit who told of men who had died along the coast.
Later that summer, they found a piece of wood carved with the name *Erebus*, and one with *Mr. Stanley*, the name of the ship’s doctor, near Montreal Island (Woodman 1991).

By this time, the Admiralty and the public accepted that the Franklin expedition was lost, but Lady Jane persisted. She vowed to mount one last attempt, this one to cover King William Island, which had not been searched. She purchased the yacht *Fox*, after being denied use of a naval vessel, retrofitted it, and offered the job of leading the expedition to Capt. McClintock (Crouse 1934; Berton 1988). McClintock accepted and chose an experienced crew to accompany him on the small, reinforced ship (Berton 1988). On June 30, 1857, they sailed from the Orkney Islands, with Lady Jane seeing them off. They found Lancaster Sound blocked by ice and drifted in the pack ice through the winter, until the sound opened in July 1858, 242 years after Bylot and Baffin had explored the area (Berton 1988). The *Fox* stopped at Beechey Island to take on coal from a cache and to place a stone tablet from Lady Jane “To the Memory of Franklin, Crozier, Fitzjames, and all of their Gallant Brother Officers and faithful Companions who have suffered and perished in the cause of science and the service of their country…” (Crouse 1934, 466). Continuing on, the *Fox* was unable to penetrate Peel Sound, the direct route from Beechey to King William Island, so McClintock took Prince Regent Sound to tiny Bellot Strait, which separates Somerset Island and Boothia Peninsula. Failing multiple attempts to transit, the *Fox* and her crew wintered at the eastern end in a small cove (Berton 1988).

McClintock did not sit idly that winter but developed an ambitious plan to search the area by sledge (Berton 1988). On one of the forays, McClintock met an Inuk wearing a naval button. The man reported that the button had come from an island where white men had starved (Breton 1988). McClintock then met other village members, who sold him a variety of relics. One of the elders had seen the bones of a man near Montreal Island, and another remembered a ship that had
been crushed by ice and sunk west of King William Island after the crew abandoned it (Crouse 1934). “Thus, in bits and pieces, did the vague outlines of the Franklin tragedy emerge” (Breton 1988).

In early Spring of 1859, McClintock headed south by sledge and encountered other Inuit, who spoke of two wrecked ships and white men seen hauling boats toward a large river on the mainland (Berton 1988). He found more relics as he traveled, along with wooden items that had obviously been scavenged from ships in “that treeless land, where wood was more precious than gold” (Berton 1988, 324). Finding nothing of the Franklin team on Montreal Island, he returned to King William Island, where he found a human skeleton, in tattered naval wool, face down, reminding him of the words of an elderly Inuk woman: “They fell down and died as they walked along” (Berton 1988, 325). Several miles away, he found a message left by his party.

One of McClintock’s sledge teams had found a note at Victory Point, on the northwest coast, left by the Franklin Expedition (Crouse 1934). The recovered note was a preprinted Admiralty form with two handwritten messages added (Raymond 2018). The first, written on May 28, 1847, stated “all well;” the second, dated April 27, 1848, was signed by Crozier and Fitzjames (Berton 1988, 326-7). This second message reported the deaths of Franklin, in June 1847, and 24 others, and indicated the survivors were abandoning their ice-trapped ships and heading to the Great Fish River (Berton 1988). (See Figure 2-3.)

We do not know why Franklin failed to leave a note at Beechey Island, per naval protocol. Franklin’s grave has never been found, he may have been buried at sea, but the “fate of his men is less mysterious” (Berton 1988, 330). McClintock discovered one of the Franklin crew’s sledges, “a monstrous contraption of iron and oak, weighing at least 650 pounds,” loaded with a 28 foot boat and “an incredible accumulation of unnecessary articles: books…dinner
knives, crested silver plate…everything, in short, that civilized nineteenth-century travelers considered necessary…” (Berton 1988, 331).

Figure 2-3.
The Victory Point Note
(Royal Museums Greenwich 2020)
The men of the Franklin Expedition had not been equipped to hunt, lacked dogs to pull sledges, and were subject to extreme cold, starvation and scurvy (D’Ortezio et al 2018). The tinned meat they carried was a recent innovation, but the lead solder resulted in elevated blood lead levels that may have caused a variety of physical ills, confusion and paranoid behavior (Bayliss 2002). It is likely that all of these factors contributed to their deaths (D’Ortenzio et al. 2018). The men perished, desperately floundering in the wilderness. But their disappearance led to other discoveries. “Franklin left no maps, but the massive search for him that was to follow would end up mapping much of the Canadian Arctic Archipelago” (Hayes 2003, 85). (See Figure 2-4.)

The Passage at Last. It took a Norwegian adventurer to finally transit the NWP. Roald Amundsen was born in Norway in 1872. A teenaged Amundsen discovered the writings of Sir
John Franklin, became fascinated with his adventures, and vowed to follow in his footsteps (Crouse 1934). To please his mother, he entered University and medical school, but left when she died and devoted his inheritance to fund his adventures. He entered a period of seaman apprenticeship, during which he was among the first crew to overwinter in Antarctica in 1897 (Alexander 2011).

After traveling to Germany to study magnetic navigation, he purchased the *Gjoa*, a small, sturdy yacht, only 70 feet by 20 feet (Barr 2020) and made a test run to the Arctic in 1901 (Crouse 1934). After a retrofit that included installation of a thirteen horse-power motor, Amundsen selected just six men to accompany him and stocked his ship with equipment and a five-year store of food. Some of this was obtained on credit, which he could not repay, so Amundsen and company set out at midnight on June 26, 1903, to evade the creditors. “When dawn arose…we were safely out on the open main…disappearing upon a quest…on which we were destined to succeed in an enterprise that had baffled our predecessors for four centuries” (Crouse 1934, 484, quoting Amundsen). (See Figure 2-5.)

Figure 2-5.
The *Gjoa* in the NWP
(Kløver 2018, citing Fram Museum)
The *Gjoa* took on supplies in Disko, Greenland, then made for Lancaster Sound and stopped at Beechey Island on August 24, 1903, so that Amundsen could pay homage to his hero, Franklin (Crouse 1934). Anxious to move on, they proceeded on a course Amundsen had devised by studying the reports of Rae and McClintock, east of King William Island, to avoid the ice stream that had trapped Franklin (Crouse 1934). Storms forced *Gjoa* into the shoals twice, but the party reached the southern end of the Island and found a safe harbor that Amundsen dubbed *Gjoahavn*, as it is still known today (Crouse 1934). (See Figures 2-6 and 2-7.)

![Gjoa Haven, Nunavut, Canada](Image)

Figure 2-6.
Gjoa Haven, Nunavut, Canada
(Riley 2019b)

The way west, Simpson Strait, was clear, but Amundsen stopped to spend the winter conducting scientific observation, the magnetic north pole lying less than 100 miles away (Crouse 1934). Amundsen was joined by a group of Inuit who settled nearby. Unlike most of the English explorers, Amundsen and his men learned skills and lessons from the Inuit, adopting reindeer skin clothing and learning to build snow houses (Crouse 1934). They remained two
winters, so that Amundsen could conduct scientific inquiries and explore the area. Amundsen was the first to observe the Earth’s magnetic field in the northern polar region and the first to demonstrate that the Magnetic North Pole is not fixed (Kløver 2018).

The *Gjoa* finally sailed west on August 13, 1905 (Crouse 1934). The crew carefully picked their way through islands and shallows, “like sailing through an uncleared field” until they reached Cambridge Bay on August 17, having “now sailed the *Gjoa* through the hitherto unsolved link in the North West Passage” (Crouse 1934, 504, quoting Amundsen). Later that month, *Gjoa* met the *Charles Hanson*, from California, which had entered through the Pacific end of the NWP. Its captain congratulated Amundsen and provided annotated charts of the waters *Gjoa* was about to enter (Crouse 1934). The expedition was forced to overwinter near King’s Point, however, when heavy ice set in (Crouse 1934). In June 1905, Amundsen and crew
again sailed west, encountering few difficulties, and after a brief stop at Point Barrow, they entered the Bering Strait on August 30, 1906 (Amundsen 1908). The Gjoa continued to Nome, where they were welcomed with “whistling, shouting and cheering – the American’s mode of expressing enthusiasm” (Amundsen 1908, 292). “The North-West Passage was done. My boyhood dream—at that moment it was accomplished. A strange feeling welled up in my throat; I was somewhat over-streained and worn—it was weakness in me—but I felt tears in my eyes” (Alexander 2011, quoting Amundsen).

While a great feat of exploration, the journey took three years and included waters too shallow for commercial shipping. More than 400 years after the dream began, the attainment was hailed as a significant accomplishment, but it was considered economically insignificant. The St. Roch, commanded by Royal Canadian Mounted Police Sergeant Henry Larsen, completed the second NWP crossing, the first west to east, from 1940-1942 (Arctic Resources 2009c). Larsen and the St. Roch also completed the third crossing, the first in a single season, from east to west, in 1944, but the route was still too shallow for commercial shipping (Arctic Resources 2009c). The U.S. Coast Guard (USCG) were first to cross by a deep route, in 1957, when USCG Cutters Storis, Bramble and SPAR, escorted by Canadian Icebreaker Labrador, made the journey west to east in 64 days (Arctic Resources 2009c). In 1969, oil tanker SS Manhattan, accompanied by Canadian icebreakers, became the first commercial ship to successfully traverse the NWP (King 2020). The trip, sponsored by Humble Oil (now ExxonMobil) and two other companies, cost over $50 million, and the ship was unable to repeat the transit the next year, due to thick ice (Arctic Resources 2009b). Sponsors concluded the NWP was not economical and did not offer an alternative to the Alaska pipeline (King 2020).
Modern People of the NWP. Modern Inuit culture is thought to have arisen toward the end of the Little Ice Age (16th to 19th centuries) when hunting adaptations became necessary for survival, but they are the genetic successors to the Thule (Moltke et al. 2015). The people of the NWP are survivors in a unique and challenging environment. “For the Inuit, there is no ‘savage wilderness’ that Franklin disappeared into – there is home” (Land 2020). Indigenous people started finding relics and providing information about the fate of the Franklin expedition shortly after it was “lost.” Their knowledge, passed down through generations, would eventually lead to the discovery of his ships (see Chapter 4).

Early European explorers clung to their own traditions and failed to learn skills that might have saved their lives. It took hundreds of years for the British to put aside their woolens for far warmer and more protective animal skins and to abandon canvas tents for snow houses. Roald Amundsen successfully broke that mold, and his adoption of Inuit skills is considered one of his great advantages in beating British Capt. Robert Scott to become the first man to reach the South Pole in 1911 (Alexander 2011). (See Figure 2-8.)

Figure 2-8. Amundsen (2nd from Left) and Crew in Inuit Clothing (Kløver 2018, citing Fram Museum)
In the 19\textsuperscript{th} and 20\textsuperscript{th} Centuries, Inuit faced domination and discrimination by European settlers and white North Americans. In the 1870s, Canada instituted residential schools, intending to “eradicate the language, cultural traditions and spiritual beliefs of Indigenous children in order to assimilate them” (Wilk, Maltby, and Cooke 2017, 2). The forced schooling resulted in intergenerational trauma that adversely impacted health and social conditions in the broken communities (Wilk, Maltby, and Cooke 2017). In the 1950s, largely as a means of promoting sovereignty through occupation, Inuit were resettled, often through coercion, in northern “hamlets” (Stewart, Dawson and Johnston 2015). Promised more abundant game and fur supplies, families were moved north to strategic locations at Resolute Bay and Grise Fiord, under the supervision of Royal Canadian Mounted Police (Grant 2016). Despite construction of wooden houses, a store and a school in the hamlets, the relocation was “ill-conceived and poorly planned” and there is “clear evidence of unwarranted hardships endured by the Inuit during the early years” (Grant 2016, 2). Once relocated, Inuit were denied free movement and assistance was restricted by government policy. In some cases, new families arrived on a distant, High Arctic beach, with insufficient time to stock food for the winter (Grant 2016). (See Figure 2-9.)

Figure 2-9.
Grise Fiord Relocation Monument, Carved by Resident Looty Pijimani
(Riley 2019b; Artist Identified by Zarate 2010)
Alaska did not become a U.S. territory until 1867, so some of the laws related to Native Americans, such as the establishment of reservations, were never applied there. But the 1819 Civilization Fund Act was applied, and some Inupiat (indigenous northern Alaskan) children were sent to “civilizing” boarding schools (Barnhardt 2001). While many schools in northern Alaska were day schools, a “strict ‘English Only’” policy applied (Barnhardt 2001).

Self-determination finally appeared on the horizon in the 1970s, in both Canada and the U.S. Nunavik, the northern most region of Quebec, located along the Hudson Strait and Hudson Bay, is home to 10,000 Inuit (Makivik 2019b). The James Bay and Northern Quebec Agreement of 1975 brought recognition and more autonomy to the Inuit of Nunavik, who remain part of Quebec (Makivik 2019a). (See Figure 2-10.)

In the west, the Inuvialuit Settlement Region was designated in 1984, through the Inuvialuit Final Agreement (Inuvialuit Regional 2020a). Comprised of 35,000 square miles in the northwest corner of the Northwest and Yukon Territories, it contains land and portions of the Beaufort Sea traditionally used by Inuvialuit (indigenous western Canadians) (Inuvialuit Regional 2020a). Negotiations for self-government in the region are still underway (Inuvialuit Regional 2020b). (See Figure 2-11.)

In Northeastern Canada, negotiations began in the 1970s, and culminated in the 1993 Nunavut Land Claims Agreement, which granted some control over traditional lands and set conditions for more autonomy (Wilson and Selle 2019). In 1999, the newest, largest, and northern-most province in Canada, Nunavut, was established from the Northwest Territories, as “a homeland for Canada’s Inuit” (Kulchyski 2017). (See Figure 2-10.) The Inuit reportedly favor the current arrangement and do not seek independence from Canada (Kulchyski 2017).
In Alaska, the 1971 Alaska Native Claims Settlement Act made possible the creation of two Inupiat regions in northern Alaska: the Northwest Arctic Borough and the North Slope Borough (Wilson and Selle 2019; North Slope 2020). The Home Rule Charter of the North Slope Borough of Alaska brought local government to 94,000 square miles of north Alaska, which includes the largest oil field in the U.S., Prudhoe Bay, and the top of the Trans-Alaska pipeline (North Slope 2020). The Burroughs remain components of Alaska and the U.S. These agreements have not been perfect solutions but have returned some degree of autonomy to northern peoples.
Today the Inupiat of northern Alaska, the Inuvialuit and Inuit of Canada, and the Avanersuaq and Kalaalisut of western Greenland comprise the indigenous peoples of the NWP (Native Land 2020). (See Figure 2-11.)

Other Arctic Passages. It must also be noted that the NWP is not the only possible northern sea route from Europe to Asia. There are two other potential routes. The first is the North East Passage (NEP), also referred to as the Northern Sea Route (NSR), which lies across the top of Europe and Russia. Russia defines the NSR as a portion of the NEP, so the terms are not precisely synonymous (Østreng 2010). (See Figure 2-12.) In the early 16th Century, with the NWP still unattainable, British and Dutch attention turned for a while to the search for the NEP, but this would prove just as challenging. The English made multiple attempts in the mid-1500s but lost more men and ships (Pletcher 2011).
In 1584, Willem Barentsz (Barents) found Novaya Zemlya, an archipelago in northwestern Russia (Karlsbakk 2012) and learned that Russians had already been there (Pletcher 2011). Europeans had been unaware that the Russians had begun trading with Siberia via the Arctic (Pletcher 2011). In 1596, Barents discovered Svalbard and Bear Island, mistaking them for Greenland, before wintering on the northeast coast of Novaya Zemlya (Pletcher 2011). Unable to free his ship from the ice the following summer, his party journeyed across the Barents Sea in two small boats, but Barents died on the way (Pletcher 2011).

Adolf Erik Nordensiöld of Finland is generally credited as the first to conquer the NEP (Ashworth 2015). He sailed aboard the SS Vega in July 1878, becoming frozen into the ice just one day short of his goal, which he quickly attained ten months later, when the ship was released.
(Ashworth 2015). Others, though, believe the honor belongs to Portuguese explorer David Melgueiro, who may have crossed the NEP west to east between 1660-1662 (Firmino 2014).

In 2017, the Russian icebreaking, natural gas carrier *Christophe de Margerie* set the record for the fastest NEP crossing, completing the full transit from Norway to Korea in just 19 days, and the NSR portion in under seven days (Gosnell 2018). Some heralded the feat as the dawn of a new Arctic shipping era, but others cite the variability and unpredictability of conditions as continuing limits on marine transit in the region (Gosnell 2018).

The second route is the Trans-Polar Route, which passes from the Barents Sea to the Bering Strait, through the Arctic Ocean, closer to the North Pole. This route is called the “Central Passage” by the Chinese, who refer to it as an Arctic shipping route in their own Arctic Policy (Bennett 2019). (See Figure 2-12.) The Soviet nuclear icebreaker, *Arktika*, was the first surface vessel to reach the North Pole, in 1977 (Bennett 2019). If the transpolar route were navigable, it would offer the most direct route between Europe and Asia. While it remains clogged with thick, multi-year ice, the route may be passable in summer within decades, due to climate change (Bennett 2019). The route could even open to ice-strengthened ships, without icebreaker escort, as early as mid-century (Stevenson et al. 2018; Bennet 2019).

The dream of a shortcut from North America or Europe to Asia persists, despite the rather discouraging reality. Because climate change is rapidly warming the Arctic and decreasing sea ice, it is already possible to traverse the NWP and NEP most years, although the route is unpredictable and often costly, due to the necessity of icebreaking. The next chapter examines the changing reality of the NWP today.
“Ah, for just one time I would take the Northwest Passage
To find the hand of Franklin reaching for the Beaufort Sea;
Tracing one warm line through a land so wild and savage
And make a Northwest Passage to the sea.”
Canadian Folk Song by Stan Rogers
(Rogers 1980)

Chapter 3. The Northwest Passage Today

The Opening of the NWP

Climate Change. Just over a century after Amundsen’s voyage through the NWP, climate change is drastically altering the polar regions, particularly the Arctic, which is the fastest warming part of the planet (European Union 2014; Hauser, Laidre, and Stern 2018). According to a Canadian government report, annual average temperatures in northern Canada have already increased by over 2° C, much higher than the global rate (Zhang 2019). As a result, sea ice, which is frozen ocean water that floats on the ocean surface, is melting faster each summer, and refreezing less each winter (National Snow & Ice 2019a). (See Figure 3-1.) This ice is important because it reflects sunlight (the albedo effect), helping to keep the earth cooler, influences ocean circulation, and serves as critical habitat for marine life, from the phytoplankton beneath it to the polar bears on top (Scott and Hansen 2016).

The southern, or Amundsen route of the NWP, where summer ice is now a “dwindling commodity,” has been “open,” defined as no more than 60% ice-covered, most years since 2006 (Di Liberto 2016). (See Figures 3-3a. and 3-3b.) The previously unnavigable northern route has been open seven times since 2006. In June and July of 2019, sea ice in the southern route was at its lowest extent since 1981 (National Snow & Ice 2019b). (See Figures 3-2.) The opening of the NWP brings new challenges and opportunities for the region. “As the Arctic Ocean loses its
ice cover, it becomes more accessible to marine shipping, extraction of resources, and tourism” (Serreze and Meier 2018, 11).

Figure 3-1.
Annual Sea Ice Extent in January, 1978-2020
(National Snow & Ice 2020a)

Figure 3-2.
Sea Ice Extent in the Southern NWP, Summer 2019
(National Snow & Ice 2019b)
Figure 3-3a.
Open Southern Route of the NWP, August 9, 2016 (See Inset, Below)  
(Di Liberto 2016)

Figure 3-3b.
Inset: Ice-Free Queen Maud Gulf, August 9, 2016  
(Di Liberto 2016)
Melting ice from glaciers also impacts the NWP. The dramatic decline of the Greenland ice sheet is well known (Shaftel et al. 2020). Less well known is the extent of glacial ice – and loss - in the Canadian Arctic Archipelago, the chain of islands running through the eastern portion of the NWP. The Canadian Arctic Archipelago is home to 300 glaciers, the largest area of glacial ice outside the ice sheets of Greenland and Antarctica (Cook et al. 2019). Unlike sea ice, which is already floating in the water, glaciers are land ice, so their melt water flows to the sea and contributes to sea level rise. The archipelago is losing an estimated 60 gigatons of ice per year, more than double the rate of ice loss in the Patagonian ice fields, (Gardner et al. 2011).

Declining ice is not the only consequence of climate change affecting the NWP. With continued warming, permafrost, the layer of soil that remains frozen all year, will continue to decrease, with near-surface reductions of 37%-81% forecast this century (Intergovernmental Panel 2014). Snow cover is also decreasing, even faster than sea ice. June snow cover decreased 53% between 1997 and 2012 (European Union 2014). Less permafrost and snow cover lead to the formation of wetlands in formerly frozen areas, disrupting terrestrial habitat, and interfering with traditional hunting and transportation routes (European Union 2014).

The effects of climate change directly impact the diverse wildlife of the Arctic. The most Arctic-adapted, or specialized, species, are the most negatively affected. Species classified as “ice-obligates,” such as hooded or bearded seals, walrus and polar bears, require ice to reproduce or hunt, so they are particularly sensitive to changes in ice extent and duration (Moore and Huntington 2008). Ice-associated species, such as narwhal and beluga whales, live amongst ice, but their precise dependence on it is poorly understood (Laidre et al. 2008). Some studies suggest that both species rely on ice for winter feeding (Laidre et al. 2008). Other Arctic species have also adapted to use sea ice and snow. For example, two important caribou herds migrate
over sea ice (Poole et al. 2009), arctic fox den in snowbanks and hunt on sea ice in winter (Pamperin, Hollman, and Person 2008) and snowy owls hunt winter prey on ice (Therrien, Gauthier, and Bêty 2011). The Arctic has passed a climate “tipping point” and is now “transforming into a new state” (Struzik 2019, quoting Queen’s University geographer). This new state is far different from the environment the explorers fought so hard to conquer.

**Commercial Shipping.** With less ice in the way, the NWP is once again an aspirational shipping route and Arctic shipping is rapidly increasing. The majority of commercial vessels in the NWP are partial passage resupply vessels. Many are visiting remote communities during the short summer, to deliver crucial, non-perishable goods and fuel, at a fraction of the cost of airlift, and to supply or haul from mines (Nunavut Government 2015a). In 2015, there were 30 cargo trips in Nunavik and Nunavut, of which five full loads and nine partial loads were dedicated to mines (Nunavut Government 2015a). The *MV Nunavik* made the first unescorted, commercial, full passage in 2014, carrying nickel ore mined in Deception Bay, Canada, to China (Oskin 2014). The Marine Communications and Traffic Services Centre, in Iqaluit, Nunavut, supported 191 vessels in 2019, including cargo ships, cruise ships, research vessels, fishing vessels, pleasure craft and Coast Guard ships (Sevunts 2019a).

Full commercial transits are increasing. In 2019, the 27 full NWP crossings included five dedicated cargo trips, the most since 2016 (Sevunts 2019a). While this is a small number, cargo represented over 18% of full transits in 2019, compared to only 3% of full transits from 2011-2016 (Lasserre et al. 2020). Each year, the Canadian Coast Guard deploys icebreakers to the passage, to escort ships through ice, respond to environmental incidents and conduct search and rescue operations (Sevunts 2019b). (See Figure 3-4.) Seven Arctic-positioned icebreakers provided 51 commercial escorts in 2019 (Sevunts 2019b). The concern is that increased
shipping may contaminate pristine Arctic ocean water and negatively impact marine mammals such as narwhal and walruses (Hauser, Laidre, and Stern 2018) or change the migration and foraging patterns of other wildlife. These issues are discussed below.

Figure 3-4.

Natural Resource Extraction. Much of the commercial activity in the NWP relates to extractive industries, including oil, minerals, such as gold and diamonds, and fishing. According to Northern Affairs Canada, “Canada’s North is rich in mineral resources and the development of these resources provides socio-economic benefits to northerners” (2019). There are three working diamond mines in the Northwest Territories, three active gold mines and an iron mine in Nunavut (NWT & Nunavut 2018). One industry representative referred to mining as the “new seal industry” (Buchan 2018). (See Figure 3-5.) Mining made up 36% of the Northwest Territories’ gross domestic product (GDP) and 23% of Nunavut’s GDP in 2018 (Neary 2019). Unfortunately, while money flows into businesses and governments, the mining boom is not
doing much for Nunavut’s unemployment rate, which, at around 14%, is 2.5 times the national average (Thompson 2019). Most jobs are filled by skilled workers from other areas and Nunavut is struggling to train young residents for mining jobs (Thompson 2019).

![Mary River Iron Mine, North Baffin Island](image)

Figure 3-5.
Mary River Iron Mine, North Baffin Island
(Buchan 2018)

Nunavut does not currently have active crude oil production, but its oil resources are estimated at over 18 billion barrels and exploration is ongoing (Canada Energy Regulator 2019). The U.S., however, actively pumps oil in the Beaufort Sea, inside the NWP. Prudhoe Bay, Alaska, is the largest oil field in North America, with 800 active wells and a large natural gas reserve (Conoco Phillips 2020). (See Figure 3-6a.) NorthStar Island was built of gravel in the Beaufort Sea to allow year-round offshore production. (See Figure 3-6b.) Two 10-inch pipelines move oil and gas from the island to the Trans-Alaska Pipeline (Alaska 2020). There are three other man-made islands off the coast of Alaska, and construction of another in the Beaufort Sea was approved by the U.S. in 2018 (Maritime Executive 2018).
Public Law 115-97, Section 2001, of 2017, opened the Arctic coastal plain of the Alaska National Wildlife Refuge (ANWR), in the far northeast corner of Alaska, along the Beaufort Sea, to oil and gas drilling. The coastal plain, part of “the last great wilderness” (Thomas Jr. 2017, quoting George Collins and Lowell Sumner 1953), contains overlapping ecosystems, home to both grizzly and polar bears, muskox, and wolves, and is the calving range of a unique caribou population. In February 2020, the U.S. Fish and Wildlife Service released a study on the impacts of seismic surveys on polar bears for public comment (Alaska Region 2019). The study found that seismic studies conducted during denning can lead to decreased cub survival (Wilson and Durner 2019). Some analysts see the unusual release of the study for public comment as an opportunity for the oil industry to contradict the study and a prelude to moving forward with licenses (Beitsch 2020). It appears likely more oil drilling is coming to the NWP.

In the Inuvialuit region of northwestern Canada, commercial fishing was banned in the Beaufort Sea to prevent a “rush” of new fisheries as the ice disappears (CBS 2016). The ban was designed to avoid both overfishing and negative impacts on wildlife. But fishing is a major component of food security and a growing industry in Nunavut. Commercial fishing is primarily
focused on turbot, shrimp and Arctic char, with a catch valued at $86.3 million in 2015 (Fisheries and Sealing Division 2016). Nunavut turbot, also known as Greenland halibut, recently received the Marine Stewardship Council’s international certification as “sustainable,” a designation it shares with Nunavut shrimp (Anselmi 2019). There is room for growth in this sector, as Nunavut is not yet reaching its quotas for shrimp or char (Fisheries and Sealing Division 2016). Climate change may extend fishing seasons and open new fishing grounds but is also likely to contract suitable habitat for some species and stress populations of Arctic fish (Troell et al. 2017). The climate impact on fisheries is one more challenge residents of the NWP will have to face.

**Political and Military Issues.** As the NWP clears, Canada’s neighbors, friends, and competitors are eyeing it with increased interest. The NWP is contained primarily, but not exclusively, within the Canadian Maritime Arctic, which runs across northern Canada, from Baffin Bay, in the east, to the Beaufort Sea, in the west, where the Yukon Territory abuts Alaska (Arctic Resources 2009c). The Canadian Maritime Arctic contains the Canadian Arctic Archipelago, “one of the most complex geographies on Earth,” which comprises almost 36,000 islands (Arctic Resources 2009c). Canada claims the NWP as an inland waterway, meaning it controls access, and Russia makes similar claims to much of the NEP route above Siberia (Council on Foreign Relations 2014). The U.S., the European Union and others dispute these claims to the NWP and NEP, however, arguing that the northern sea routes are international passages with free navigation rights (Council on Foreign Relations 2014).

The list of other sovereignty disputes in the Arctic is growing. Both Canada and Denmark claim Hans Island, located between Canada and Greenland, the U.S. and Canada dispute the maritime boundary in the Beaufort Sea, and Russia, Denmark (for Greenland) and
Canada all dispute the under-sea Lomonosov Ridge, which runs between the Siberian Islands and Ellesmere Island (Council on Foreign Relations 2014). Canada filed an application with the UN Commission on the Limits of the Continental Shelf in May 2019, to extend recognition of its continental shelf, the portion of its land mass below the Arctic Ocean, by 1.2 million km$^2$, based on scientific data collected since 2003 (Natural Resources Canada 2019). (See Figure 3-7.) With this submission, Canada joins Russia and Denmark in claiming the underwater Lomonosov Ridge, and with it, the North Pole (Bykova 2019).

![Figure 3-7. Canadian Continental Shelf Claim (Ridge Label Added) (Showing Fixed Points of Claim per UN Rules) (Government of Canada 2019)](image)

Arctic changes are also raising military concerns. Russia planted a titanium flag in the seabed near the North Pole in 2007, using a remote-controlled submarine (Worrall 2017), and is making extensive investment in its Arctic region, building up both commercial and military infrastructure (Council on Foreign Relations 2014; Garamone 2019). Russia’s “robust Arctic militarization plan” enhances its ability to “project power” into the western world (Garamone 2019).
2019, quoting U.S. Navy Admiral James Foggo). China has declared itself a “near-Arctic state,” though it makes no territorial claim, and is expanding its Arctic presence through scientific research and by increasing its economic influence, investing in Iceland, Greenland and its “Polar Silk Road” initiative (Jerome 2019).

The John S. McCain National Defense Authorization Act for Fiscal Year 2019 requires the U.S. military to monitor Russian and Chinese activities in the Arctic and to improve military capability to operate in the Arctic (Jerome 2019). The U.S., Canada and North Atlantic Treaty Organization (NATO) allies have stepped up military exercises in the Arctic in the last few years, including Trident Juncture 2018 (Friedl 2018) and Cold Response 2020, both in Arctic Norway (Danilov 2020). This increased emphasis includes exercises directly on the NWP. (See Figures 3-8a. and 3-8b.)

![Figure 3-8a. Canadian Troops Arrive at Resolute Bay, 2019 (Gramer 2019, crediting Jerome J.X. Lessard, Canadian Armed Forces)](image_url)
Canada’s annual “Operation Nanook” often involves NATO allies and included an exercise focused on “Naval presence along and monitoring of [the] Northwest Passage” in 2019 (National Defense 2019). Every other year, the U.S. conducts “Operation Arctic Edge,” a northern Alaska training exercise that will include Canada’s Joint Operations Command in 2020 (Defense Visual 2020).

People of the NWP. As discussed in the previous chapter, the Arctic is home to culturally adapted, indigenous peoples, composed of over 40 different ethnic groups, who have inhabited the Arctic for thousands of years (Arctic Centre 2020). “In general, indigenous people have a specific connection to land,” and traditionally relied on fishing and hunting for survival (Arctic Centre 2020). Most Canadian Inuit now live in permanent settlements, with small grocery stores, but despite government subsidies, extremely high food prices result in widespread food insecurity (Pedersen 2019). (See Figure 3-9.)
To offset these prices, many Inuit still hunt, or harvest “country food,” such as caribou, seal, or whale, which is often shared with neighbors (Pedersen 2019). (See Figure 3-10.) Local communities are working to support hunters, who face high ammunition costs and high fuel costs for snowmobiles and outboard motors. Some also supply community freezers to preserve food and to encourage hunting skills in a new generation raised in towns (Hoover et al. 2016).

Inuit now face the effects of climate change, which makes hunting more difficult. Shorter sea and inland ice seasons make travel to traditional hunting areas treacherous and thawing permafrost can make vehicle travel impossible (Nunavut Climate Change Centre 2020). Melting permafrost also threatens “heritage and special places,” such as sod houses, that were preserved by low temperatures, and contemporary buildings, roads and infrastructure, due to ground shifting (Nunavut Climate Change Centre 2020). Weather and temperature changes impact water quality and increase disease transmission in humans and animals (Ford et al. 2014).
And the expansion of extractive industries, while a financial boon, can lead to contamination, which degrades the environment, as well as the health of humans and wildlife.

Figure 3-10.
Inuit Culturalist Sharing Caribou “Country Food”
(Riley 2019b)

Inupiat residents of the northernmost community in the U.S., Utqiagvik (formerly Barrow), Alaska, at the western end of the NWP, face similar challenges. The cost of groceries there is more than twice the cost in Anchorage (Sperling’s Best 2020). Subsistence whaling and other hunting are so important that many jobs offer “subsistence leave” (Ice Stories 2015). Traditional subsistence hunting of bowhead whales, an endangered species in the Western Arctic, is permitted by the U.S. Marine Mammal Protection Act, and quotas are issued by the International Whaling Commission (George et al. 2020). In 2018, 27 whales were landed in
Utqiagvik, but hunting has become more challenging due to diminishing sea ice, which increases open water and reduces Inupiat access to whales and walruses (Suydam et al. 2019).

**Increasing Tourism.** Coinciding with easier access to the Arctic, climate change brings longer summers and increased interest in a previously ignored area. These factors combine to stimulate tourism, which has become “one of the key phenomena affecting the Arctic Circle” (D’Aprile 2018). “[M]ore and more people want to see the region’s attractions before they are gone” (Keil 2017). Tourists are not distributed uniformly throughout the Arctic, however. Alaska, Sweden and Finland each attract more than 2 million tourists per year, compared to 200,000 for the Yukon Territory (Keil 2017). Svalbard, Norway is a “hot spot” due to easy air access from Europe, a high concentration of polar bears and the Northern Lights, while visits to Iceland have increased six-fold since 2008 (Keil 2017).

Arctic Canada and the NWP are still less traveled than other Arctic destinations, but tourism is increasing rapidly. Nunavut, in particular, has seen a significant rise in vessel numbers (Johnston, Dawson, and Maher 2017) and growth is projected to continue (Johnston, Dawson, and Stewart 2019). Within Nunavut, the NWP, “known for its rich history and scenic beauty, has emerged as the most popular area to visit with transits increasing dramatically” (Johnston, Dawson, and Maher 2017).

By far the greatest increase in tourism along the NWP is marine tourism (Johnston et al. 2017). Cruise tourism in the NWP is generally limited to smaller, “expedition-style” ships, carrying 75-350 people, with visits by an occasional mid-sized ship, carrying up to 1,000 (Tetu, Dawson, and Lasserre 2020). Nonetheless, with the passage open at last, cruise passenger numbers more than tripled between 2005 and 2015 (Johnston, Dawson, and Maher 2017). In the next section, I examine the increase in NWP cruises and the types of cruises offered.


Cruise Tourism in the NWP.

The First NWP Cruises. “No place on earth, it seems, can escape the determined traveler” (Rosenberg 1984). In 1984, the ice strengthened *MV Lindblad Explorer* became the first tourist ship to completely transit the NWP (Headland 2019). (See Figure 3-11.) The 98 passengers aboard paid a reported $16,000 to $20,000 each (UPI 1984), the equivalent of $39,000 to $49,000 today (U.S. Inflation 2020).

![Image of MV Lindblad Explorer](image.png)

**Figure 3-11.**

*MV Lindblad Explorer*

(Tribute 2020)

Monitored from above by aircraft and assisted by an icebreaker in “difficult spots,” the ship traveled from Newfoundland, Canada to Yokohama, Japan (UPI 1984) and was just the 29th ship to complete a full transit of the NWP (Headland 2019). Of the seven generally recognized routes through the NWP, *Lindblad Explorer* followed Route 4 West, also known as the Amundsen Route (Headland 2019). (See Figure 3-12.)

The *Explorer* was described as “the first ship to be expressly built for rugged exploration service while retaining all the comforts of a modern cruising vessel” (Tribute 2020). The ship
was owned and operated by Lindblad Travel (now known as Lindblad Expeditions), founded in 1958 by Lars-Eric Lindblad, a pioneer of small ship cruising to remote destinations, including Antarctica in 1966 and the Galapagos Islands in 1967 (Lindblad 2020c).

The slightly larger cruise ship, World Discoverer, with 138 aboard, accomplished a full crossing, in the opposite direction, the following year (Headland 2019; Griffin 2014b). Sailing for now-defunct Society Expeditions, that passage ran from Nome, Alaska, to Halifax, Canada (Griffin 2014b). World Discoverer failed to get through in 1986, however, due to heavy ice (Griffin 2014b). Society Expeditions successfully operated the third passenger cruise through the NWP in 1988, aboard the former Lindblad Explorer, now renamed Society Explorer (Headland 2019). The ship spent four days stuck in the ice before being freed by a Canadian icebreaker (Berliner 1988) and completing the transit.

The “heaviest Arctic freeze in a decade” ended a 1991 attempt by the new Frontier Spirit (Griffin 2014b). The Frontier Spirit, another ice-strengthened, purpose-built ship, and the first

Figure 3-12.
Northwest Passage Route 4
(Voyage Advisor 2019; Headland 2010)
described as “environmentally friendly” (Barrington 1990), would get other chances. The Scott Polar Institute of Cambridge University reports no successful NWP transits in 1991, which they define as from Atlantic to Pacific oceans, via Bering Strait, or reverse (Headland 2019). The Scott Polar Institute maintains an annual list of complete NWP transits, which excludes some voyages others count, such as the 1969 Manhattan journey, which ended its trip at Point Barrow, Alaska, and did not enter Bering Strait (Headland 2019). I refer to the Scott Polar Institute list for the remainder of this paper.

Regular Transits. The next era of NWP cruises began in 1992, when both Frontier Spirit and converted Russian icebreaker Kapitan Khlebnikov completed passenger transits (Headland 2019). Since 1992, passenger cruises have been scheduled to transit the NWP every year, and have succeeded every year except 2018, when unusually heavy ice forced all cruises to reroute (Hollander 2018). One to two full NWP cruise transits (an average of almost 2 per year) were completed each year from 1992-2011. (See Chart 3-1.) The Frontier Spirit and the Kapitan Khlebnikov became NWP stalwarts during this period. Their usual operators, Hapag-Lloyd Cruises and Quark Expeditions, dominated the market.

All of the ships used during this period were icebreakers or ice-strengthened, meaning they have reinforced hulls (Stewart et al. 2007). The use of Russian icebreakers for polar cruises is attributed to the decline of the Soviet Union in the 1980s, which made the ships available for refit and charter (Stewart et al. 2007). The icebreaker Khlebnikov completed a total of 18 transits, the most of any ship (Headland, 2019). Sailing for Quark Expeditions (Quark 2020b), the ship was the first to go round trip, making back-to-back transits, in a single year, in 1994. One of those was the first to go via the more northerly Route 2 (Headland 2019). (See Figure 3-12.) The Frontier Spirit transited the NWP twice for SeaQuest Cruises, in 1992 and 1993.
(Headland 2019; New York Times 1992), before being sold to German shipping and cruise company, Hapag-Lloyd, and rechristened *Bremen* (Hapag-Lloyd 2006). The ship has made eight more crossing under that name, most recently in 2019 (Headland 2019). With ten full transits, *Bremen* has the third most transits of any ship (Headland 2019). The *Hanseatic*, also owned by Hapag-Lloyd, made its first transit in 1994 and would go on to complete the most crossings of any expedition cruise ship, and the second most of any ship, with eleven full transits (Headland 2019). The *Bremen* may have a chance to tie *Hanseatic* in the future (Hapag-Lloyd 2020a).

<table>
<thead>
<tr>
<th>Year</th>
<th>Ships</th>
<th>Total</th>
<th>Year</th>
<th>Ships</th>
<th>Total</th>
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<td>2002</td>
<td>Hanseatic Kapitan Khlebnikov</td>
<td>2</td>
</tr>
<tr>
<td>1993</td>
<td>Frontier Spirit Kapitan Khlebnikov</td>
<td>2</td>
<td>2003</td>
<td>Bremen (formerly Frontier Spirit) Kapitan Khlebnikov</td>
<td>2</td>
</tr>
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<td>1</td>
<td>2005</td>
<td>Kapitan Khlebnikov x 2</td>
<td>2</td>
</tr>
<tr>
<td>1996</td>
<td>Hanseatic Kapitan Dranitsyn</td>
<td>2</td>
<td>2006</td>
<td>Bremen Kapitan Khlebnikov</td>
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<tr>
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<tr>
<td>1998</td>
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<td>2008</td>
<td>Bremen</td>
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<tr>
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<td>1</td>
<td>2009</td>
<td>Bremen Hanseatic</td>
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<tr>
<td>2000</td>
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<td>2</td>
<td>2010</td>
<td>Hanseatic Kapitan Khlebnikov</td>
<td>2</td>
</tr>
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<td>2001</td>
<td>Kapitan Khlebnikov x 2</td>
<td>2</td>
<td>2011</td>
<td>Bremen</td>
<td>1</td>
</tr>
</tbody>
</table>

Chart 3-1.
Completed NWP Cruise Transits, 1992-2011
(Riley 2020; Data from Headland 2019)

With Khlebnikov’s back-to-back transits, there were three tourist transits for the first time in 1994. The 1996 entry requires a note. That September, *Hanseatic* become stuck on a shoal in Simpson Strait, between Gjoa Haven and Resolute Bay, due to an errant buoy (Transportation Safety Board 1996). The ship’s passengers were evacuated by the *Kapitan Dranitsyn*, a sister
icebreaker to the *Khlebnikov*, which was in the area and quickly chartered by the cruise operator to complete the cruise (Transportation Safety Board 1996). Those passengers completed their full NWP transit on two different ships, and *Hanseatic* completed its 1996 transit later, without its passengers. Perhaps neither of these 1996 transits should count as full NWP passenger transits, but they are included in the Scott Polar data and so are included here. Although *Hanseatic* and its passengers were never in danger, the incident shows the difficulty of travel in the NWP. (Safety in the NWP is discussed in Chapter 5.)

Hapag-Lloyd became the first cruise company to take two different ships through the NWP in a single year, in 1995. The *Hanseatic* and the *Bremen* started at opposite ends of the passage and made a rendezvous near Cambridge Bay (Griffin 2014b). In 2001, *Kapitan Khlebnikov* was the first cruise ship to transit the full, northern Route 1. (See Figure 3-12.)

**Expanding Market.** The NWP cruise market changed in 2012, when new cruise operators started taking an interest in the route. (See sample itinerary at Figure 3-13.) That year the *Hanseatic* was joined by *The World*, a floating condominium ship carrying 500 passengers, the largest passenger ship to transit at that time, and the first non-ice rated passenger ship (Headland 2019; Johnston, Dawson, and Maher 2017). This ship is difficult to classify (Johnston, Dawson, and Maher 2017), but I included it here because its presence heralded the next era of NWP cruising. More significantly, French luxury cruise line, Compagnie du Ponant (Ponant), completed its first full transit in 2013, aboard its brand new, ice-strengthened *Le Soléal*. With *Bremen* and *Hanseatic* also making full transits, 2013 marked the first time that three different cruise ships transited the NWP in one year.
In 2014, *Le Soléal’s* sister ship, *L’Austral*, made its NWP debut for Ponant, joined by another luxury line, Silversea Expeditions, which took its 132-passenger *Silver Explorer* through the passage for the first time. *Silver Explorer*, also ice-rated, had already visited Svalbard, Iceland, Greenland and Antarctica (Norton 2014). Then, in 2015, Ponant followed Hapag-Lloyd’s lead by taking two of its ships, *Le Boreal* and *Le Soléal*, through the passage in one season. *Le Boreal* sailed under charter to Abercrombie & Kent (A&K), a high-end, U.S. based travel company, that had previously chartered Ponant vessels for tours to Antarctica and continues to offer NWP cruises on Ponant ships (Norton 2014). (See Chart 3-2.)

In 2016, Crystal Cruises made giant waves by taking the *Crystal Serenity* through the NWP, carrying 900 tourists, nearly twice as many as any previous cruise (Nunez 2016). Passengers reportedly paid $22,000-120,000, per person (Nunez 2016). (See Figure 3-14.) Although it had previously visited Antarctica, the announcement that the non-ice rated *Crystal Serenity* sought to become the largest cruise ship ever to transit the passage was met with concern. One concern was the volume of wastewater the ship would discharge, another was the
possibility of a large fuel spill, and a third was the impact of so many visitors on small NWP villages (Comer and Olmer 2016). Perhaps the most immediate concern was safety, specifically the availability of search and rescue assets to evacuate so many people in such a remote region in case of emergency (Nunez 2016). (These issues are discussed in Chapter 5.)

The ship carried two Canadian ice pilots, was escorted by an ice breaker and was equipped with forward looking sonar, ice radar, thermal imaging and ice searchlights (Business Wire 2016). The sold-out transit was a success and Crystal Cruises announced it would repeat
the journey the following year. The 2017 trip also successfully sailed the full NWP, but bookings on the large ship were down 10-20%, and the company decided Crystal Serenity would not return to the NWP (Maritime Executive 2017b). The company said it wanted to “offer guests a more intimate experience in the Arctic” (Coppes 2017, quoting Crystal Vice President John Stoll) and would likely return with its new, smaller expedition ship, the Crystal Endeavor, which was then under construction (Maritime Executive 2017b).

Three separate operators offered full transits of the NWP for the first time in 2016. The average number of full NWP transit cruises increased from 1.8 per year in 1992-2012, to 2.5 per year in 2013-2017, a 38% increase. The number of operators participating, including A&K but excluding The World, tripled. The number of full cruise transits of the NWP has continued to grow, as discussed below. These full transits are now complemented by an increasing number of partial transits of the NWP.

Partial-Transit Cruises. A new aspect of NWP cruise tourism developed in the late 1990s to early 2000s, when cruise ships began visiting the eastern portion of the NWP, making only partial transits. It is difficult to trace the precise origin of these partial-passage cruises because they developed alongside other eastern Canadian Arctic cruises, which include Baffin Island and Hudson Bay, and because consistent statistics were not kept (Stewart et al. 2007). The year 2005 is considered the start of “a stable cruise tourism industry in Nunavut” (Johnston, Dawson, and Maher 2017). There were only two full NWP cruises that year, but eleven cruises visited the Canadian Arctic region (Stewart and Dawson 2011). The number doubled the following year, and by 2009 had grown to 25 cruises (Stewart, Dawson, and Johnston 2015). Despite a decrease in cruise tourism in 2011 and 2012, attributed to the global financial crisis, the number of
Canadian Arctic cruises reached 30 in 2015, a 273% increase in ten years (Stewart, Dawson, and Johnston 2015). (See Chart 3-3.)

![Canadian Arctic Cruises](chart3-3.png)

**Chart 3-3.**
Number of Cruises Visiting Nunavut, Canada
(Riley 2020; Data from Johnston, Dawson, and Maher 2017)

As Canadian Arctic cruises increased, some of the cruises began entering Lancaster Sound and making partial transits of the NWP, visiting only the eastern portion of the passage, where the early explorers spent so much time. For this project, I define partial NWP cruises as those going into the passage at least as far as Beechey Island, at the west end of Devon Island. (See Figure 3-15.) Beechey Island is a National Historic Site where three of Franklin’s men are buried, and a popular NWP cruise landing site. The growing number of Baffin Bay cruises, which do not enter Lancaster Sound and the NWP proper, are not included here. Although tourism is slowly increasing in the western portion of the NWP, I did not find any partial NWP cruises entering from the west.
I found limited information on qualifying, partial NWP cruises prior to 2015. One of the first operators to offer cruises in the eastern half of the NWP was Adventure Canada, which began as a land-based, outdoor adventure company, before offering its first cruises in 1994 (Adventure Canada 2020a). By 2010, Adventure Canada was offering three cruises per year in the eastern NWP (Stewart and Dawson 2011). In 2011, Hapag-Lloyd offered a cruise on the *Hanseatic*, “through a smaller portion of the Northwest Passage,” on which guests could “follow the traces of Amundsen and Franklin…” (The Cruise Line 2010). In 2012, a new Canadian company, One Ocean Expeditions, offered two partial transits, on the *Akademik Ioffe*, another Russian icebreaker, entering from the Atlantic and turning around at Kugluktuk (Griffin 2014b). And in 2014, Lindblad returned to the NWP, offering partial transits on its *National Geographic Explorer* (Griffin 2014b). Intending to change passengers at Kugluktuk, *Explorer* had to turn around at Resolute Bay that year, due to heavy ice (Wright 2018a). (See Figure 3-16a.)
Also in 2014, One Ocean chartered the Russian icebreaker *Akademik Sergey Vavilov*, to carry donors funding part of a renewed search for Franklin’s lost ships (Canadian Press 2014). The *Vavilov* assisted Parks Canada and the Canadian Royal Geographical Society in the largest modern search for the ships, transporting sonar equipment, a dive boat and underwater cameras (Griffin 2014a). The *Vavilov* was nearby when a Canadian Coast Guard icebreaker, with assistance from Inuit guides, found the wreck of *HMS Erebus* on the sea floor (Canadian Press 2014). The first of Franklin’s ships to be located, *Erebus* was resting just 11 meters (36 feet) below the surface of the water (Parks Canada 2019e). This find, and the discovery of the *HMS*
Terror in 2016, generated even more interest in the NWP (Parks Canada 2019i). (The wreck of HMS Erebus is discussed in Chapter 4.)

I found more complete data in Nunavut government records for partial NWP cruise visits, by community, beginning in 2015. (See Figures 3-16a and 3-16b.) These data indicate the Canadian Arctic and partial NWP cruise markets were well developed by 2015. The most visited Canadian Arctic community that year was Pond Inlet, population 1617 (Nunavut Government 2017), with ten cruise visits planned (Nunavut Government 2015b). Some sources include Pond Inlet as part of the NWP, because it is located on the north end of Baffin Island, near the entrance to the passage, but for this project, cruises going only as far as Pond Inlet were not considered NWP cruises.

There were eleven qualifying, partial NWP cruises in 2015, offered by six operators on seven ships. (See Chart 3-4.) Some partial passage cruises go deeper into the passage than others. (See sample partial-passage cruise itinerary maps at Figures 3-17a. and 3-17b.)

I then compared the 2015 data to 2017. There were 13 partial NWP cruises in 2017, an 18% increase. (See Chart 3-5.)

---

1 Nunavut captures cruise data by regions, the largest of which, Qikiqtaaluk, includes islands inside the NWP as well as popular cruise destinations outside the passage, such as Pond Inlet and Iqaluit, so these data must be culled. (See Figure 3-16a.) Nunavut has also published a “Master Cruise Itinerary” each year since 2015, which lists planned cruise visits to each community. I used this data set to learn which cruises intended to visit Cambridge Bay, Gjoa Haven, Resolute Bay or Kugluktuk, in 2015, 2017 and 2019, as these are all located well inside the NWP. I counted only published cruise offerings, not private yachts or charters. Beechey Island is not on the Nunavut Master List because there is no community there, so I also searched the internet for the itineraries of cruise ships visiting Pond Inlet and Grise Fiord, both located near the entrance to the passage, to see whether any planned to venture into Lancaster Sound to Beechey. One additional cruise, with Lindblad Expeditions, did go to Beechey Island, so it is included (Lindblad 2015b). This identification method is imperfect, but gives a general outline of the evolution of partial NWP cruises during this period. It is possible that some cruises were not included in the Nunavut data, and archived cruise brochures are not available for every line. Still, enough information is available to determine most cruises offered in 2015 and 2017. Most 2019 information was still readily available.

2 Adventure Canada and One Ocean offered more cruises than in 2015, while Zegrahm and Quark were absent from the tally. Zegrahm is a specialty travel company that offers unique journeys each year (Zegrahm 2020). Quark was still present in the Canadian Arctic, offering a land-based, wilderness lodge trip on Somerset Island, inside the NWP, and cruises to southern Greenland and southern Baffin Island, but these trips did not meet the criteria for inclusion as NWP cruises (Quark 2017).
<table>
<thead>
<tr>
<th>Operator</th>
<th>Ship</th>
<th>No. of Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adventure Canada</td>
<td>Ocean Endeavor</td>
<td>3</td>
</tr>
<tr>
<td>Hapag-Lloyd Cruises</td>
<td>Bremen</td>
<td>1</td>
</tr>
<tr>
<td>Lindblad Expeditions</td>
<td>National Geographic Explorer</td>
<td>1</td>
</tr>
<tr>
<td>One Ocean Expeditions</td>
<td>Akademik Ioffe</td>
<td>2</td>
</tr>
<tr>
<td>Quark Expeditions</td>
<td>Sea Adventurer</td>
<td>1</td>
</tr>
<tr>
<td>Quark Expeditions</td>
<td>Sea Explorer</td>
<td>2</td>
</tr>
<tr>
<td>Zegrahm Expeditions</td>
<td>Sea Adventurer</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total 2015 Partial Transits</strong></td>
<td></td>
<td><strong>11</strong></td>
</tr>
</tbody>
</table>

Chart 3-4.
Partial NWP Cruise Transits, 2015
(Riley 2020; Data from Nunavut Government 2015b, Lindblad 2015a)

Figures 3-17a and 3-17b.
Quark “Epic High Arctic,” Shorter Itinerary, 2015 (left); Quark “Northwest Passage: Franklin’s Legend,” Longer Itinerary, 2015 (right) (Quark 2014)
Partial NWP Cruise Transits, 2017
(Riley 2020; Data from Nunavut Government 2017, Lindblad 2017a, Lindblad 2017b).

2018-2019 NWP Cruises. Interest in NWP cruises continued, with more companies participating and more cruises offered. But climate change does not mean the NWP is predictable, as “[i]ce reigns supreme in the Arctic” (Schrandt 2018). The 2018 cruise season was disrupted “by an old foe: jumbled rafts of ice,” which blocked most NWP traffic and forced all scheduled full transit cruises to reroute (Hollander 2018). (See Figures 3-18a and 3-18b.) The Scott Polar Institute reports only two complete transits of the passage that year, both by private sailboats, compared with 32 total transits the year before and 24 in 2019 (Headland 2019).

Ponant turned Le Boreal around at Bellot Strait, on the eastern side of the passage, when it encountered treacherous ice there, and completely rerouted its second ship (Hollander 2018). The Northern Canada Vessel Traffic Services Zone Regulations (NORDREG) authority issued a small craft warning on August 18th that harkened back to the early days:

“CCG icebreakers cannot safely escort pleasure craft. Operators of pleasure craft considering a northwest passage should also consider the risk of having to winter in a safe haven in the Arctic, or in the case of an emergency, be evacuated from beset vessels.” (Blackwell 2018, citing NORDREG Iqaluit).

<table>
<thead>
<tr>
<th>Operator</th>
<th>Ship</th>
<th>No. of Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adventure Canada</td>
<td>Ocean Endeavor</td>
<td>4</td>
</tr>
<tr>
<td>Hapag-Lloyd Cruises</td>
<td>Hanseatic</td>
<td>1</td>
</tr>
<tr>
<td>Lindblad Expeditions</td>
<td>National Geographic Explorer</td>
<td>2</td>
</tr>
<tr>
<td>One Ocean Expeditions</td>
<td>Akademik Ioffe</td>
<td>2</td>
</tr>
<tr>
<td>One Ocean Expeditions</td>
<td>Akademik Sergey Vavilov</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total 2017 Partial Transits</strong></td>
<td></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>
Some of the partial NWP cruises continued in the east, but Hurtigruten, famous for its cruises along the Norwegian fjords, moved the disembarkation/embarkation point for two of its cruises from Cambridge Bay, deep inside the passage, to Pond Inlet, on Baffin Bay (Hollander 2018). Adventure Canada cruised “Into the Northwest Passage,” but could not reach Kugluktuk as planned and had to disembark and reload for its next cruise at Resolute, using “lots of little planes” to move passengers (Swan 2019a). Lindblad still managed to land on Beechey Island, after a band of ice cleared to open a channel (Lindblad 2018).

The NWP cruise enterprise recovered in 2019, with five full NWP cruise transits completed, a new high and a 67% increase over 2017. This total includes the return of the condominium ship, *The World*, which transited again. The increase was particularly noteworthy after the failed 2018 season. Hurtigruten introduced its new expedition ship, *MS Roald Amundsen*, in 2019. Large by expedition standards, with a capacity of 530, it is described as “the first battery-hybrid powered ship” to sail the NWP (Maritime Executive 2019). This new entry demonstrates continued commitment to the passage. (See Chart 3-6.)
On the partial NWP cruise front, there were 15 planned cruises for 2019, also a new high. However, the market was disrupted by One Ocean’s unexpected loss of its lease of the Akademik Ioffe, advertised under the name Ocean Navigator, just before the start of the summer season (Ziobrowski 2019). The planned cruises would have represented a 15% increase over 2017, but the four cruise cancellations by One Ocean resulted in a 15% decrease. (See Chart 3-7.)

A more positive development was One Ocean’s launch of its new ship, RCGS Resolute, formerly Hapag-Lloyd’s storied Hanseatic, in 2019, and that ship completed its two cruises. Hapag-Lloyd introduced one of its three new expedition ships, Hanseatic Nature, to the NWP, as well. Hapag-Lloyd describes the new ships as its “new expedition class,” a “mixture of adventure and comfort” (Hapag-Lloyd 2020e). These ships are part of a new wave of expedition-class ship building in the cruise industry, discussed below.

---

One Ocean initially blamed East-West political tension for the loss of its charter, but it was later reported that the loss was due to non-payment of fees and One Ocean entered restructuring at the end of the year (Ziobrowski 2019). One Ocean is still advertising online, but unless a new partner is found, it appears likely One Ocean’s future NWP cruises will be cancelled (One Ocean 2020).
### Chart 3-7.
Partial NWP Cruise Transits, 2019
(* Cruises Cancelled Due to Loss of Ship Lease)
(Riley 2020; Data from Nunavut Government 2019, Lindblad 2019)

<table>
<thead>
<tr>
<th>Operator</th>
<th>Ship</th>
<th>No. of Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adventure Canada</td>
<td>Ocean Endeavor</td>
<td>3</td>
</tr>
<tr>
<td>Hapag-Lloyd Cruises</td>
<td>Hanseatic Nature</td>
<td>1</td>
</tr>
<tr>
<td>Hurtigruten</td>
<td>Fram</td>
<td>2</td>
</tr>
<tr>
<td>Lindblad Expeditions</td>
<td>National Geographic Explorer</td>
<td>1</td>
</tr>
<tr>
<td>One Ocean Expeditions</td>
<td>Akademic Ioff (Ocean Navigator)</td>
<td>4*</td>
</tr>
<tr>
<td>One Ocean Expeditions</td>
<td>Resolute (Formerly Hanseatic)</td>
<td>2</td>
</tr>
<tr>
<td>Quark</td>
<td>Ocean Adventurer</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total 2019 Partial Transits**: 15 Planned, 11 Actual

The Future of NWP Cruising. The phenomenon of expanding cruise tourism in the NWP continued in 2020, at least in the planning stages. Then the season was scuttled due to Corona Virus Disease 2019 (COVID 19). In March 2020, the Canadian Minister of Transport announced that, given the “limited public health capacity in Canada’s Northern communities,” cruise ships of all sizes with Arctic stops would be “deferred” for 2020 (Government of Canada 2020). The season had been shaping up to set new records, so it is still instructive to examine advertised cruises.\

Seven full NWP cruises, offered by six operators, on seven ships, were advertised. All three numbers were new records, with a 40% increase in the number of planned cruises. Several of the cruises, selling from $17,700 for a porthole cabin on Bremen, to $115,000 for a grand

---

4 For this section, I conducted internet searches for full and partial NWP cruise advertisements, searched the websites of operators of previous NWP cruises and identified new operators through web advertisements and expedition cruise booking agent sites.
suite on Silversea, per person, were sold out as of April 2020 (Hapag-Lloyd 2020a; Silversea 2020a). (See Chart 3-8.)

<table>
<thead>
<tr>
<th>Operator</th>
<th>Ship</th>
<th>No. of Trips</th>
<th>No. of Passeng.</th>
<th>Starting Fare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abercrombie &amp; Kent</td>
<td>Le Boreal</td>
<td>1</td>
<td>199</td>
<td>$30k</td>
</tr>
<tr>
<td>Hapag-Lloyd Cruises</td>
<td>Bremen</td>
<td>1</td>
<td>155</td>
<td>$17.7k</td>
</tr>
<tr>
<td>Hapag-Lloyd Cruises</td>
<td>Hanseatic Nature</td>
<td>1</td>
<td>230</td>
<td>$23.8k</td>
</tr>
<tr>
<td>Hurtigruten</td>
<td>Roald Amundsen</td>
<td>1</td>
<td>530</td>
<td>$25.2k</td>
</tr>
<tr>
<td>Ponant</td>
<td>L’ Austral</td>
<td>1</td>
<td>264</td>
<td>$26.4k</td>
</tr>
<tr>
<td>Scenic Luxury Cruises</td>
<td>Scenic Eclipse</td>
<td>1</td>
<td>220</td>
<td>$28.3k</td>
</tr>
<tr>
<td>Silver Sea Expeditions</td>
<td>Silver Cloud</td>
<td>1</td>
<td>254</td>
<td>$35.4k</td>
</tr>
<tr>
<td><strong>2020 Full Transits Advertised</strong></td>
<td></td>
<td><strong>7</strong></td>
<td><em><em>Avg.</em> 264/220</em>*</td>
<td><strong>Avg. $26.7k</strong></td>
</tr>
</tbody>
</table>

Chart 3-8.
Advertised Full NWP Cruise Transits, 2020
(*Average Passenger Number with and without Road Amundsen)
(Riley 2020; Data from Abercrombie 2020a, Hapag-Lloyd 2020a, Hurtigruten 2020b, Ponant 2020b, Scenic 2020a, Silversea 2020a.)

Silversea planned to return for the first time since 2014, while Hapag-Lloyd intended to once again send two ships through the passage, starting at opposite ends (Hapag-Lloyd 2020a). The two ships planned to take different routes through the NWP, with *Bremen* attempting an unusual course through the Gulf of Boothia and around the southern end of Baffin Island (Hapag-Lloyd 2020d). (See Figures 3-19a and 3-19b.) That cruise was scheduled to stop in Igloolik (“place of the igloos”) where “members of the Parry expeditions who were looking for the Northwest Passage, spent the winter…” (Hapag-Lloyd 2020d).
Scenic Luxury Cruises planned to enter the NWP market for the first time, with its new “discovery yacht,” the *Scenic Eclipse*, which promises “a whole new level…of luxury and elegance…and absolute discovery” (Scenic 2020b). Though it is described as a “yacht,” the expedition ship holds up to 220 guests, which is about average for an expedition cruise ship.

Operators were still in the process of publishing 2021 cruise plans prior to the COVID 19 cancellation announcement. Four full NWP transit cruises had been announced, with Hapag-Lloyd, Hurtigruten, Ponant and Silversea all planning to return (Hapag-Lloyd 2020b; Hurtigruten 2020a; Ponant 2020c; Silversea 2020b).

There were ten announced partial NWP cruises for 2020, one fewer than in 2019, though it was unclear whether One Ocean would find a partner to operate its cruises. (See Chart 3-9.) This did not signal a downturn in the market at the time, however, based on the 2021 season then shaping up. Quark, offering only one partial passage in 2020, had already announced five partial NWP cruises for 2021, on its first newly built ship, *Ultramarine* (Quark 2020a; Saunders 2020). The ship will hold 199 passengers and carry two sightseeing helicopters (Saunders 2020). Lindblad planned to return (Lindblad 2020a) and Hurtigruten intended to circumnavigate Baffin Island after visiting Beechey Island (Hurtigruten 2020c).
<table>
<thead>
<tr>
<th>Operator</th>
<th>Ship</th>
<th>No. of Trips</th>
<th>No. of Passeng.</th>
<th>Starting Fare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adventure Canada</td>
<td>Ocean Endeavor</td>
<td>4</td>
<td>198</td>
<td>$11/7.6k*</td>
</tr>
<tr>
<td>Hurtigruten</td>
<td>Fram</td>
<td>2</td>
<td>318</td>
<td>$18k</td>
</tr>
<tr>
<td>Lindblad Expeditions</td>
<td>National Geographic Explorer</td>
<td>1</td>
<td>148</td>
<td>$17.3k</td>
</tr>
<tr>
<td>One Ocean Expeditions</td>
<td>Resolute</td>
<td>2</td>
<td>146</td>
<td>$13.2k</td>
</tr>
<tr>
<td>Quark</td>
<td>Ocean Adventurer</td>
<td>1</td>
<td>128</td>
<td>$12k</td>
</tr>
<tr>
<td><strong>2020 Partial Transits Advertised</strong></td>
<td><strong>10</strong></td>
<td><strong>Avg. 199.6</strong></td>
<td><strong>Avg. $12.9k</strong></td>
<td></td>
</tr>
</tbody>
</table>

Chart 3-9.
Advertised Partial NWP Cruise Transits, 2020
(*Price Difference Reflects Length of Itinerary) (Riley 2020; Data from Adventure Canada 2020b, Hurtigruten 2020d, 2020e, Lindblad 2020a, One Ocean 2020, Quark 2020d)

Luxury cruise line Seabourn announced its entry into the NWP, with its new Seabourn Venture, an “ultra-luxury purpose-built expedition ship” (Seabourn 2020) and Adventure Canada had just announced three NWP cruises for 2021 (Adventure Canada 2020e). Hapag-Lloyd advertised partial transits in 2021 and 2022, on its new Hanseatic Spirit (Hapag-Lloyd 2020g, 2020h). At least twelve partial passage cruises appeared likely in 2021.

How the 2021 season will be impacted by COVID 19 or a resulting downturn in travel or the economy remains to be seen. Adventure Canada, forced to cancel all of its 2020 cruises, stated they “wholeheartedly support” the government measure and announced their intention to operate their full 2021 season (Adventure Canada 2020f). Hurtigruten called the cancellation a “temporary setback” (George 2020).

While prudent, cancellation of the entire season “represents a substantial loss of revenue for some Northern communities” (Neary 2020) due to the loss of passenger landing fees and sales by artists and craftspeople (George 2020). Whether the NWP cruise market will rebound as well as it did after the 2018 heavy-ice season is unclear. Professor Jackie Dawson of the
University of Ottawa warned that recovery could be “tough” since many of the Arctic cruise lines are small, but she expressed confidence in those lines’ leadership (George 2020).

*Tourism Theory and Expedition Cruising.* Before the uncertainty created by COVID 19, expansion of the market to new ships and operators continued to be the trend for NWP cruises. (See Chart 3-10.) With this data set in mind, I examined tourism theory and the rise of expedition cruising, then turned to the question of why people are drawn to NWP cruises.

![Chart 3-10. Increase in Full and Partial Planned NWP Cruises (Riley 2020)](chart)

**Types of Tourism.** Personal travel dates back millennia. There is evidence of travel for “amusement, experience and relaxation” in ancient Egypt (Gyr 2010, 5). The classical Greeks and Romans traveled for education and pleasure (Gyr 2010) and religious pilgrimages were an early form of tourism (Daily 2018). True tourism probably began in the 1500s, when young noblemen traveled, mainly in Europe, to enhance their educations and develop social skills, but leisure and enjoyment had become important components by the time of the “grand tours” pursued by aristocrats in the 18th and 19th centuries (Gyr 2010, 13).
Modern tourism developed with the rise of the middle class and improved means of transportation (Gyr 2010). The industrial revolution brought disposable income and the heyday of the British seaside resort, which was newly accessible by train (Caletrío 2019). Thomas Cook invented the organized group tour in the 1840s, and the guided tour abroad in the 1850s (Gyr 2010) and a new industry was born. During the post-war period, those who could afford it came to view vacations as “necessary for health, education and as a marker of class or status” (Caletrío 2019). International travel increased more than 25-fold in the second half of the 20th century and tourism is now considered a “defining aspect of western lifestyles” (Caletrío 2019). The rise of tourism led to “mass tourism,” which has been described as “a beast, a monstrosity which has few redeeming qualities…” (Fennell 2008, 4).

To avoid the ills of mass tourism, a different approach to travel developed, which demanded “an unspoiled environment and consideration of the needs of local people” (Fennell 2008, 5). Sometimes referred to as “alternative tourism,” this new travel style emphasizes natural and cultural resources (Fennell 2008, 5-6). Alternative tourism includes a wide variety of formats, some of which are known as eco-tourism, nature tourism, wildlife tourism, adventure tourism, and responsible, sustainable or green tourism (Fennell 2008).

Wildlife tourism includes hunting, fishing and animal-watching, either wild or captive (Fennell 2008, 30). Adventure tourism, on the other hand, is a potentially broad term, which refers to tourism that involves some sort of risk (Fennell 2008). It is difficult to pin down a definition of adventure tourism, as it contains a vast array of activities, offering very low to extreme levels of risk.

Nature-based and eco-tourism are even broader terms, which include wildlife viewing but also plants, landscapes, cultures and other components of the natural world. Nature tourism is
“travel for the purpose of enjoying undeveloped natural areas or wildlife” and may include eco-
tourism, adventure tourism and even mass tourism (Fennell 2008, 20). Eco-tourism, on the other
hand, is “responsible travel to natural areas that conserves the environment and improves the
well-being of local people” (Honey 2008, 6). The primary difference is that nature tourism
refers to the tourist’s goal while eco-tourism (a subset of nature-based tourism) requires that
positive benefits be produced (Fennell 2008; Honey 2008).

Marine tourism is a subset of nature tourism that focuses on the marine environment. It
includes whale watching, SCUBA diving, kayaking, small boat tours and cruises (Garrod and
Wilson 2003; Orams 2002). Today, cruises are a popular form of marine tourism and expedition
cruises are a subset of cruise tourism.

**Expedition Cruise Tourism.** Expedition cruises originated in 1860, when William
Bradford and Dr. Isaac Hayes, a veteran of one of the failed searches for Franklin, took paying
guests to Greenland for the first time, aboard the steamship Panther (Snyder and Stonehouse
2007). The ship “was not bound upon a voyage of discovery, nor did she belong to the whaling
fleet…nor was she in pursuit of codfish…she simply bore a party of excursionists, who had
resolved to make a summer trip to the regions of the arctic circle” (Snyder and Stonehouse 2007,
18, quoting William Bradford in *Harpers Weekly* 1871). The trip featured lectures by explorers
and scientists, wildlife sighting and excursions (Snyder and Stonehouse 20017). Norwegian
ferry-cruise company Hurtigruten (meaning fast route), founded in 1893, may be considered the
first polar expedition company. It built a prefabricated hotel in Svalbard and initiated a
“Sportsman’s Route” from the mainland in 1896 (Hurtigruten 2019).

Modern expedition cruising dates back at least as far as the early Lindblad Travel
journeys to Antarctica, which began in 1966, and took a major step forward with the introduction
of the “purpose-built” *Lindblad Explorer* in 1969 (Tribute 2020). As Lars-Eric Lindblad said, “[t]here is an explorer in every man and woman – a spirit which demands an effort other than to sit in a sightseeing bus” (Barrington 1990, quoting Lars-Eric Lindblad). Since that time, expedition cruises have continued to evolve, following a standard format dating back to Bradford, as refined by Lindblad (Oceanwide 2020).

Today’s expedition cruises usually employ relatively small ships, carrying 100-300 passengers, with 200 or fewer considered “ideal” (Koutsky 2020). The smaller ships are not tied to large cruise ports, so they are able to follow a more flexible plan, adjusting to opportunities and conditions (Koutsky 2020). They usually visit remote locations and offer “intensive interpretation” by onboard guides, such as lectures and Zodiac excursions (Walker and Moscardo 2006, 106). Zodiacs are rugged, shallow, inflatable boats, considered stable and safe, that allow travelers to get closer to the environment and make beach landings. (See Figure 3-20.)

![Figure 3-20. Zodiac Boat in the Arctic](One Ocean 2015)

In my opinion, a cruise is not a true expedition cruise without Zodiacs. Some large cruises to Antarctica, for example, do not carry Zodiacs, and passengers merely “sail past
glaciers and remote islands” or “search for wildlife… off [the] balcony” (Celebrity 2020) rather than connecting more closely with the environment.

In contrast, most expedition cruises offer educational presentations onboard and naturalist-guided Zodiac excursions or landings each day, conditions permitting (Oceanwide 2020). Expedition cruises have been called “floating seminars” where “[n]o reasonable person is ever bored,” with onboard naturalists, scientists, historians and cultural specialists, depending upon the itinerary, providing educational programs and interpreting on-site (Peterson 1983). These programs and excursions are generally included in the expedition cruise price.

Expedition cruises are often nature or wildlife oriented, but may also focus on culture, such as the Lindblad Expeditions journey to Vietnam and Cambodia, where travelers “discover the ways of life along the Mekong River…” (Lindblad 2020d). The unique characteristics of expedition cruises, which differ from traditional cruises, combine to make expedition cruising one of the fastest growing segments of the cruise industry (Jordan 2019). Polar cruises are a rapidly expanding part of the expedition cruise market, with visitors to the Arctic and Antarctic regions now numbering in the tens of thousands each year (Wright 2018b).

Experience Tourism and the Tourist Gaze. In 1988, Joseph Pine and James Gilmore published their theory of “the experience economy.” An “experience” is an “event that engages the individual in a personal way” (Hwang and Han 2018). In the experience economy, a company delivers its products and services “in an environment where the customer can ‘experience’ the products and services,” such as in a theme restaurant or bookstore with comfortable chairs and a coffee bar (Jotberg 2001). The theory has been applied to cruises, particularly luxury cruises, where a customer pays a premium, not just for better food or a nicer
cabin, but for “an unforgettable consumption experience,” something they do not have every day (Hwang and Han 2018).

Professor John Urry theorized that the tourist experience is “fundamentally visual” (1992, 172). The tourist is looking for “something distinctive to be gazed upon,” he argued, endowing the “experience with a striking, almost sacred importance” (Urry 1992, 173). He dubbed this phenomenon “the tourist gaze.” His theory addresses the way tourists experience a destination but also the way the destination is packaged for consumption (Caletrío 2019). Travel, and what we consider desirable or undesirable, are “socially organized,” and change as society changes (Caletrío 2019).

Both of these theories are particularly applicable to the expedition cruise market. The experience economy has four dimensions: education, entertainment, esthetics and escapism (Pine and Gilmore 1999), and people embark on expedition cruises for all four. Naturalists or historians provide entertainment and education together, in the form of interesting, colorful presentations and excursions, rather than through typical cruise ship-style stage shows. In fact, education is a hallmark of expedition cruising. Remote locations provide the escapism people seek, as do the effort it takes to reach the remote location and the ship itself, regardless of luxury level. Dramatic or exotic scenery provides the esthetics, something unique to gaze upon, as “many tourists visit to see the beautiful natural landscape…without affecting or changing” it (Hwang and Han 2018). But instead of gazing upon the landscape from inside a ship’s observation lounge, expedition tourists seek to experience it out on deck with binoculars or on Zodiac excursions. Lindblad understood that people wanted to experience something unique, long before the term “experience economy” was coined. He foresaw people’s desire for
experiences, noting: “…people do not want to be tourists: they want to know; they want to do. Looking is passive. It’s action that counts” (Lindblad with Fuller 1983, 284).

**Last Chance Tourism.** Last chance tourism is the desire to see something before it is too late. Named a top travel trend of 2018, this form of tourism includes the desire to see cultures, landmarks, or natural landscapes before they are gone (Groulx et al. 2019). Examples includes Venice, Masai bomas (small villages) in Africa, the Great Barrier Reef, Antarctica, and the Arctic. While last chance tourism is not exclusively tied to climate change, the two are often associated, and the combination can result in an “ethical paradox,” when travel to see an endangered location hastens its destruction (Groulx et al 2019, 203).

For example, marketing for Antarctic cruises is often “rooted in social and environmental righteousness” (Haskins 2018). Trips are “presented like a limited-time offer” to travelers who are concerned about climate change and interested in conservation (Haskins 2018). Yet, travel to Antarctica leaves a large carbon footprint, with each visitor contributing more than five tons of carbon dioxide emissions between their flights and cruise (Farreny et al. 2011). One study examined the conflict of values inherent in last chance tourism. The study found that selfish motives, such as self-fulfillment or a sense of accomplishment, drove travelers’ decisions to visit locations impacted by climate change (Hindley and Font 2018). At the same time, travelers did not see their own contribution to climate change as consequential, which is attributed to denial, lack of awareness or “selective attention” (Hindley and Font 2018, 12).

These issues are compounded when last chance tourism develops into over-tourism. Venice is a classic example, with over-tourism there judged so severe its World Heritage status is “in jeopardy” (UNESCO 2019). Antarctica is also a prime example. There were just over 1,000 tourist visits to Antarctica during the 1990-1991 season. By 2014-2015, the number of tourist
visits had grown to 36,700 (International Association 2015) and by 2018-2019 to 56,000 (International Association 2019). The question now is whether this growth is sustainable in such a pristine, fragile region. As tourist numbers increase, so does the carbon footprint and the cumulative impact on the environmental (McClanahan 2020). The same is true of Arctic tourism. For example, the number of expedition cruise ships visiting Svalbard, Norway, the archipelago between mainland Norway and the North Pole, increased by 50% between 2016 and 2018, with almost 46,000 cruise passengers visiting in 2018 (Norwegian Polar Institute 2019).

The New Wave of Expedition Ship Building. Expedition cruising was originally “a small niche” in the cruise industry (Jordan 2019) that relied on Russian icebreakers or other retrofitted ships (Micallef 2019) and a few small, purpose-built ships, to carry passengers in relative comfort, but not luxury. These cruises felt more like scientific expeditions and visited locations “that, until quite recently, were avoided by the commercial cruise industry” (Micallef 2019). This is no longer the case. Today, high end travelers are “getting more adventurous” and luxury cruise companies are joining the expedition cruise market in increasing numbers (Powell 2019).

Some, like Ponant and Silversea, led the trend, joining the market years ago (Headland 2019; Silversea 2018). But there is increasing commitment to this segment from luxury cruise companies new to expedition cruising. Seabourn, Crystal and Viking are all building new expedition-style ships (Jordan 2019; Cruise Critic Staff 2020). These small, more luxurious ships are at the forefront of a building boom in the expedition cruise market. Traditional expedition cruise companies, including Quark (Saunders 2020), Lindblad (Lindblad 2020b), Hurtigruten, Hapag-Lloyd, Ponant and Silversea, have all built new ships (Jordan 2019). (See Figure 3-21.) Twenty-six new expedition ships were on order in 2018 (Powell 2018). As of
2019, 40 new expedition ships were “on order or rumored by 2023” (Jordan 2019). At least 19 will be delivered in 2020 and 2021 (Cruise Critic Staff 2020). (See Appendix IIIA.)

These ships will visit a variety of destinations, with NEP and even North Pole cruises increasing. There are five NEP transits (Heritage 2020; Lindblad 2020e; Silversea 2020c) and five North Pole cruises offered in 2020 (Quark 2020e; Poseidon 2020). (See Appendices IIIB-IIIIE.) As the expedition cruise market expands, NWP cruises are likely to increase, as operators seek unique itineraries.

Figure 3-21.
Ponant’s Hybrid, Polar Class *Le Commandant Charcot* (Ponant 2020a)
“Follow in the footsteps of the early Arctic explorers…as you discover one of the world's last frontiers, the infamous Northwest Passage.”
Cruise Advertisement
(Scenic 2020)

Chapter 4. Research Questions, Methods and Results

Statement of Research Questions. Chapters 1. and 2. have shown how the NWP drew explorers, at great cost and peril, for centuries. Chapter 3. presented the modern reality that cargo and even tourist ships now routinely transit the passage, in comfort and relative safety, most years. The NWP has a romance and a history that give it great appeal to the modern "experiential" tourist. Yet the cost of tourist voyages is very high, and the product is not as familiar as, for example, African safaris or cruises to the Galapagos Islands or Antarctica.

This chapter therefore asks three researchable questions:

-- what is the lure of the NWP for tourists today? Is it based on the desire to see historical sights and artefacts of exploration? Is there a sense of thrill and adventure in undertaking a voyage that is even now open to only a few? Or are tourists motivated by more traditional aspects of an expedition cruise such as scenery and wildlife?

-- how do cruise firms market the product? Which tourist motivations do they consider most important and how is this manifested in marketing material?

-- does the actual product meet tourist expectations when they take a cruise? Are tourists satisfied with the experience and what are the elements they most like or dislike?

The research will also discuss--though it cannot formally investigate--the important question of the impact that tourists are having on the Inuit and Inupiat villages where cruise ships stop. These remote places see few individual tourists, much less groups that may number in the
hundreds. It is possible to shed some light on this question and to describe the tourism product offered by the villages, without fully measuring the impact this is having on the local economy or society.

*Research Methods.* I approach the questions three ways: through a multi-method analysis of marketing materials used by cruise firms; through a direct examination of passenger motivations on a partial passage cruise I took in 2019, using a questionnaire and three focus groups; and through my personal observations on the same cruise.

*Marketing Analysis.* Travel through the NWP has been called “one of the world’s greatest voyages” (Adventures Canada 2020b). How are these trips portrayed in advertisements and what is promised to travelers? I analyzed itinerary-specific, online trip descriptions and brochures from the ten expedition cruise companies offering 17 full and partial NWP transit cruises in 2020 (A&K, Adventure Canada, Hapag-Lloyd, Hurtigruten, Lindblad, One Ocean, Quark, Ponant, Scenic and Silversea).\(^5\) I look at three aspects of the advertisements.

--- Photographs. What types of photographs are used in NWP cruise descriptions and what are they implying to potential passengers? I made a visual survey of both website and brochure advertisements and looked for patterns in the types of photographs used. There are two limitations on this process. First, only isolated NWP cruise advertisements were analyzed. Many NWP cruises are advertised alongside other Arctic cruises in brochures and on websites. Photographs of the Arctic in general may influence potential passengers but are excluded here.

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\(^5\) I reviewed printed brochures from eight of the ten operators and found them identical or nearly identical to the electronic brochures available for download from the websites. I used the electronic versions of the brochures for all ten operators for consistency and ease of use. The electronic brochure descriptions differed from the website descriptions, so both were included in the text analysis. The materials analyzed are on file with the author.
Second, brochures and websites change over time, and the photographs and description may change during a sales year, so this analysis represents a snapshot in time.\(^6\)

--- Adjectives. Which adjectives and descriptive terms are used in the advertisements, and what images are they creating of the destination? I determined the descriptors most frequently used to sell NWP cruises, using a text analysis engine, Voyant Tools (Voyant 2020). Voyant is a “web-based text reading and analysis environment” for humanities students and scholars (Duke 2020a). For the text analysis, I included the website and electronic brochure descriptive text for each full and partial NWP cruise.\(^7\) Ten documents (one per operator) composed the body of text analyzed. The documents contained a total of 39,259 words.

--- Text Analysis. In addition to word counts, Voyant searches for trends, creates word pictures and word associations, and allows the user to search for the context of words in multiple documents. I used Voyant to examine the same texts used in the adjective search, but this time generated word pictures and looked for word associations to determine the images being created. I then drew conclusions about what the cruise operators were selling, based on the results.

Traveler Motivation. I used two methods to determine motivation.

--- Online Traveler Survey. I designed a survey using the Qualtrics program offered by the Duke Office of Information Technology, to be taken by NWP cruise passengers (Duke 2020a). Participation was voluntary and anonymous, with the consent process built into the survey. The survey is in Appendix IVA. The survey contained six sections after the informed

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\(^6\) For example, the website for A&K’s NWP cruise changed between January and March 2020. I did not find any significant theme changes, but they may occur.

\(^7\) I included the descriptions of each individual cruise for companies offering more than one qualifying NWP cruise. The more words used and the more trips offered, the greater the weight by volume of that operator’s advertisements. I included all text that described the trip itself, including daily itineraries. I did not include general descriptions of the Arctic. Information on particular experts joining specific itineraries or text regarding trip-joining details, such as “[a]rrive in Montreal and transfer to your hotel” (Abercrombie 2020a) were excluded. I did not include details of cabins, pricing or amenities, such as “elegant yacht-like ambiance…as well as gastronomic cuisine” (Ponant 2020). Voyant screens out common words such as “because,” “you” and “when.”
consent: top three motivations to visit the NWP; ranking of primary motivating factors; favorite aspect of the trip; disappointment in the trip; miscellaneous questions; and demographic data.

I recruited survey participants during the partial NWP cruise I took in 2019. I gave a short introduction to the survey during the “nightly recap” on the next to last night of the cruise. Business cards with a survey link were placed in passenger cabins that night. (See Figure 4-1.) I sent one email reminder with a direct survey link to the passengers two weeks after the trip ended. A total of 65 surveys were completed based on these direct requests.

Figure 4-1.
Business Card for NWP Traveler Survey

--- Focus Groups. I conducted three focus groups during the cruise. One focus group consisted of Americans, the second of Canadians, and the third of mixed nationality. The Focus Group consent process and script are in Appendix IVB. I asked the focus groups some of the same questions asked in the survey, but allowed participants to elaborate their motivations,

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8 I sent invitations to participate in the survey to each cruise line offering NWP cruises, but none of the other cruise lines agreed to participate. To reach additional passengers, survey links were posted on Facebook pages where readers discuss NWP cruises, but this method was not productive.
impressions and insights, rather than rigidly following the format. I also allowed the groups to take the conversation in a different direction if they wished.

My Journey through the NWP. I travelled on a partial passage NWP cruise in September 2019. I provide my observations of the cruise, in light of marketing trends and passenger motivations.

Marketing Analysis: What they are selling. Marketing is a necessary component of almost any business. Customers cannot buy a product if they do not know it is available. Advertisements must either respond to pre-existing demand from consumers or create it. This is particularly true in the travel market. “Contemporary tourist destinations are exhibited seductively for the visual consumer’s gaze…” (Dorsey, Steeves, and Porras 2004). This seduction employs both words and pictures to create an image of a destination, also referred to as a “consumption vision” (Walters, Sparks, and Herington 2007). The consumption vision is a mental image of a location that causes the consumer to see themselves there. Creating this type of image has been referred to as “commodifying environment and culture” (Dorsey, Steeves, and Porras 2004).

Pine and Gilmore discuss the importance of themes and impressions in marketing experiences (1999). Themes are “concise and compelling” cues that captivate customers and impressions are the “take-aways” of the experience (Pine and Gilmore 1999, 52). Travel marketers use themes to create impressions that define the destination image for the customer.

Nature tourism companies employ a reinforcing combination of print and online advertising to inspire and lure customers. Glossy catalogues and engaging online content immerse consumers in the location and the experience, allowing them to explore a variety of
destinations that fulfill their travel desires. (See Figure 4-2.) These marketing tools employ a number of themes to create a vision of the NWP cruise for prospective passengers.

![Abercrombie & Kent Advertisements for NWP Cruises Catalogue (left); Website (right) (Abercrombie 2020a)](image)

**Photographs.** Pictures have been important in tourism for over 100 years (Smithsonian 2020). The photographs chosen to represent a cruise in advertisements provide the first impression of the trip to travel consumers. “Today’s society is an image society,” and online marketing makes photographic representation more important than ever (Sparks and Wang 2014). Photographs are “attention-getting;” they are better remembered than written descriptions because they “stimulate higher cognitive elaboration and richer memory trace” than words (Sparks and Wang 2014). This is particularly true for nature tourism, since photographs of nature provoke a stronger response than do photographs of the built environment (Barlemenou and Garrod 2019).

I identified the eight most popular photographic themes in NWP cruise advertisements: Arctic scenery (ice or glaciers), wildlife, Zodiacs, local villages, native cultures (such as Inuit in
traditional clothing), the expedition ship in the Arctic, travelers in the Arctic, and historic sites (such as former Hudson’s Bay Company trading posts). (See Chart 4-1.)

Chart 4-1.
Photographic Themes in NWP Advertisements
(Riley 2020)

All operators featured photographs of Arctic scenery in their descriptions, which is not surprising since they are selling trips to the Arctic. All operators also featured photographs of their ship in an Arctic setting. (See Figure 4-3.) This demonstrates the importance of the ship, itself, in cruising in general (Teye and Paris 2010) and in expedition cruising in particular. Depicting the ship in the Arctic setting shows potential travelers it is possible to get to the remote location in safety and comfort. All operators also featured photographs of local villages and cultures, indicating both aspects are important draws. (See Figures 4-4a and 4-4b.) Eight of the ten operators included all eight of the prominent photographic themes in their descriptions.
Nine operators included photographs of Zodiac boats. Nine featured travelers in the Arctic, often in multiple settings, such as on Zodias and ashore. These operators are selling the opportunity for immersion in a frozen world. (See Figures 4-5a and 4-5b.)

Nine operators prominently featured wildlife, most frequently polar bears (90%), walruses (80%), muskoxen (80%), and whales (80%), indicating the importance of wildlife viewing in NWP cruise marketing. (See Figure 4-6.) One operator offered a photographic guide, called “Meet the Wildlife” (Abercrombie 2020b).
Eight of the operators focused heavily on photogenic wildlife, also known as charismatic megafauna, featuring both bears and whales, along with other wildlife, in trip descriptions. Seals, caribou and Arctic birds were each featured by 40% of operators. Only two operators depicted narwhal and only two depicted beluga whales, both of which are closely associated with the NWP. Narwhal tend to avoid large ships, but beluga whales are frequently spotted, so their absence is more surprising. Apparently, operators are not promising sightings of these species.

Eight operators included photographs of historic sites, confirming the importance of history in marketing NWP cruises. (See Figure 4-7.) Six of the operators included photographs
of optional activities, such as hiking, kayaking or photography, but none of the individual activities appeared frequently enough to constitute a common theme. Walking ashore, as opposed to hiking, could be considered a common theme, but the two activities are difficult to distinguish in photographs and that aspect was included in depictions of tourists in Arctic scenery. Kayaking was the most commonly depicted optional activity, included by 40% of operators. Sled dogs or puppies were also pictured by 40% of operators. (See Figure 4-4b.) Serious photography, beyond the taking of simple snapshots, was depicted by 30% of operators.

![Hurtigruten NWP Advertisement Photograph](image)

Hurtigruten NWP Advertisement Photograph
Historic Royal Canadian Mounted Police Station, Dundas Harbor
(Hurtigruten 2020a)

One operator, Scenic Cruises, failed to depict wildlife, Zodiacs or travelers in the Arctic setting. Photographs were not as extensive or important in their advertising. Only one company, Adventure Canada, included a photograph of the Northern Lights, which are discussed below.

For nine of the ten operators, photographs played a starring role in advertising NWP cruises. What do the photographs accomplish? Advertising photographs elicit emotion and serve as proof that something exists or happened (Messaris 1997). The photographs used in NWP cruise descriptions accomplish both of these goals. Many of the photographs elicit emotion in the sense that they are dramatic or grand, provoking awe and stimulating a desire to
experience the location. The photographs of travelers in the Arctic inspire the viewer to picture themselves there. They link the cruise and traveler to the Arctic environment, by showing the ship in the remote setting, by showing its passengers in the setting and by immersing the viewer in the setting, telling viewers “we can take you to this remote place.” The photographs also “prove” what has happened: cruise travelers have seen bears or whales or glaciers with us, here is the photographic proof. The beautiful photographs create the image of a pristine, wild and distant world, while allowing the viewer to imagine being there, observing the wonders depicted.

Photographs are necessary in NWP cruise advertisements because most people have only a vague mental image of the place. And, in the words of one operator, “[s]ome places in this world are so magical that their beauty cannot be described in words” (Ponant 2020b). So, what are operators selling with these photographs? They are selling not just a cruise, but a voyage that will immerse the traveler in remote arctic scenery, where they can see exotic wildlife, make contact with Arctic villages and cultures, and sail in safety and comfort in the wake of history.

**Descriptive Adjectives.** A wide array of superlatives is applied to NWP journeys. Descriptions like “epic” (Hapag-Lloyd 2020f), “legendary” (Ponant 2020b), “pristine” (Adventure Canada 2020b), “iconic” (One Ocean 2020) and “the voyage of a lifetime” (Abercrombie 2020c, 48), are all used to describe NWP cruises in advertising. Adjectives are employed to make a product appear unique – this is a basic sales technique (Qunsheng and Wang 2013). The adjectives used in advertising help the reader form a mental image of the destination (Torto 2016). For instance, calm, relaxed and warm might be applied to a tropical destination to create a tranquil image.

I determined the most popular descriptive adjectives in the brochures and web advertisements for the 17 NWP cruises offered in 2020, using Voyant Tools. The results include
the ten adjectives used by the most operators and the ten adjectives used most frequently throughout the advertising. The number of operators using a term indicates the breadth of the theme in the market, while the number of uses indicates the weight the theme is given, overall. For example, the term with the most total uses is probably a popular theme. But if only two of ten operators use the term, it is not very important in the market, even if those operators use the term many times. The results for the two categories are similar, but slightly different.

All ten operators used the word “spectacular” at least once in their trip descriptions. “Historic” and “beautiful” were each used by nine of ten operators. (See Chart 4-2.) “Fascinating,” “remote” and “unique” were each used at least once by eight of ten operators. In contrast, “remote” was the most frequently used adjective throughout the advertising, followed by “spectacular” and “historic.” (See Chart 4-3.) “Remote” is a very strong theme among 80% of operators, while “spectacular,” the second most used adjective, was used by all operators, so it is also a very strong descriptive theme.

[Chart 4-2
Percentage of Operators Using Adjectives
(Riley 2020; Data from Voyant 2020)]
The word “rich” was the fifth most used adjective. That adjective was used to describe a variety of aspects, such as “rich culture,” “rich history,” or “rich in marine life,” but 30% of operators did not use the term at all. “Beautiful” and “fascinating” were used by more operators but not used as often as “rich” and “traditional.” “Traditional” was used in conjunction with words such as “kayaking,” “singing,” “houses,” and “lifestyle,” generally describing local culture, but was only used by half of the operators.

Four of the descriptors, “spectacular,” “remote,” “historic” and “unique,” are in the top six on both lists. They are the most important descriptive adjectives used in NWP cruise advertising because they are both frequently and broadly used. Three of the NWP cruise operators, A&K, Hurtigruten and One Ocean, included all ten of the most used adjectives in their advertising. Quark used nine, while Ponant used eight. The operators used an average of 7.4 of
the most frequently used adjectives. One of the operators, Lindblad, used only four of the adjectives, “fabled,” “historic,” “spectacular” and “unique,” in their advertising. Neither Lindblad nor Adventure Canada used “remote,” while Scenic, the Australian firm, used the term more than they used any of the other popular adjectives, and more than any other operator. It is likely that the NWP seems much more remote from Australia than it does from lower Canada or the U.S. (See Chart 4-4 for the distribution of most used adjectives among operators.)

![Chart 4-4. Distribution of Ten Most Frequently Used Adjectives, by Operator (Voyant 2020; Riley 2020)](chart44.png)

A destination image emerges from these descriptive words. Operators are selling trips to a “remote” and “spectacular” location of “historic” value, where they offer “unique” experiences. This destination image is reinforced by the photographs of adventure travelers amidst the scenery, immersed in the remote but spectacular location. It is clear that the photographs and adjectives reinforce themes to create a destination vision. (See Figure 4-8.)

**Text Analysis.** This analysis was also conducted with Voyant Tools, using the same text files. The results offer a number of insights into the advertisements and the images they create.
Word Cloud. The most immediate result produced by Voyant is a “Cirrus World Cloud,” a colorful arrangement of the most prevalent words (Sinclair and Rockwell 2016). The pictorial representation of these words provides a visual snapshot of the heart of the text, which allows the viewer to quickly get the gist of the content.9 (See Figure 4-9.)

Many of the common themes already identified are apparent here. One of the first words to emerge, after obvious choices like “Arctic,” “northwest” and “passage,” is “expedition,” which appears much larger than the word “cruise.” “Expedition” is reinforced by the words “adventure,” “explore,” “discover,” and “journey.” The operators are portraying this trip as an expedition, an adventure where the traveler can explore and discover.

Of course, Arctic terms, such as “polar,” “ice,” “icebergs,” “icefjord,” and “glaciers” are prominent, since this is an expedition into the frozen north. The word “wildlife” is also prominent, and is reinforced by “whales,” “bear,” and “seals.” The size of the word “wildlife”

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9 The word cloud may be composed of between 25 and 500 words. I chose a cloud composed of the 105 most used words for both detail and clarity. Word size indicates frequency of use, while color and arrangement are random.
indicates that animals are a major selling point here. Potential travelers are being offered the opportunity to view unique wildlife in their natural environment.

![Figure 4-9. Voyant Word Cloud of NWP Advertisements (Voyant 2020; Riley 2020)](image)

History is represented with “Franklin,” “Amundsen,” “explorers,” “Beechey,” and “UNESCO.” Local cultures are included, with “Inuit,” “Thule,” “heritage,” “culture,” and “community” all present. The words “Franklin” and “Inuit are the same size, and larger than many of the other words, telling us both of these aspects are important draws.

This word picture gives us a visual overview of the meaning of the text. Advertisements are offering an expedition to a historic location, realm of the explorers, where the traveler will discover Arctic ice, glaciers, wildlife, and local cultures.
Word Frequencies and correlations. In this section, I use Voyant to count the number of times unique words are used in the body of the text, to look at correlations, and to search for specific words in the texts. The most frequently used words, “island,” “arctic,” “passage” and “northwest” do not tell us much, since these are trips to the NWP in the Arctic. As seen in the word cloud, “expedition” is the fifth most used word, used by all operators, demonstrating the importance of the expedition concept in the marketing. “Expedition” is used 212 times, compared to 83 uses of the word “cruise,” revealing the preference for the former term over the later in marketing this type of trip. Although “Franklin expedition” accounts for 21 of the 212 uses of “expedition,” most uses relate to concepts such as “expedition team,” “expedition stop,” or “expedition opportunities.” There are 11 uses of “Zodiac cruise” or “Zodiac cruising,” and five uses of “cruise among icebergs,” so even the word “cruise” becomes expeditionary. There is a clear preference for describing the trip as an expedition rather than as a cruise. Half of the operators use the words “expedition cruise” or “expedition cruising” in their text, which one operator defines as “an adventure into the unknown” (Abercrombie 2020). All ten operators use the word “adventure” to describe the trip, as well.

Nine of ten operators use the word “Zodiac.”10 The tenth uses “small boat” in its place, so all ten tout their Zodiac-style capability in support of the expedition theme. Scenic uses the word “Zodiac” more often than any other operator, though it was the only operator not to feature a photograph of a Zodiac. “Ice,” “iceberg,” “icefjord” and “glacier(s)” are used a total of 344 times, showing the importance of the Arctic environment and scenery, as reinforced by the photographs. Surprisingly, the word “climate” is used only eight times, the words “climate

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10 The term “Zodiac” is a registered trademark of French company, Zodiac Nautic. French cruise operator Ponant applies the “®” symbol, though many companies use the term without the trademark. The term is often used generically, like “Kleenex,” to describe a variety of rigid, inflatable boats.
change” only twice, both times by A&K. “Global warming” is used only once, by One Ocean. “Last chance,” “ice melt” and “ice loss” are never used. The advertisements for these trips are not actively selling last chance tourism, even if such motives bring travelers to the Arctic.

“Wildlife,” “bear(s),” “whale(s),” and “seal(s)” are used 373 times, cumulatively. Every operator uses the words “wildlife,” “bear(s)” and “whale(s);” nine operators use “seal(s).” In the words of one operator, wildlife viewing is “a major draw card of our expedition” (One Ocean 2020). This language reinforces the wildlife photographs featured in the advertisements.

The names “Franklin,” “Amundsen,” and “Beechey,” and the words “history or “historic” are used a total of 352 times. All operators but one, Lindblad, use either “Franklin” or “Amundsen,” and Lindblad uses “William Baffin,” so all operators discuss explorers in their advertisements. Franklin’s name is used 123 times, Amundsen’s only 51, so apparently Franklin’s tragedy is a bigger draw than Amundsen’s success. Perhaps poor Amundsen, the most successful of all polar explorers, made it look too easy, or perhaps it is because he was not British or American. Lindblad is the only operator that does not use “Beechey” in its advertisement, though its cruise attempts to land on Beechey Island each year. Explorer history appears to be an important selling point for all operators except Lindblad. Even Scenic, which is the only company other than Lindblad not to include photographs of historic sites in its advertisements, uses the names “Franklin,” “Amundsen,” and “Beechey” in its trip descriptions.

The word “Inuit” is used by all operators, a total of 96 times. Local cultures are included as a reason to visit the NWP, with promises of “a warm Inuit welcome” (Adventure Canada 2020b), or other interaction frequently advertised. This reinforces use of the photographs of local inhabitants. “Village” and “community” are used 85 times, further reinforcing “Inuit,” local culture, and the colorful photographs of villages used by operators.
“Luxury” is used only 15 times, by only four operators. Those operators, A&K, Ponant, Scenic and Silversea, are the four luxury brands offering NWP cruises in 2020. Five other companies use “comfort” or “comfortable,” with one line promising “premium comfort” (Hurtigruten 2020b). Only Lindblad fails to discuss comfort level in its NWP advertisements, though it uses the word “comfort” in general advertisements for the Arctic. As discussed in Chapter 3, expedition cruises were originally expected to be comfortable, rather than luxurious, but that is changing as the market expands. As the market evolves, some expedition cruisers will seek luxury, while others will shun the concept, if not the practice. The marketing split may continue, even when new ships are deployed, to emphasize the expeditionary nature of the trip.

Only two companies, Adventure Canada and A&K, mention the Northern Lights, with the former offering a “good chance” to see them (Adventure Canada 2020c) and the later offering the possibility “with some luck” (Abercrombie 2020). Northern Lights are associated with the Arctic, but are best viewed within the “Aurora Oval,” which falls below the NWP. The best chance on an NWP cruise is just below the Arctic Circle in Greenland at the beginning or end of the cruise (Aurora Zone 2020). Passengers may hope to see Northern Lights, but only 20% of NWP cruise operators advertise the possibility.

The word counts reveal the same themes as the photographs and adjectives. The expeditionary nature of the trip is important, as are Arctic scenery, wildlife, history and culture. Luxury is important to only 40% of the market and climate change is not an enticement to visit.

**Addressing Potential Disappointment.** Trip operators are painting a picture of a beautiful, remote location, full of spectacular scenery, fascinating wildlife, Inuit culture and fabled history. But all NWP cruise ship captains must contend with fickle weather, high winds and unpredictable ice. Cruise itineraries can never be guaranteed, but polar cruises in general, and
NWP cruises in particular, are almost certain to vary from the stated itinerary. Unusually challenging ice thwarted the NWP cruise season in 2018, forcing most cruises to reroute and others to significantly modify their itineraries (Hollander 2018). Even in a good year, such as 2019, some stops must be cancelled due to conditions. For example, Lindblad was unable to make its intended landing at Beechey Island, normally an NWP highlight, due to strong northeastern winds (Lindblad 2019). The cruise I took was forced to divert from the historic Hudson’s Bay Company trading post at Fort Ross, on Somerset Island, and the colorful town of Illulissat, Greenland, but was fortunate to be the first cruise to visit the wreck of Franklin’s Erebus, which several previous cruises had been unable to reach due to conditions.

With cruises booked up to 18 months in advance, how do cruise operators address the likely itinerary changes and avoid potential disappointment? All NWP cruise operators include a disclaimer in their trip descriptions. One partial NWP cruise operator succinctly indicates: “itineraries may be subject to change without notice due to weather, ice, and sea conditions” (Adventure 2020c). One operator describes some destinations, such as Beechey Island, as “extremely weather and ice dependent” (Silversea 2020a). One full NWP cruise operator offers the following explanation:

“this expedition through the Northwest Passage is a very difficult cruise to plan, organise and sail. It is characterised by a great natural experience in an extremely remote region. All of our experience and careful preparation notwithstanding, the actual itinerary heavily depends on the local conditions. A change in itinerary may be necessary, primarily due to the weather and ice but also perhaps due to official guidelines. We…wish to inform you of the expeditionary nature of this cruise and the flexibility this requires.” (Hapag-Lloyd 2020d).

Some operators wrap the potential disappointment in adventure, reminding passengers that “[e]mbracing the unexpected is part of the legacy—and excitement—of expedition travel” (Quark 2020d). Another offers a safety reminder. “As with all expeditions, nature prevails…”
Safety is always our top priority. We continuously evaluate our cruises to adapt to unexpected weather, ice and sea conditions, and exciting nature opportunities. That’s why we call it an expedition” (Hurtigruten 2020b). So, what, after all, is the company offering? Northwest Passage cruise operators are offering the chance to transit the passage, to observe wildlife, and to visit historic sites. Just as the original explorers learned, results cannot be guaranteed, no matter how carefully the trip is planned.

**Marketing Conclusions.** The packaging of a destination results in the “commodifying” of the environment and culture (Dorsey, Steeves, and Porras 2004). This is as true for Arctic cruises as it is for Caribbean cruises. A product is being packaged, marketed and sold. In this case, the product is a remote corner of the globe, where few have traveled, full of spectacular icebergs, wildlife, native cultures, villages and historic sites. But unlike a typical Caribbean or Mediterranean cruise, expedition cruises to the NWP build uncertainty into the marketing. The NWP product is designed and sold as an adventure, an expedition into remote and spectacular landscapes, where unique opportunities and hazards await.

*Passenger Responses: Why They Went.* I assessed the reasons travelers visited the NWP, and their satisfaction with the journey, in two ways: by online survey and through focus groups. **Online Survey.** A total of 65 surveys were completed. Sixty-one passengers on the NWP trip I took, and three guest lecturers on the trip, took the survey. One respondent who was planning a trip but had not yet traveled to the NWP also took the survey. Despite a high response rate of over 37%, the cruise population of 170 is very small. For small sample sizes like this one (n<130), it is necessary to use a statistical approach called the “Fischer Exact 2x2
test” to determine whether results are significant.\(^{11}\) This test is used to determine whether data--which always have random elements such as misunderstanding the question or selecting the wrong answer box, or just having a quirky sample, such as several members of the same family--truly represent the population studied.\(^{12}\) The test calculates the probability level (p), which tells us how confident we can be that a given response is reliable, rather than due to some random element. I used a statistics calculator to obtain these results (Stangroom 2020b).

The survey has four additional limitations. First, these results come from a single trip with Adventure Canada. This trip was different from the trip immediately preceding it on the same line, both in itinerary and experiences. So, it is possible this trip was particularly good or particularly disappointing, which would skew the results. Second, this was a partial NWP transit, not a full passage. While it was one of the longer partial-passage itineraries, travelers making the full passage might have different motivations.

Third, this is a snapshot of travelers on one of ten cruise lines offering NWP cruises. Each line has a different personality.\(^{13}\) Moreover, Adventure Canada is a Canadian company, and almost 65% of the passengers aboard were Canadian; more than 87% were from Canada or the U.S. In contrast, Hapag-Lloyd conducts its NWP cruises in German, carrying primarily

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\(^{11}\) I would like to thank Dr. Edwin Iverson of the Duke University Department of Statistics for suggesting the Fischer Exact 2x2 test for use with small sample sizes. Dr. Iverson did not review the results, so any errors are my own.

\(^{12}\) The Fischer Exact 2x2 test is recommended when comparing two values from small sample sizes, to determine whether a difference between the two is significant (McDonald 2014b). For example, 50% seems much larger than 30%, but if the sample size is very small, the difference might not be representative of the larger population. The Fisher Exact 2x2 test determines whether results from two small samples are reliable rather than random. The test calculates the probability level, “p.” If the value of p is less than .05 (1 in 20), then the difference is considered significant (McDonald 2014a).

\(^{13}\) One online reviewer of ships carrying 300 or fewer passengers describes Adventure Canada as best for those who want to “see nature at its most dramatic…while traveling with a smallish group of people many of whom will share your interests and enthusiasm” (Quirky Cruise 2020a). It rates One Ocean and Quark as “along the same lines” (Quirky Cruise 2020a). But Silversea Expeditions is described as “a chance to explore some really remote corners of the globe at a level of luxury close to” that of its larger, “ritzy” ships (Quirky Cruise 2020b). Ponant is rated “along the same lines” as Silverseas (Quirky Cruise 2020b).
European passengers; Ponant is French. Responses from passengers on those lines would likely be different.

Finally, even if all 2019 NWP travelers had been sampled, the results would still have been limited to a single, generally good year. Travelers from 2018, when most cruises were rerouted, might have different views. So, this is a snapshot of travelers on the trip I took.

-- Demographics. Of the 65 respondents: 64%, were from Canada; 23% from the U.S. and 6% from Australia. The United Kingdom, France, the Netherlands and New Zealand were each represented by one respondent, comprising 6% of respondents. One respondent chose not to disclose nationality. (See Chart 4-5.) The respondents’ demographics compare favorably to the demographics of the guests aboard the ship: 61% from Canada, 28% from the U.S., 6% from Australia and 11% other nationalities (Adventure Canada 2019a).

All respondents were willing to supply their age-range. Only 5%, were under 40; only 22% were under 60. Almost half (49%) were over 70. The mean (average) age was approximately 70. (See Chart 4-6.) This tracks my general impression of the group onboard. Despite their ages, the group was very active and surprisingly nimble getting in and out of bobbing Zodiaks.
Most of the respondents (74%) were women; only 26% were men. My onboard observation would have placed the percentage of men closer to 35%. Perhaps women are more willing to take surveys or perhaps the under-represented males were older. There were no male respondents aged “80 or better.”

![Chart 4-6. Age Ranges of Survey Respondents](Riley 2020; Data from Duke 2020c)

Most respondents (58%) were retired, though many added they do volunteer work; 25% were employed full time. One respondent reported being semi-retired but also doing consulting and “lots of volunteer work.” One respondent, aged 80+, reported her employment status as “volunteer work” rather than “retired.” (See Chart 4-7.)

![Chart 4-7. Employment Status of Survey Respondents](Riley 2020; Data from Duke 2020c)

The respondents were also well educated. More than 84% were college graduates. Of the college graduates, more than half had graduate or professional degrees. (See Chart 4-8.)
-- Well-Traveled Respondents. This was a well-traveled group of respondents. (See Chart 4-9.) More than a third (35%) had already visited both Antarctica and the Arctic or Near-Arctic (i.e. Alaska or Iceland) before this trip. Another 8%, had previously visited Antarctica but not the Arctic, and 19% had previously visited the Arctic or Near-Arctic. Taken together, almost 54% of respondents had previously visited the Arctic/Near-Arctic, while 62% had previously visited Antarctica and/or the Arctic/Near-Arctic before this trip to the NWP. Of the 54% of respondents who had previously visited the Arctic or Near-Arctic, most (48% of total respondents) had visited more than one other Arctic/Near-Arctic location. These locations include Alaska; Greenland; Iceland; Svalbard, Norway; Finland; and Russia. Six respondents, or more than 9%, had previously visited the NWP.
Respondents’ previous travel was not limited to cold climates. Asked whether they had previously taken an “expedition or safari-style trip (other than Antarctica or the Arctic/Near Arctic),” 65% reported that they had. Offered a list of popular choices, as well as an “other” option, 40% reported having taken an African Safari, 26% had visited the Galapagos Islands, 11% Patagonia, 9% Costa Rica and 6% had taken a Tiger Safari in India. Safaris in Africa and India are notable because, unlike the Galapagos, they are not accessible by cruise ship, so the respondents were not solely “cruisers.” This group had traveled extensively, with many respondents listing multiple previous expeditions. “Other” expedition responses included Easter Island, Indonesia, Sri Lanka, the Camino de Santiago pilgrimage route and the Trans-Siberian Railroad. The most unusual response was “overland truck from Islamabad to Kathmandu.”

The demographics in this survey reveal an older but active, well-traveled and highly educated group. These demographics mirror other Arctic expedition cruise studies (Manley, Elliot, and Jacobs 2017; Johnston et al. 2017).

-- Top Factors in Deciding to Visit the NWP. What motivates travelers to visit particular locations? Because “most people are not led by just one motive, but rather a series of travel needs and motives…” (Gisolf 2014), respondents were asked to provide their top three reasons for choosing to visit the NWP. There were ten possible answers, as well as the option to specify “other” reasons, and 18% chose to do so. Three respondents provided only a single “other” answer, while nine included “other” as one of their top three. (See Charts 4-10 and 4-11.)

No respondent chose “relaxation” as one of their top three motivations. This contrasts with studies of Caribbean or Atlantic cruises, where relaxation was the most important reason travelers chose to cruise (Jones 2011; Hung and Petrick 2011). These expedition cruisers were looking for something different. The most popular choice was “history/ following in the
footsteps of explorers,” chosen by 55%. This result could be skewed by the number of respondents from Canada and the U.S., who may be more interested in NWP history than other nationalities. I look at that possibility in the rating section, below.

![Chart 4-10. Top Reasons Travelers Went to the NWP (Duke 2020c)](chart)

The second and third most popular answers were “Arctic scenery,” chosen by 41%, and “visiting local villages,” chosen by almost 37%. The survey should have included a category for engaging with other cultures, as that is potentially different than visiting villages. Five respondents wrote in “other” answers like “meeting the people and hearing their stories” or “learning more of Inuit culture and about past wrongs,” so leaving out that choice was a flaw in the survey. These choices were followed by “adventure” and “seeing the Arctic before it is too late,” each chosen by 29%. Combining “seeing the Arctic before it is too late” and “viewing climate change impacts,” which I consider related answers, yields 24 votes, or almost 37% of
respondents. Of course, “before it is too late” could be taken as “too late for me,” so the answers might not be seen as related by some respondents. That response choice was poorly worded.

“Wildlife viewing” was chosen by 21 respondents, or just over 31%. I was surprised fewer than one-third of respondents chose wildlife as one of their top three reasons to visit, as wildlife fell within my own top three reasons and is heavily advertised. Polar bears were the most hoped for species, receiving eleven votes. This means 17% of respondents listed seeing
polar bears as one of their top three reasons to visit the NWP. Although the NWP does not offer the best polar bear viewing in the Arctic, sightings are considered likely, and we saw at least six bears on this trip.

Narwhal were the second most hoped for species, receiving seven votes, or 11% of respondents. Narwhal were high on my own wildlife wish list, though they are much less likely to be seen on an NWP cruise than bears, and we did not see any on this trip. “Whales in general” received two votes, and we saw at least three types of whales on the trip: humpback, bowhead and beluga. I was surprised that beluga whales did not receive any specific votes, as belugas topped my wildlife wish list. The chance of beluga whale sightings in the NWP is high and we had multiple sightings on this trip.

The “other” reason option was chosen by 18%. Among the “other” reasons given, my favorite was “I love the Arctic and will travel there whenever and however I can.” One traveler admitted they wanted to “take a vacation which was not what you call ‘normal.’” It is not clear whether they were looking for adventure or bragging rights, but they got both. The most touching response was the revelation by one traveler that “our mother, before she passed away, told us she wanted us to go up to the High Arctic, as she had loved her experience there.”

Five, or almost 42%, of the “other” reasons given related to seeing a part of Canada the respondent had not previously visited. Being from the U.S., I had not considered this as a motivation. One of these travelers listed “learning about and experiencing the Canadian north;” one answered, “seeing and learning about another part of Canada before my mobility prevents it.” It was this response that made me realize “before it is too late” could have a second meaning. Another respondent said, simply, “connecting with my country, Canada.” So, among Canadians, the desire to see a remote part of their own country, which has been in the news in
recent years due to both climate change and the creation of the new Canadian territory, Nunavut, was an important motivation, and one I had not considered. The high percentage of Canadian travelers, of course, influenced the overall motivation answers. Canadians wanting to connect with their own country might also be more likely to choose “following in the footsteps of explorers” and “visiting local villages.” Canada has a variety of other wildlife viewing opportunities, some of which are easier to reach than the NWP, so this may account for the lower than expected choice of that option as a primary motivating factor.

There appears to be a wide range of motivations for choosing to visit the NWP. History appears to be the most popular choice. But are the results significant? The selection difference between the importance of history and the second most popular choice, Arctic scenery, is not significant, using the Fischer Exact test. The difference in selection between history and visiting local villages was not significant, either, though that test was very close. But the difference between the 55% selection of history and the 31% selection of wildlife viewing as top reasons to visit is statistically significant (p=.009). History, Arctic scenery and visiting local villages were the most popular choices, statistically even in selection. But history was significantly more likely to be a top three reason for visiting than wildlife, adventure, seeing the effects of climate change, or traveling where few have travelled among these respondents.

-- Relative Importance of Factors. Respondents were then asked to rate each listed motivating factor as “very important,” “moderately important,” “slightly important” or “not important.” This type of opinion question is called a “Likert scale.” A four-point scale is known as a “forced Likert scale,” because there is no neutral or uncertain option (Formplus 2020).  

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14 The forced Likert scale is best for products or services that have been used or experienced, as in this case. The danger is some may skip the question (Formplus 2020), but 63 of 65 respondents (97%) rated all of the factors. One respondent rated all factors but one, which could have been an oversight, and one respondent only rated the factors considered “very” or “moderately important.”
When asked to rate the important factors in this manner, more nuanced views emerge. The factor most often voted “very important” was “Arctic scenery,” selected by 75% of respondents, followed by “viewing wildlife” (58%) and “visiting villages” (54%). (See Chart 4-12.) The two factors most often rated “very important” or “moderately important” (adding the two ratings) were the same: “Arctic scenery” (94%), followed by “viewing wildlife” (91%), but by this count, “history/following in the footsteps of explorers” tied with “visiting local villages” for third most important (86% each). Adding “very” and “moderately important” resulted in a very close vote between the top four motivations, with a difference of only five votes between first and third place. In other words, it was a statistical tie among the top four choices.

This relative importance rating appears to differ from the three most important motivating factors, where “history/following in the footsteps of explorers” received the most votes and “viewing wildlife” placed fourth, but the two are not necessarily inconsistent. These results tell
us that while “viewing wildlife” was not in most people’s top three reasons to visit, it was still “very” or “moderately important” to them. Conversely, while history was the reason most included in top three motivations, it was not “very important” to as many as “Arctic scenery.”

“Relaxation” still placed last in importance, receiving the most “not important” votes. Adding the “slightly important” and “not important” votes to determine relative unimportance, “relaxation” continued to lead the way by a large margin, with 50 respondents (77%) assigning one of those two grades. This was followed by “photography,” with 25 respondents (38%) rating it “slightly or “not important.” Of course, 62% still voted photography “very” or “moderately important.” “Relaxation” was by far the least important factor for this group.

“Arctic scenery” received the fewest “not important” votes and the fewest “slightly” and “not important” combined votes. But perhaps more interesting were the small number of relative unimportance votes received in the “viewing climate change impacts” category. Only 23% rated it “not” or “slightly important,” yet it received only five “top three reason” votes. This information on relative importance makes it possible to better interpret the “top three” data. “Viewing climate change impacts” was not one of the top three reasons most travelers went to the NWP, but neither was it unimportant to 77% of them.

These data also provide a glimpse into the role of nationality in motivating factors. Based on the advertising differences, I wondered whether interest in history would differ by nationality. There was no difference between residents of Canada and the U.S. But Canadians were significantly more interested in history than Australasians (Australians and New Zealanders). Forty-four percent of Canadian respondents rated “history/following in the footsteps of explores” as “very important,” compared to zero Australasians. This difference was
statistically significant (p=.00001). Nationality did play a role in motivation, which is also discussed below.

-- Favorite Trip Aspects. Respondents were then asked, “what ended up being your favorite aspect of the trip?” The responses to this question were very enthusiastic. All respondents who had visited the NWP (64 of 65) answered the question, but 25% could not limit themselves to one answer, making “multiple answers” the most popular response category. Some who chose “other” added multiple answers there, so I counted those respondents under “multiple.” The rest of the respondents did provide a single answer. The most popular single answer for favorite aspect was “history/following in the footsteps of explorers,” selected by 17% of survey takers. It is possible this aspect was so popular because of our unexpected opportunity to visit the wreck of Franklin’s lost ship, *HMS Erebus*, which is discussed below. This choice was followed by “Arctic scenery,” chosen by 14%, then “traveling where few have traveled” and “visiting local villages,” each chosen by 11%. (See Chart 4-13.)

![Chart 4-13. Respondents’ Favorite Aspects of the Trip (Riley 2020; Data from Duke 2020c)](chart413.png)
Once again, “relaxation” did not receive a single vote, even among those giving multiple answers. Only one respondent chose “photography” as their favorite aspect, but four multiple-answer respondents included photography on their list. I was mildly surprised by this because there were several passengers onboard with professional-level camera equipment and photography was a very popular pastime. It appears photography was more a means of enjoyment rather than an end in itself. “Adventure” and “wildlife viewing” were the next-least popular single choices, each chosen by only two respondents, though two multiple-answer respondents included “adventure” on their lists and five included “wildlife viewing” on their lists. That brought wildlife to 11% of respondents choosing or including it as a favorite aspect.

Among the multiple-favorites respondents, one chose six categories of favorites and three chose five categories. Five respondents could not choose at all, indicating they “can’t pick just one,” it was “hard to pick…they all added to the trip,” their favorite was the “amazing combination of all,” or, their favorite was, simply, “all of it!” The fifth wrote “[a]ll of the above, and you forgot…education.” Another respondent mentioned the educational aspect, as well, so that response choice should be added to the survey, particularly given the importance of education in expedition cruising.

Three “other” respondents listed the Inuit people as the highlight. As discussed above, local cultures should have been broken out from local villages in the choices, as one respondent suggested at the end of the survey. It is certainly possible to enjoy the cultural aspects of meeting people and learning about traditions more than walking through a small village with few shops and less direct interaction. One respondent answered, “the people,” followed by 33 exclamation points, but I was uncertain whether they were referring to the Inuit or the people on the cruise. Two specifically cited the visit to the wreck of the Erebus as their favorite, which
may have been the highlight for me, as well. Single write-in votes for favorite aspects were cast for kayaking and for the onboard specialists, both worthy selections.

Did the travelers’ favorites correspond to their top reasons for visiting? By and large they did, with two exceptions. Although the numbers cannot be directly correlated, because I asked respondents to list their top three motivations, one aspect, “history-following in the footsteps of explorers” was both the most chosen motivation and the most chosen favorite aspect. “Arctic scenery” was chosen second in both categories, and “visiting local villages” was third in both. So, the top three motivations for visiting the NWP ended up being respondents’ three favorite aspects of the trip.

The next two results differ, however. “Going where few have traveled” moved up from fifth most chosen motivation to tie for third among favorite aspects. It appears travelers appreciated the remote and unique aspects of the NWP more once they had visited. “Wildlife viewing” moved farther down the list, dropping from the fourth most chosen motivation to second-to-last among favorite aspects of the trip. The next section, concerning satisfaction, helps to explain this decrease.

-- Level of Satisfaction. The survey was also designed to determine whether travelers were satisfied with the trip and whether they felt any disappointment upon completion. The respondent who had not yet traveled to the NWP was not asked these questions, so a total of 64 responded, of which 83% reported they were “not disappointed in any aspect of the trip.” For this large majority, the trip clearly met or exceeded their expectations overall. The survey should have included an “exceeded expectations” option. Compared to Caribbean cruise surveys, this was a very high satisfaction rate (Deloitte Consulting 2018). Eleven respondents, or just 17%, reported being “disappointed in some aspect of the trip.” (See Chart 4-14.)
This does not mean those respondents were disappointed in the trip overall; the survey did not include that specific question. Disappointed respondents were then asked to rate their level of disappointment as “somewhat disappointed,” “disappointed” or “strongly disappointed,” in seven specific categories, as well as an “other” category. Each respondent could rate as many disappointment categories as they wished. A total of 28 votes were cast, or an average of about 2.5 per disappointed passenger.

No respondent reported being disappointed in the guides/naturalists. Only three people minded the itinerary changes, all voting just “somewhat disappointed.” Itinerary changes are discussed in the next section. Six of the seven specific categories received at least two “somewhat disappointed” votes. There were only three “strongly disappointed” votes in total, each in a different category.
The category registering the greatest disappointment was wildlife viewing, which received a total of six votes, or 9% of all respondents. Of these, two were “somewhat disappointed,” three were “disappointed” and one was “strongly disappointed.” Of the six disappointed travelers, three were disappointed that they did not see enough wildlife, while two did not see a particular species they hoped to see, and one did not get close enough to the wildlife. One respondent had visited the Arctic before and did not see any new species. Both respondents disappointed in the species of wildlife had hoped to view narwhal, which have been called “hopelessly hard to see” (Tucker, 2009). The longer itinerary of this trip, with more ocean to cover, may contribute to fewer wildlife sightings, compared to more concentrated itineraries. Moreover, bears, walrus and seals frequent sea ice, and there was little ice in the NWP on this trip. Five of the six bears we saw were on land, stalking belugas in bays.

The percentage of respondents disappointed in wildlife viewing, 9%, is lower than the 11% who designated wildlife viewing as one of their favorite aspects of the trip, however, so satisfaction level may depend on expectations or disappointment may have been offset by other aspects. I discuss the wildlife seen on the trip more fully in the next section.

Five people, or 8% of respondents, were “somewhat disappointed” in the activities, but I did not offer respondents a chance to explain this answer. Five respondents were disappointed in the ship, of which four were only “somewhat disappointed” but one was “strongly disappointed.” The ship used by Adventure Canada in the NWP, Ocean Endeavor, is a leased ship, built in 1981. The ship has also been leased for several years by Quark Expeditions during the winter season, for trips to Antarctica. The ship is comfortable, functional and appears well maintained, but it is simple by general cruise ship standards.
The “other” category received two “disappointed” votes and one “strongly disappointed” vote. The “strongly disappointed” vote was aimed at the onboard sales of future trips while one “disappointed” vote was for the encouragement to visit the gift shop to purchase books or CDs by onboard naturalists and speakers. The final “other” vote was “disappointed” that it was not colder and that we did not see enough ice. As discussed below, our trip had no issues with ice inside the NWP, while the trip immediately before ours had to follow an icebreaker to complete its journey into the NWP. Such is the ever-changing nature of the passage.

-- Safety. Only four respondents indicated they were concerned about their safety on the trip. Three of these cited the availability of rescue, with one balancing that concern with confidence in the honesty and abilities of the group leader. The fourth respondent felt unsafe on Zodiacs in rough seas. So, only 5% of respondents were concerned about the availability of rescue options. Rescue challenges are discussed in the next chapter.

-- Local Villages and Crafts. All of the respondents reported visiting local villages which is not surprising. Forty-eight respondents, or 73%, reported buying local arts and crafts, either in villages or from the onboard gift shop, which offered a variety of Inuit-made items throughout the cruise.15 (See Figures 4-10a and 4-10b.)

Those reporting the amount they spent, which was optional, averaged $351 per purchaser, with a low of $30 and a high of $2000. One respondent, however, reported spending “thousands!!” I did not include that response in the average. Dividing the total spent by the total number of respondents yields a rough average of $259 per person. While this may seem

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15 Of these purchasers, 40% bought products both in villages and on the ship, while 44% purchased their items in the local villages. The remaining 16% only bought local arts and crafts on the ship. This particular cruise line works closely with local cooperative organizations, such as Arctic Co-operatives Limited, which markets crafts from 50 cooperatives in Nunavut and the Northwest Territories (Citizens 2020), to encourage employment for women and to increase marketing opportunities for goods from remote communities. The ship also purchased items from local craftspeople, so there was always a selection of handmade items and art available for purchase onboard.
like a small amount compared to the cost of the trip, it would represent a $44,000 financial impact on local communities and artisans, from the passengers on this cruise, alone. This is in addition to per-passenger fees paid by cruise lines for each community visit, plus other employment opportunities afforded.

Figures 4-10a and 4-10b.
Hat, Mittens and Scarf by Inuit Craftswomen (left);
Local Artist Sells Drawings in Gjoa Haven (right)
(Riley 2019b)

-- Trip Planning. These NWP cruise passengers used a variety of methods to plan their trip. (See Chart 4-15.) Asked how they researched their trip to the NWP, 6% relied solely on “friends/word of mouth,” while 51% included word of mouth with other methods. Cruise lines tend to inspire loyalty, and 21% of respondents reported having previous travel with the same company as one of their methods of gathering information. But the most common method cited was the internet, employed by 63% of respondents as one of their primary methods of research. Mailed brochures were included as one of multiple means of research for 37% of respondents, while 38% cited an email about the trip. The cruise industry’s method of marketing through websites, email and print catalogues appears to have played a major role in most traveler’s
decisions to visit the NWP. Of course, some relied on inspiration. One respondent reported they had seen “a news report of a trip that got stranded and thought 'hmm that sounds good to me.’”

**Chart 4-15.**
Planning Methods Used by NWP Cruise Passengers
(Riley 2020; Data from Duke 2020c)

Focus Groups. I conducted three informal focus groups, with a total of 17 participants, each lasting 30-45 minutes, after the ship left the NWP for Greenland. I had a prepared script but allowed the conversation to take its own course once the “why you came” question was answered. (See Appendix IVB.) The online survey had not been introduced when the focus groups met, so the participants had not seen the possible answer choices supplied in the survey. I asked open-ended questions rather than suggesting possible answers.

These groups offered valuable insights, though the method has obvious limitations. First, it was necessary to conduct these focus groups onboard, before the trip ended. The questions were focused on the portion of the trip that had been completed, but some participants’ answers might have changed after the Greenland portion of the cruise. Second, some people are less willing to fully express their opinions in a group setting. Although none of the participants seemed shy, it is impossible to know whether they held back on any of their answers. Third, some participants naturally talk more than others, so the results can be skewed to one or two particular viewpoints. All participants but one seemed to fully engage in the discussion, but it is
still impossible to be certain that all views were captured. Finally, because these were small groups of volunteers, their views may not be representative of the other passengers. Nevertheless, the results yielded additional insights and prompted new questions.

-- Canada. This group had six participants, three male and three female. The major reason these travelers chose to visit the NWP was to see a part of their country they had not visited or did not know enough about. One participant came “because Nunavut was the only Canadian province I had not visited.” One had wanted to visit since the 1980s, when a Canadian Broadcast announcer spoke of his love for the people and the beauty of the area. Another had a relative living in Nunavut, and believed it holds an important place in Canadian history, but felt he knew little about the province. As discussed above, I had not previously considered this.

One woman, who appeared to fall within the older age category, said she wanted to do something exciting while she still could. This led me to wonder about motivating factors by age category. Every respondent below age 50 (four respondents) indicated “adventure” was a “very important” motivation to visit the NWP, compared to only 20% of those age 50-59. This difference is statistically significant (p=.00001). Only 50% of those 50-59 rated it “very” or “moderately important.” But interestingly, the importance of “adventure” rebounded with age. For those between 60-79, 42% rated it “very important,” and 90% rated it “very” or “moderately important.” Among respondents age 80+, “adventure” was “very” or “moderately important” 80% of the time. It is not surprising that adventure was most important to younger travelers, but interesting that importance dipped for those in their 50s, then increased for those 60+.

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16 The one participant who did not fully engage may have been brought to the group by his wife, who did fully participate. He nodded and agreed with her views but did not say much. The remainder were enthusiastic and animated during the discussion.
Another participant came to learn about the Inuit, but also to see the Arctic before climate change destroys it. He reported that when he was younger, beluga whales were frequently seen near Quebec, but are seen far less often today. One participant wanted to meet the Inuit, fellow Canadian citizens she felt she knew little about. She was concerned, though, that our presence might be “damaging” to their lives or environment. She wondered whether she was engaging in “cultural appropriation” or “cultural pornography” by visiting and felt it was important to determine that. At that point of the trip, she was still uncertain. The idea of cultural appropriation led to a discussion of “the North.”

To the U.S., and even some Canadians, all of Canada is “the North.” Since the Toronto Raptors won the National Basketball Association (NBA) championship, the city has increasingly used the slogan “True North” in marketing. Of course, Toronto is located in southern Canada and is not “North” at all to most Canadians. The Inuit, we learned from onboard presenters, consider places below Nunavut to be “the South.” Inuit go to “the South” for specialized medical care or to attend University, but they see it as separate from their world. Some of the group worried that “true North” marketing disregarded those who actually live in the true, far North. The focus group ended here, but I left with an increased awareness of Canadian citizens’ desire for a connection to the northern part of their country.

-- United States. This group had six participants, four female and two male. The U.S. residents expressed more diverse reasons for coming to the NWP than did the Canadians. One couple came for separate reasons – she came to see polar bears, having previously visited Churchill, Manitoba, which is famous for bear viewing, while he came because he was interested in exploration history. He was surprised by how interesting he found the Inuit history, and other
history of the area, as well. A second couple expressed similarly diverse reasons for coming. She came for wildlife and to see Greenland, while he came for explorer history.

This apparent pattern caused me to check the relative importance of these motivations by gender in the survey. Explorer history was, indeed, rated “very important” by more men than women, with 53% of male respondents rating it “very important,” compared to 44% of female respondents. The difference was not statistically significant, however. We can only hypothesize that history may be more important to male than to female NWP cruise passengers. The importance of wildlife viewing, though, differed even more by gender, with 69% of female respondents rating it “very important,” compared to only 29% of male respondents. More women rated wildlife viewing “very” or “moderately important” than men, as well. This difference in importance of wildlife viewing was statistically significant (p=.0362). Visiting villages was also rated “very” or “moderately important” more often by women than men, to a statistically significant degree (p=.0451).

One woman came to see “a new, wild place” while another, who travels extensively with her husband (he was not in the focus group), came because they had never been to the Canadian High Arctic. The group collectively expressed a new-found interest in Inuit culture, and felt they knew less about it than their Canadian counterparts. Although there are Native Americans in Alaska related to the Inuit, they felt they had not heard much about them. Two participants expressed a desire to travel to Northern Alaska now, to meet their fellow citizens there.

-- Mixed Nationalities. There were five members of this group, three women and two men. Three Australians were intentionally recruited, to broaden the input in the focus groups. They were joined by one Canadian and one American. The observation was made that Australians are great world travelers, as one meets them everywhere in the world. One of the
three suggested this is because they live so far away from everyplace else, that they are used to traveling great distances. Another added that, as a result of the distance, they take longer vacations than Americans.

Two of the Australians chose to visit the NWP because they had never been to the Canadian North and they both reported wanting to see a new part of the world. The third had visited Antarctica and wanted to compare what the North had to offer. I judged these three answers to be similar. They wanted to go to a new and distant place. This caused me to check the relative importance of motivating factors for Australian survey respondents. All of the Australian respondents rated “traveling where few have travelled” “very important” or “moderately important,” while only 61% of Canadian respondents gave the same ratings. This difference was significant (p=.00001). Going where few have traveled was more important to Australians than to Canadians.

The Canadian in the group came for the history, while the American came “to see the Arctic before it melts.” This answer indicates there was some last chance tourism among the travelers. All participants indicated they had not known much about the Inuit and felt the interaction with onboard culturalists was a trip highlight that made the NWP journey unique. The rest of the conversation was given to enthusing over all we had seen, particularly the unexpected visit to Franklin’s lost *HMS Erebus*, which was a trip highlight for all five participants.

-- Focus Group Conclusions. I drew three conclusions from the focus groups. The first is not surprising. People from different countries visit the NWP for different reasons. Canadians were curious about this lesser-known region of their own country and were drawn by history. Americans were motivated by a more varied set of reasons, such as wildlife viewing, the history
of explorers and climate change. Australians were interested in seeing new places and “going where few have traveled.”

Second, most focus group participants found the Inuit representatives they met onboard to be a highlight. While most NWP cruises stop in local villages and offer lectures about the local people, the level of emphasis placed on local cultures seems to vary, at least in the advertisements. Both Canadian cruise lines have close ties to local communities and a commitment to hiring local people. Adventure Canada advertises:

> we are privileged to work with the people who call the region home – not just on shore, but also aboard. Regional representatives are at the heart of our shipboard staff. Their culture, language, and local understanding of life and the land are woven into our programming, deepening the connections we form as we go (Adventure Canada 2020d).

There were seven Inuit staff members on board, including the group leader and six “culturalists,” who offered presentations and insights throughout the trip. This investment clearly made an impression on the guests, regardless of their nationality.

Third, with a single exception, the focus group participants were lively, thoughtful, and keen to discuss their experiences. Even the quiet participant was enthusiastic. While I expect most cruise-goers are happy while onboard, I have found expedition cruisers, on this trip and on trips on other lines, in other regions, to be curious and eager to engage with their fellow travelers and the world around them. Some of this is due to the nature of expedition cruises. It is easier to develop a close-knit group on a small ship than on a mega-ship. But it is also due to people sharing a common interest that they have gone out of their way to pursue. Research suggests that expedition cruise and themed cruise participants form “neo-tribes,” or groups that share a social bond due to a mutual interest (Weaver 2011; Kriwoken and Hardy 2018). By the time the ship left the NWP for Greenland, this bond was evident in the focus groups and in daily interaction.
Age, education and socioeconomic level play roles as well. Studies have found that expedition cruise travelers tend to be older, affluent and well-educated (Foster 1986; Lamers, van der Duim, and Spaargaren 2017). This survey did not ask respondents to reveal their income level, but passengers necessarily had sufficient leisure time and financial means to spend 17 days on a trip priced between $10,000 and $24,000 each (Adventure 2019b). Survey results did reveal education level. While only 35% of the U.S. population has a college degree or higher (United States Census Bureau 2018), over 84% of these respondents had a college degree or higher. Studies have found that previous education level predicts future participation in formal and informal educational activities and that participation of older, affluent, well-educated people in educational activities is increasing. (Kim and Merriam 2010). Other studies show that older travelers are “showing an increased interest in more meaningful, challenging and authentic experiences” when they travel and that they seek “cognitively stimulating and socially engaging activities” (Ahn and Janke 2011). These travelers fit those descriptions well, and they engaged with gusto.

Motivation vs. Marketing. The reasons chosen for visiting the NWP closely track the themes identified in the marketing material. The depiction of ice or glaciers and tourists in scenery were two of the three most widely used photographic themes, and “viewing arctic scenery” was voted a “very important” motivation more often than any other category. It was also the second most frequently chosen “top three” reason for visiting, and was voted a trip highlight, placing third as single “favorite aspect.” “History/following in the footsteps of explorers” was the most frequently selected “top three” reason. Photographs of historical sites, while a major photographic theme, were the least popular of the major themes. This may be due to the nature of the photographs, as grave sites and decaying buildings do not create the same
visual excitement as whales or polar bears. History was a very popular theme in the text descriptions, though, so it was heavily advertised. Reviewing Adventure Canada’s advertisement text, the words “Beechey” and “Franklin” were used more often than the words “Inuit” and “culture,” and more often than the words “wildlife,” “bear” and “whale.” So, this particular company did place an emphasis on explorer history in its advertisements, and it proved both a top reason for travelers to visit and a trip favorite.

Local cultures and villages were both used as photographic themes by all operators. Although only 11% of respondents chose visiting villages as their favorite aspect of the trip, meeting Inuit people received three write-in votes and should have been included as an option. The focus groups made it clear that meeting and learning about the Inuit were favorite aspects of the trip. I expect the Inuit guides on board would have been rated higher than visiting villages, based on the interaction and education they offered and the response they received.

Wildlife viewing received the second most “very important” votes in the survey, and nine of ten operators used wildlife photography in their advertisements. “Wildlife,” “bear” and “whale” were frequently used in the advertisement texts, as well. Wildlife viewing was the largest source of disappointment in the survey, selected by 9% of respondents. That number is balanced by the 11% who listed wildlife as a favorite aspect of the trip. Still, it is interesting that one of the most widely used selling points came up short for so many travelers on this particular cruise. The trip delivered polar bears, beluga and two other types of whales, seals, and thousands of birds, but the NWP does not offer the concentration of wildlife found on other Arctic itineraries, such as Baffin Bay or Svalbard, and clearly did not meet some travelers’ expectations.
Overall, the marketing for this trip and the product it delivered matched closely. Travelers chose to visit for the reasons highlighted in the marketing and experienced very low rates of disappointment. The NWP remains unpredictable, however, and results are impossible to guarantee, as many passengers found in 2018, when ice forced all NWP cruises to reroute.

My Journey Through the NWP. In order to experience the NWP firsthand and to facilitate this project, I took a partial NWP cruise in September 2019. The 16-night cruise, entitled “Out of the Northwest Passage,” operated by Adventure Canada aboard the Ocean Endeavor, traveled east-bound from Kugluktuk, Nunavut, Canada, to Kangerlussuaq, Greenland. (See Figures 4-11 and 4-12.) In addition to naturalists, Inuit “culturalists” and scientists, Parks Canada representatives were onboard for part of the journey.

I had previously taken expedition cruises to Svalbard, Antarctica, Costa Rica and the Galapagos Islands with another operator, but this was my first experience in the NWP or with Adventure Canada. I chose Adventure Canada for this trip based on four factors: itinerary, availability, price for a single traveler and timing. This itinerary stood out because it originated deep within the passage. The operator stood out because they focus primarily on Canada and maintain close ties with local communities. I analyze the trip through the lens of surveyed travelers’ top reasons for visiting the NWP, which closely mirror my own.

-- Trip Format. Adventure Canada follows a format similar to other expedition cruises, with an open bridge where guests can interact with the Captain and crew and help spot wildlife, educational presentations, Zodiac excursions, ship-wide morning wakeup calls, evening expedition updates and the daily presence of experts and guides. Nine of the ten NWP cruise operators, including this one, provide a “free” parka. Waterproof boots, clothing and life vests
are required for excursions and all of the expedition ships have a mud room with lockers where gear is cleaned, stored and donned prior to boarding Zodiacs. Food and drink are plentiful.
Following in the Footsteps of Explorers. As the survey results have shown, the mystique of the NWP is such that an opportunity to follow in the wake of explorers is a major draw for passengers. Visits to Gjoa Haven, founded by Amundsen, himself, and Beechey Island, where three of Franklin’s men are buried, carried high expectations and did not disappoint. Several travelers found the visit to Beechey Island to be a “profound” experience, like visiting a church or natural wonder. In some ways it was both of those things, fulfilling Professor Urry’s tenet of the “sacred importance” of the places tourists gaze upon (1992, 173). With an appreciation for all that unfolded there, and the usual, misty weather, standing on Beechey’s atmospheric shores is eerie and moving. In addition to the graves of Franklin’s men (see Figure 2-2 in Chapter 2), the touching memorial sent by Lady Franklin and the remains of Northumberland House are present. Northumberland House was built from salvaged wood in 1854 by the crew of *HMS North Star*, one of the ships sent to search for Franklin, in the hope his men might find the stores left there (Arctic Institute 2020). (See Figure 4-13.)

![Remains of Northumberland House, Beechey Island](image)

**Figure 4-13.** Remains of Northumberland House, Beechey Island (Riley 2019b)
Beechey island is a National Historic Site but is not attended by park rangers. This operator, and most, I expect, observe strict controls and monitor passengers closely during the visit. But the lack of rangers means yacht travelers visit unsupervised.

We were weathered out of Fort Ross, the site of a former Hudson’s Bay Trading Company outpost prominently featured in advertising photographs. But on this trip, few minded, because we had already received one of those unexpected surprises for which expedition cruises are known. The group leader called a meeting on the first full day of the cruise to discuss an itinerary change. We would remain in Queen Maud Gulf an extra day so that we could attempt a visit to the Wrecks of HMS Erebus and HMS Terror National Historic Site with Parks Canada two days later. (See Figure 4-14.)

![Figure 4-14. Wrecks of HMS Erebus and HMS Terror National Historic Site Nunavut, Canada (Gulf Label Added) (Parks Canada 2019d)](image)

Although the vicinity of the sunken wrecks is acknowledged on most NWP cruises, the wreck sites are restricted areas, to conserve the “heritage value of significant archaeological, historical and cultural resources located on the Wrecks…” (Parks Canada 2019h). (See Figure 4-15a.) Adventure Canada won a request for proposals to conduct a “test visit” to the site two years ago, but each attempt had been denied by site conditions (Carrizzo 2019), including with
the cruise just before ours. With a lot of luck, and if the weather held, an iffy proposition in the NWP, we would be the first group lucky enough to do it.

Two days later, luck was with us. The visit was organized in small groups throughout the day. Each group visited RV David Thompson, the floating marine lab and dormitory used by Parks Canada in their conservation work, and the dive barge stationed above HMS Erebus, where underwater archaeologists were surveying the wreck. The research season is extremely brief in the NWP, limited to a few weeks in September, at best. With onsite work so time-constrained, it was a remarkable opportunity to visit the facilities and view the work in progress. On the day of our visit, there were snow flurries and the water was a bit choppy but calm enough for us to transfer from the ship to the facilities. (See Figures 4-15b and 4-15c.)

During our visit to the platform, a diver was working on the wreck. We watched by video as he vacuumed silt from the structure of the ship. (See Figures 4-16a and 4-16b.) The Erebus is considered more fragile than Terror because it rests in shallower water and is more subject to storms and wave action.
Figure 4-15b.
Guests Visit *MV David Thompson*  
(Riley 2019b)

Figure 4-15c.
Guests Visit Parks Canada Dive Platform  
(Riley 2019b)
We were shown artifacts that had been brought up this season, including a leather shoe sole, an ink bottle, a decanter, a wine bottle and sugar tongs, though photographs were not permitted. Artifacts are initially conserved on the barge in a saltwater solution, then transferred to a conservation laboratory in Ottawa (Parks Canada 2019b). (See Figures 4-17a and 4-17b.) This operation was impressive, and guests felt very close to the wreck and the conservation activity.
On board the *Thompson*, we were given a demonstration of the sonar used to map the ships and introduced to the remotely operated vehicles (ROVs) that found the ships and help explore them. (See Figures 4-18a and 4-18b.)

![Sonar Scan of the Wreck of HMS Terror (left); ROV Used to Find and Explore *Erebus* and *Terror* (right) (Riley 2019b)](image)

A third planned component, a visit to “the Guardians,” a team of Inuit from Gjoa Haven, who watch over the wreck site, was cancelled due to landing conditions. Instead, the Guardians were brought onboard to speak to us. The Guardians live in onshore camps near the wreck locations during the summer to monitor the site, report unauthorized entry and contribute “to further integrating Inuit knowledge into site operations” (Parks Canada 2019f). Their involvement is particularly important because the wreck sites were finally located with the help of “Inuit knowledge,” the stories handed down through generations (Parks Canada 2019c). The wrecks are the first National Historic Site co-managed by Inuit and Parks Canada (Parks Canada 2019g). Each Guardian camp has one elder, and we met Tommy, who does not know his age, but passes on his survival skills to the younger Guardians, as he likes to do in schools when he is in town. Tommy spoke through a translator, but the younger Guardians all spoke English, and reported they take their role very seriously. (See Figure 4-19.)
Meeting the Guardians, visiting the wreck site, and getting a tour from the Parks Canada team were the unanticipated trip highlight for many. While we benefited from lucky timing, the visit fulfilled the expedition cruise promise to “expect the unexpected” very well.

-- Onboard Experts. The onboard experts assembled were diverse, and included experienced naturalists, an ornithologist, a geologist, a botanist, Inuit culturalists, Parks Canada representatives, a historian and even a lawyer who works on implementation of the Nunavut Land Claims Agreement. The experts offered lectures and seminars on topics such as marine mammals, “the Superpowers of Birds,” glaciers, adaptations by Arctic plants and Amundsen’s voyage through the NWP. The experts were also available onboard and ashore to interpret what we were seeing. On many shore landings they set up stations, with a scope to observe a loon nest or to point out interesting plant life, for example, or to interpret historic sites, such as the remains of ancient Thule sod houses. (See Figures 4-20a and 4-20b.) These are the programs for which expedition cruises are known, and the vast majority of passengers attended all of the presentations.
Wildlife Viewing. Wildlife is considered a major draw to the Arctic, but the lower NWP cannot compete with the wildlife viewing of Arctic Svalbard, Antarctica, or even Baffin Bay. It is not that wildlife are not present, but that cruising the NWP requires minimal sea ice, which marine mammals require. Some locations still offer reliable opportunities for encounters, while others happen by chance. On a sea day, as we sailed north through Franklin Strait, we had just settled in for a presentation on polar bears, when the speaker was interrupted by a polar bear sighting. Guests grabbed their parkas and cameras and headed out onto the decks. The ship kept a respectful distance but was close enough for easy viewing of a male bear enjoying a fresh kill. (See Figure 4-21a.) He was closely guarding his prey from any interlopers but did not seem particularly interested in our presence. We spent over half an hour enjoying this chance encounter, before moving on to our next destination.

That afternoon we went out in Zodiaks in Coningham Bay, off Prince of Wales Island, in search of more “large white things” (Swan 2019b). We found them, seeing another polar bear on land and a pod of beluga whales, that swam right toward the Zodiaks, in the Bay. (See Figure 4-21b.) The guests were delighted, but the bear was not, as he appeared to be tracking the belugas, so we backed off, having enjoyed a day of wildlife to equal the brochures.
The following day, several Bowhead whales were spotted outside of Bellot Strait. A few days later, more belugas were observed in a bay, with four interested bears prowling the hills above them.
The wildlife viewing on this trip was either very good or disappointing, depending on one’s expectations. It is clear from the survey and focus groups that some came primarily for wildlife, and though we were relatively fortunate, encounters were less frequent than in some locations. There were no walrus or narwhal sightings and the scheduled foray into Smith Sound, known for excellent wildlife sightings, was cancelled due to weather. This trip did not offer the best wildlife viewing available, but wildlife was still an exciting component of the experience.

-- Inuit Culturalists. The presence of seven Inuit culturalists onboard was another unanticipated trip highlight for me and many others, as the survey and focus groups demonstrate. It is difficult to have meaningful interaction with people in villages on short visits, so getting to know Inuit staff, of various ages and backgrounds, added tremendous depth to the program. One of the Inuit women is a recent college graduate, working on a grant to study tourism for Nunavik (the Inuit area of Quebec), another woman is an award winning film maker (and has harpooned a beluga), another is a throat singer and storyteller, and one of the men is a traditional hunter and naturalist. Each of them offered their thoughts and insights on a variety of topics, from hunting to climate change to the challenges of life in the North, and each offered some demonstration of cultural traditions, such as lighting an oil lamp, throat singing, sewing sealskin, preparing food and drum dancing. (See Figure 4-22; see also Figure 3-10.)

Cultural demonstrations for tourists, sometimes referred to as “heritage tourism,” can feel stilted or commercialized, and have been described as “staged authenticity” (Chhabra, Healy, and Sills 2003, 702-703). Today’s tourists want to “directly experience and consume diverse past and present cultural landscapes,” and authenticity, “or at least the perception of it,” is an important aspect (Chhabra, Healy, and Sills 2003, 703). Even with the best of intentions,
cultural providers package their culture for consumption and this packaging alters the product (Chhabra, Healy, and Sills 2003, 705).

Because we interacted with the presenters in multiple ways, on a daily basis, shared meals and observed them as “regular people,” their presentations felt more authentic, even though they were necessarily rehearsed, and therefore packaged. Our perception of authenticity was higher, in part, because they did not pretend they wore traditional dress or ate raw caribou every day. Presentations felt more like demonstrations of family traditions they were eager to preserve and share. At a minimum, they placed high on the “perceived authenticity” scale.

-- Visiting Local Villages. Like wildlife, perceptions of the NWP villages likely depended on expectations. Kugluktuk and Gjoa Haven, inside the passage, and Griese Fjord, just outside, were all “authentic” in the sense that real people live there. (See Figures 4-23a and 4-23b.) Streets were unpaved for the most part, primarily because paving is difficult to maintain in
extreme temperatures. Those hoping for the bright, colorful villages we would see in Greenland may have been disappointed. Those wanting to see how people live along the NWP, however, greatly enjoyed these locations. It was interesting to see the health clinic and to visit the town hall and community grocery store. The local post office was a big draw. The technology on display, including satellite dishes, snowmobiles and motorboats, was intriguing. There were plenty of curious children and friendly sled dog puppies to smile at.

Both Kugluktuk and Gjoa Haven have small, well curated museums. (See Figures 4-24a and 4-24b.) The Kugluktuk Visitor Heritage Center, which opened in 2014 with a grant from a mining company (CBC 2014), contains interesting historical displays and has a small shop that sells local art and carvings. Gjoa Haven’s Nattilik Heritage Centre, which opened in 2013 (Rogers 2013), displays Amundsen artifacts, traditional tents and clothing, and local art and allowed a noted local artist to sell his work while we were there. Both museums exceeded expectations, the community stores were friendly and generally prepared for our visit, and most of the group seemed extremely interested in observing modern life along the NWP.
Figures 4-24a and 4-24b.
Kugluktuk Visitor Heritage Centre Display (left); Nattilik Heritage Centre Carving (right)
(Riley 2019b; Sculpture attributed to Joseph Suqslaq by Rogers 2013)

Most passengers I spoke with expressed these sentiments, though many would have liked
to see more organized craft markets and vendors. We learned this is difficult, as most local
people have jobs or children to care for and it is challenging to prepare for cruise visitors a few
times per year, when visits could be cancelled due to conditions at the last minute. Craft supplies
are extremely expensive because of shipping costs, so it is difficult to stockpile items for possible
sales to cruisers. A group favorite in Gjoa Haven was the Quqmak Sewing Group, located in a
small, unmarked building, containing worktables and sewing machines. The building is a craft
center where local women can work on clothing, artwork, souvenirs and cloth crafts, and quite a
few sales were made once they were discovered. (See Figure 4-25.)

-- Arctic Scenery. Most passengers would probably describe the Arctic scenery inside the
NWP as disappointing. There was plenty of ice in Greenland, at the end of the trip, but not much
in the NWP until we reached its exit. The polar bear on his ice flow, at Figure 4-10, was an
exception. After all the stories of ice-choked waterways, most were surprised. The cruise just
before ours, however, was challenged by ice, with ice charts featuring prominently in their
evening briefings. In fact, they joined another ship following an icebreaker at one point. We
embarked the day they disembarked in Kugluktuk, so our experience demonstrates the ever changing and unpredictable nature of the NWP. Croker Bay, at the eastern end of Devon Island and Lancaster Strait, fortunately, had ice, of both the sea and land varieties. The ice was doubly appreciated due to the brilliant sunshine that graced the bay and allowed the colors of the ice and water to dazzle our vision. (See Figures 4-26a and 4-26b; see also Figure 4-27.)

-- Overall Impressions. This particular trip had something for everyone. Exploration and Canadian history, wildlife, Inuit culture, local villages, and Arctic scenery. If one aspect disappointed, another was sure to make up for it. While some of the themes might seem
discordant, they all came together to create a distinct impression of the legendary NWP. This trip did not offer the best wildlife viewing or scenery I have experienced, but what there was, was superlative, and complemented the other aspects extremely well. This was by far the most interesting history and culture tour I have taken, and greatly exceeded my expectations on both counts. The Erebus visit, the trip highlight for me and many others, was not advertised, of course, but even without it, the trip would have offered a comprehensive look at the history of the NWP. The Inuit cultural aspects were planned but not slick, and this aspect deeply enriched the NWP journey. Overall, this trip was a remarkable “experience,” in the best tradition of expedition cruising, offering education, dramatic vistas (esthetics), entertainment, and escapism.

So, what is the modern lure of the NWP? The opportunity to relive history, meet the gracious Inuit people, learn about their survival methods and culture, and observe the natural environment and its wildlife, combine to make this a fascinating journey. This would be an excellent voyage for either first time or seasoned expedition travelers. Those looking primarily for wildlife should go elsewhere, but those looking for a unique experience could not do better.

Figure 4-27. NWP Ice
(Riley 2019b)
“…[W]e are attached to the NWP and we are a part of it. It’s part of our land, it’s part of our lifestyle, it’s part of our culture.”
Inuit Perspectives on the NWP
(Innuit Tapirit Kanatami 2017, 61)

Chapter 5. Risks of Northwest Passage Cruises and Conclusions

Cruise Risks. As NWP cruises increase, so do the risks the ships face and the damage they can cause. The NWP is poorly charted and changes quickly, making navigation a challenge. Rescue assets are limited. Ships can damage the environment and disrupt wildlife, which also disrupts local communities. This chapter looks more closely at these concerns and then draws conclusions on the advisability of continuing cruises in the NWP.

Safety. The Arctic is no longer a “a huge blank on the map” (Hayes 2003, 6), but it is still “a vast and poorly charted expanse that is cloaked in danger” (Hill, Lanore, and Véronneau 2015, 71). One source estimated that only 12% of Canadian Arctic waters had been charted to current international standards by 2014 (Lackenbauer and Lajeunesse 2014) and the U.S. National Oceanic and Atmospheric Administration (NOAA) admits its charts of the U.S. Arctic are “inadequate” (National Oceanic 2016). Although the NWP is better charted than some Arctic areas, Andrew Hartsig, Director of the Ocean Conservancy Arctic Program, believes it remains insufficiently charted for safe marine transportation (2018). Insufficient navigation aids and search and rescue assets are also concerns (Lackenbauer and Lajeunesse 2014; Congressional Research 2020a).

In addition to the 1996 grounding of the Hanseatic, discussed in Chapter 3, there have been two other cruise ship groundings in the NWP. In 2010, Adventure Canada’s chartered Clipper Adventurer struck a rock and was grounded 100 km east of Kugluktuk, requiring emergency evacuation of the 118 passengers and 69 crew (Stewart and Dawson 2011; Walker
(See Figures 3-16a and 3-16b.) Canadian Coast Guard icebreaker *Amundsen* responded from 500 km away, reaching the ship the following morning (Stewart and Dawson 2011). No injuries were reported and environmental damage was minimal, but the incident highlighted the risks of traveling in remote locations.

In 2018, to add to that season’s heavy ice disruptions, the *Akademik Ioffe* “suddenly grounded to a violent halt” in the Gulf of Boothia during an August cruise (Struzik 2018). Carrying tourists and a group of scientists from the University of Rhode Island’s Northwest Passage Project, the One Ocean cruise was over on its second day. Sister ship, the *Akademik Sergey Vavilov*, rescued the passengers 16 hours later (Struzik 2018). Coincidentally, one of the scientists aboard had previously written an article and book that warned of the danger of travel in the region (Struzik 2018). His observations are discussed below.

These incidents demonstrate how easy it is for accidents to happen, even in relatively well-traveled waters. Most ships today rely on the global positioning system (GPS), but satellite reception in the Arctic is unreliable (Hill, Lanore, and Véronneau 2015). Coverage is degraded
at high latitudes and atmospheric disturbances decrease accuracy (Alaska Department of Transportation 2019).

Despite the number of cruise ships and small pleasure craft transiting each year, navigating the NWP remains challenging (Lackenbauer and Lajeunesse 2014). The increased open water that results from longer and warmer ice melt seasons actually opens up space for thick, multi-year, or “old,” ice to drift into the passage from the north (NASA Earth Observatory 2015; Congressional Research 2020a). As ocean and atmospheric currents shift ice, it tends to concentrate in narrow passages between islands and along coastlines (Giguère, Comtois, and Slack 2017). This creates ever-changing conditions that increase the risks of navigation (Giguère, Comtois, and Slack 2017). I can think of no better example than the starkly different conditions faced by back-to-back cruises in 2019: the first cruise was obliged to follow an icebreaker part of the way, while the second encountered almost ice-free conditions.

Weather and ice forecasting are the most important contributors to safe marine movement in the Arctic (Gascard et al. 2017). Although there have been improvements in weather and local navigation information in recent years (Panikkar et al. 2018), better modeling and forecasting are still needed, particularly along narrow passages in the NWP (Gascard et al. 2017). The Canadian Ice Service (Canadian Ice Service 2019) and the U.S. National Ice Center, a joint program of the U.S. Navy, NOAA and the U.S. Coast Guard (U.S. National Ice Center 2020), both provide daily and seasonal ice forecasts and warnings. The movement of multiyear ice blocks, however, remains difficult to forecast (Congressional Research 2020a).

Wind forecasts are equally important. For example, the cruise I took was unable to achieve its highest planned latitude due to high winds coming down through Smith Sound. (See
Figure 5-2.) Smith Sound was the main route used by explorers attempting to reach the North Pole and usually contains significant sea ice, which is ideal for wildlife viewing.

The availability of search and rescue assets is another serious concern. There are no deep-water ports in Arctic Canada or the NWP and too few icebreakers. The U.S. currently has only one heavy polar icebreaker, the *Polar Star*, and one medium polar icebreaker, the *Healy*, in operation (Congressional Research 2020b). (See Figure 5-3.) In addition to rendering aid, U.S. icebreakers are tasked to support scientific missions and defend U.S. sovereignty in the Arctic (U.S. Government Accountability Office 2020).

After years of delay, the U.S. executed a contract to purchase three more heavy icebreakers in 2019, with delivery of the first expected in 2024 (U.S. Government Accountability Office 2020). The Canadian Coast Guard has an aging fleet of icebreakers, including two heavy and five medium icebreakers, and announced plans last year to buy six new ships to replace some of them (Vavasseur 2019).
NOAA includes “[o]vercoming Arctic weather conditions” as one of the top challenges of conducting search and rescue in the area (Smith 2017, 87). Moreover, effective search and rescue requires that ships and aircraft be located close enough to respond quickly. The U.S. considered the feasibility of building a deep-water port on the northern coast of Alaska but decided to rely on mobile assets and seasonal bases instead (Congressional Research 2020). There are no major hospitals in the area either, only small community clinics. With no deep-water ports in the NWP, there are few assets spread over a very large area.

The grounded cruise ships and their passengers, to date, have been lucky, because the ships were not in imminent peril and the weather was good. It took nine hours for a Hercules aircraft to reach the grounded Akademik Ioffe from the Canadian National Defense Joint Rescue Coordination Centre in Trenton, Ontario, and 20 hours for a Canadian Coast Guard helicopter to arrive (Struzik 2018). A writer and Fellow at the Queens University Institute for Energy and Environmental Policy, who was onboard the Akademik Ioffe when it grounded, reported that the weather was calm and clear when passengers disembarked from the ship into Zodiacs, but that operation would not have been possible in bad weather (Struzik 2018). The outcome of the grounding has been called “the best-case scenario” (Hartsig 2018). When the Ioffe passengers
reached tiny Kugaaruk, few of the passengers “seemed to realize just how close they had come to serious harm” (Struzik 2018). That trust, or lack of awareness, tracks the survey results here, where fewer than 5% of respondents reported concern for their safety during the cruise.

**Environmental Protection.**

--- Marine Pollution. By their very nature, cruise ships contaminate the marine environment. The U.S. Commission on Ocean Policy estimates that every cruise ship passenger generates eight gallons of sewage and 85 gallons of grey water per day (Arctic Resources 2009a; De Filippis 2014). Although most expedition cruise companies consider the environment, at least some ship waste must be discarded into the ocean (De Filippis 2014) because small Arctic communities lack the infrastructure to accept waste on-shore (Arctic Resources 2009a).

Several high-profile cases, such as Royal Caribbean’s admission that one of its ships discharged oil into Alaska’s Inside Passage on multiple occasions, led Alaska to set its own cruise ship pollution standards (Schulkin 2002). In 2006, Alaska mandated onboard “Ocean Rangers,” licensed marine engineers, to monitor and enforce environmental compliance (Alaska Department of Environment 2019). Even the most environmentally conscious ships pollute the water. As vessel traffic increases in the NWP, so does contamination of the marine environment.

Marine accidents resulting in pollution are inevitable. In 2004, a small cargo ship broke apart in the Aleutian Islands of Alaska and spilled over one million gallons of fuel oil, little of which was recovered due to the remote location and weather (Byers 2018). Oil spills are cause for concern and preparation everywhere but responding to oil spills in the Arctic is particularly challenging due to the “plethora of environmental scenarios that could play out and the speed in which ice conditions can change” (Wilkinson et al. 2017, S424). The NWP lacks sufficient oil
spill and salvage infrastructure (Lackenbauer and Lajeunesse 2014) to handle such contingencies.

Sea ice complicates oil spill response because oil can be squeezed between ice flows and drift with them (Wilkerson et al. 2017). In winter, oil freezes into ice, making it impossible to remove and oil released underwater can be trapped by the ice, break into droplets, and spread below the surface (Wilkinson et al. 2017). Cleaning up an oil spill in waters partially covered by ice “would be more complex than cleaning up the Exxon Valdez” (Struzik 2016). Moreover, a significant oil spill would have a disproportionate impact on Inuit, who not only value the environment symbolically, but remain dependent upon it for supplemental food and cultural identity (Lackenbauer and Lajeunesse 2014, 9).

Additionally, most cruise ships, including some operating in the NWP, burn Heavy Fuel Oil, “the dirtiest fossil fuel available” (Transport & Environment 2020). The use of this fuel poses serious environmental risks, particularly in the ecologically sensitive Arctic (Comer 2018), because it is the most difficult to clean up when spilled and because it produces high quantities of black carbon soot, which lands on water and ice (Comer 2018). Fortunately, some cruise companies are moving away from Heavy Fuel Oil. Hurtigruten has phased it out (Humpert 2019), while Ponant’s new ship, Charcot, is liquid natural gas powered (Ponant 2020a).

Most importantly, the members of the Association of Arctic Expedition Cruise Operators (AECO) voted in late 2019 to ban the use of Heavy Fuel Oil in the Arctic (Association of Arctic Expedition Cruise Operators 2019). All but three of the current and announced NWP cruise operators are full members of the AECO and two more are provisional members (Association of Arctic Expedition Cruise Operators 2020b). While the ban is not legally enforceable, it is now a
condition of membership in the AECO, a credential operators value, and therefore reduces the environmental risk of cruise tourism in the NWP. It does not negate it, however.

-- Wildlife Impacts. The impact of marine vessels on marine mammals is well known, but unique species and a unique environment make Arctic marine mammals particularly vulnerable (Hauser, Laidre, and Stern 2018). One study found that more than half of Arctic marine mammals are exposed to either the NWP or the NEP, where marine traffic is increasing rapidly (Hauser, Laidre, and Stern 2018). Of these, subpopulations of narwhal, bowhead and beluga whales, and walrus, were found to be the most vulnerable, due to both sensitivity and exposure (Hauser, Laidre, and Stern 2018). Many Arctic species are still recovering from previous commercial over-harvesting and poorly managed subsistence hunting (Laidre et al. 2015). Some species, such as beluga whales, have struggled to recover, even after commercial hunting ceased (Laidre et al. 2015).

The most sensitive locations in the NWP are “pinch points,” in the Bering Strait, between the U.S. and Russia, and Lancaster Sound, in Nunavut, which must be used by both marine mammals and ships (Hauser, Laidre, and Stern 2018, 7617). Lancaster Sound is particularly sensitive, because an estimated 75% of the world’s narwhal, 20% of Canada’s beluga whales, and the largest subpopulation of polar bears in Canada live or travel through the Sound and the area adjacent to it (Parks Canada 2019j).

As sea ice diminishes, sensitive species require even more careful management (Laidre et al. 2015). Shipping breaks up ice, exacerbating the problem (Panikkar et al. 2018, citing Dumond et al. 2012) and can disrupt indigenous over-ice travel routes (Carter et al. 2017). Decreased sea ice even delays land-animal migrations. For example, some caribou herds migrate over sea ice to their wintering grounds, and their failure to return disrupts both the wildlife and
traditional subsistence practices (Carter et al. 2017). It is critical, that “cumulative impacts from industrial activities,” including shipping and tourism, be mitigated (Laidre et al. 2015).

The ship is not the only risk to wildlife presented by cruises. The presence of more humans increases the likelihood of negative human-wildlife encounters. Any human presence disrupts animals’ natural behavior, but this is a particular concern with polar bears. Because of the danger to both humans and bears, operators scout a landing site before passengers arrive, and abort the landing if a bear is seen nearby. But bears are not always predictable, so trained guides carry rifles, both for firing warning shots and for protection of human life. An unexpected bear encounter on the trip I took to Svalbard in 2017 resulted in a quick but orderly evacuation of humans and the firing of warning shots to dissuade the curious bear. Some encounters end in sorrow, as happened in Svalbard in 2018, when a polar bear was shot and killed after injuring a guide (Nilsen 2018).

Still, the ship itself accounts for the greatest risk. A workshop in the Inuvialuit Settlement Region, in the Northwest Territory, revealed the impacts on wildlife and humans that occurs when reinforced ships enter the NWP late in the season (Innuitt Tapirit Kanatami 2017). One recent fall, a ship entered Union Strait, off Victoria Island, after the water had frozen, without informing the community. The ship opened a channel in the ice, which interfered with caribou migration and hunting (Innuitt Tapirit Kanatami 2017). This type of damage could also impact polar bears, which rely on sea ice to hunt seals. While this incident related to commercial shipping and not cruise ships, it illustrates the disruption ships can cause to the environment.

One hopeful sign for wildlife protection is the recent agreement between the Government of Canada and the Qikiqtani (Baffin) Inuit Association to establish the Tallurutiup Imanga National Marine Conservation Area, in and around Lancaster Sound (Parks Canada 2019k). (See
The 108,000 km² Tallurutiup Imanga is considered the “ecological engine” of the Eastern Canadian Arctic, because the interaction of major currents there bring rich nutrients to the surface in spring and summer (Parks Canada 2019m). A management plan and parliamentary approval are still needed, but the agreement is a major step toward sustainable management of the area (Parks Canada 2019k).

Another positive initiative for wildlife and safety is the pursuit of low impact shipping corridors in Canada. Announced in 2017 and still under development, the initiative includes consultation with indigenous communities and other stakeholders to improve infrastructure, navigation support and search and rescue, while protecting sensitive ecological and cultural areas (Government of Canada 2017). The project brings together marine science, shipping concerns, wildlife migration patterns and indigenous travel and hunting practices to design the lowest impact shipping lanes possible. (See Figure 5-5.)

Researchers consult with local villages to assess the impacts they have observed from increased shipping and attempt to find solutions (Carter et al. 2017). Once designated,
hydrographic charting, infrastructure improvements, search and rescue assets and enhanced navigation aids will focus on those areas, and marine traffic will be routed away from the most sensitive wildlife and cultural areas (Carter et al. 2017). This is a very complex process with multiple competing interests, but a significant step in the right direction.

Protection of Historic and Cultural Sites. Inaccessibility has long protected many of the historic and cultural sites in the Arctic, but climate change and increased human presence now threaten many of these sites (Barr 2017). Sometimes referred to as a “historical resource,” or “maritime heritage resource” (Barr 2017, 9), they include prehistoric archaeological sites, such as Thule sod houses, more recent structural objects, such as Northumberland House, cultural use areas, such as traditional hunting grounds, and shipwrecks. The challenge of protecting these sites begins with identifying and classifying them. This work has begun but is far from complete (Barr 2017). Some sites, such as sod houses or wooden structures, are extremely fragile, and even small disturbances can damage them (Barr, 2017). While many of these sites have statutory
protection, the number and distribution of the sites throughout the NWP, coupled with the lack of personnel to cover all of them, necessitates reliance on the good manners and good will of visitors. And on passenger management and supervision by cruise operators. Studies have shown that government regulation, while important, is insufficient to ensure the sustainability of Arctic sites (Bystrowska, Wigger, and Liggett 2017). Operators must be involved in site management to ensure their protection.

The best operators teach proper behavior, such as “no souvenirs, not even a seashell,” outline walking lanes to protect fragile sites or wildlife, and closely monitor passengers at all times. Generally, visitors are receptive. One study found that even people who do not live sustainably at home will choose eco-friendly travel activities when given a choice (Bickford et al. 2017). And it is in operators’ self-interest to protect the sites that attract visitors to their cruises in the first place. But to do so, conservation principles must be inculcated into the staff’s and naturalists’ ethos. The AECO facilitates good management, by publishing Cultural Remains Guidelines and Visitor Guidelines for use by members (Association of Arctic Expedition Cruise Operators 2020a). These products are used in mandatory passenger briefings and displayed on ships. The expedition cruises I have experienced all make this a priority, but some may not. Regardless of precautions, more human feet mean more opportunity for damage.

Parks Canada already has a wide network of motion-activated cameras to monitor remote or elusive wildlife. There has been public concern about privacy and the use of the cameras for law enforcement in Canada (Stuart 2020), so the current policy is to delete all human images (Frey 2017), but cameras could be deployed with warnings in sensitive cultural areas if the need arises. Other suggestions for addressing the protection of sites include the designation of more World Heritage sites in the Arctic, increased coordination among operators, tourism association
involvement, local community involvement, and increased visitor education (Barr 2017). Increased coordination among operators, as a form of self-policing, could be facilitated through the use of information technology, as in Svalbard, but all operators must participate for the method to be effective (Bystrowska, Wigger, and Liggett 2017).

One author proposed that a “positive attitude toward cultural preservation” can be the most important factor in sustainable Arctic tourism (Bickford et al. 2017). This involves building relationships to gain acceptance. Establishing the Guardians of the Wrecks of the Erebus and Terror is a successful example that has also been used in the Haida Gwai and Pacific Rim parks in Canada (Parks Canada 2017). This attitude is also developed in visitors through education. By these standards, expedition cruises do a good job of protecting sites themselves, engaging local communities and educating their guests to protect sites.

**Impacts on Local Communities.** Indigenous communities are both enriched and threatened by NWP cruise tourism. Nunavut views tourism as “an essential pillar of our territorial economy” (Taptuna 2013). But there is a “paradox between the desire to bring new economic opportunities into indigenous culture areas and the problem of sustaining that very culture…” (Okrant and Larsen 2007, 434). As the previous sections demonstrate, cruise tourism impacts the environment that Inuit value and rely on. And while tourists bring income, they also create new challenges. Many Inuit residents express this dichotomy when asked about tourism.

During a 2016 workshop in Cambridge Bay, a popular NWP cruise stop, residents expressed both positive and negative sentiments. Some appreciated that tourists were coming to learn about their communities. “They can learn from us, we can learn from them, it’s a good exchange for us” (Innuit Tapirit Kanatami 2017, 62). Some really enjoyed meeting people from all over the world. In a study of Pond Inlet and two other communities, a majority of residents
were found to favor tourism (Stewart, Dawson, and Draper 2011). Results were more positive when a community approach to cruise visits was taken by operators.

There are potential financial rewards for local communities as well. “Heritage is worth money,” and produces jobs, income, and profits (Graham, Ashworth, and Tunbridge 2000, 130). Increasing tourism can bring investment in infrastructure and direct financial benefit. Selling “tourist merchandise” such as artwork and crafts generates local income from visitors, which can lead to increased protection of natural sites (Healy 1994). Residents are also employed to serve as tour guides and to participate in cultural presentations. Two communities we visited provided demonstrations of folk singing, drum dancing, and square dancing, a still-popular tradition adopted from visiting whalers (Crowe 1991). (See Figures 5-6a and 5b.)

![Figure 5-6a and 5-6b. Inuit Drum Dancer (left); Elder Folk Singer (right), Gjoa Haven (Riley 2019b)](image)

These events are “staged authenticity,” of course, but interest from tourists may help to preserve traditions. One study found that tourist interest in kayaking was rekindling knowledge of traditional kayaks, which are used less often for hunting today (Ren and Chimirri 2018). (See Figure 5-7.) The same study showed that interest in traditional dress helped preserve costume traditions and allowed more residents to participate in the visits (Ren and Chimirri 2018).
While these demonstrations celebrate culture and keep traditions alive (Stewart, Dawson, Draper, 2011), tourist visits sometimes create discord. One study found a divergence between what guests expect and what their host can offer. Some Inuit felt “tourists want to see how it was, rather than how it is, but nothing stays the same” (Stewart, Dawson, and Draper 2011, 101). Visitors and hosts may also have different agendas. While sales are important, many of those surveyed expressed a desire to share their traditions, as well as their products, but felt some visitors were more interested in acquiring art than learning (Okrant and Larsen 2007).

Communities expressed other concerns, as well. The Cambridge Bay workshop raised the issues of protection of ancestral homes and other historic sites (Inuit Tapirit Kanatami 2017). Large groups of tourists can overwhelm tiny hamlets and there were concerns about visitor behavior, including the taking of photographs, especially of children, without permission (Stewart, Dawson, and Draper 2011). There was a general fear that visitors would misunderstand the culture and take home negative impressions. The sentiment in Cambridge Bay was similar to one voiced in Pond Inlet, where some residents feared “Greenpeace” tourists, who might oppose traditional hunting (Stewart, Dawson, and Draper 2011, 98).
Inuit communities realize that change has arrived. “The whole aspect of our traditional lifestyle is changing because of the Northwest Passage. Open seas, late freezing, early thaw, longer free water season, or free-ice season…It’s going to change everything” (Inuit Tapirrit Kanatami 2017, 66). Cruise ships increase the complexity of the changing environment these communities already face but offer financial opportunities, as well.

*Project Conclusions.* This project traced the lure of the NWP, from the early explorers to modern cruise tourists. The dream of a northern passage, from the Atlantic to the Pacific Ocean, became almost an obsession for Europeans, particularly the British, after the discovery of the New World. Searching for a shortcut to Asia, and certain of their own invincibility, officers and seamen doggedly sailed into the unknown, “braving the white, blooming emptiness…with no hope of communicating with the world…” (McGoogan 2008, 27). Lives, ships and treasure were lost in pursuit of this “maritime Holy Grail” (NASA Earth Observatory 2015). Over time, foolishly but bravely, these explorers and adventurers mapped much of the remaining, uncharted empty space on the world map. Roald Amundsen would finally accomplish the feat of crossing the NWP by ship in 1906 by studying the results of prior failures and by learning from the Inuit.

The project demonstrated the rise of modern cruise tourism in the NWP, charting the expansion of cruise ship traffic through the passage, from 1984 to present. The Arctic is the fastest warming location on the planet. The opening passage admits not just commercial shipping but increasing numbers of expedition cruise passengers, who are anxious to explore new destinations. Both full and partial NWP cruises have grown steadily, with full passages increasing three-fold since 2011 and partial passage offerings increasing 36% between 2015 and...
2019. In addition to trip numbers, new ships and more operators are entering the NWP cruise market each year. And some of the ships are very large.

The project then asked why cruise passengers are lured by the NWP. Both marketing and passenger motivation were examined to answer that question. The most commonly used marketing themes were arctic landscapes, local culture, villages, wildlife viewing and history. Operators also marketed the ships themselves, depicting the ships and their guests in an Arctic setting, and stressed the expeditionary nature of the trips.

In focus groups and a survey taken of passengers aboard one partial NWP cruise, respondents indicated they had chosen the cruise for many of the reasons advertised, with history and following the explorers being very important. Respondents were very satisfied with the trip outcome, with 83% expressing no disappointment in the any aspect of the trip. The survey and passenger focus groups uncovered a few differences in motivation based on nationality. Respondents from Canada and the U.S. were particularly interested in explorer history, while Australians were more likely to be seeking a remote location, where few have traveled. Some Canadians were also very interested in connecting with a part of their country they had not previously experienced.

There were few gender differences, but women were statistically more interested in visiting villages and more likely than men to choose the trip for wildlife viewing, with over 68% of women rating wildlife viewing “very important” compared to 29% of men. Women were just as satisfied with the trip as men, but wildlife viewing was the aspect most often rated disappointing (9%).

Tracing explorer history proved to be the favorite aspect of the trip to these respondents, which may have been due to the unexpected visit to the wreck of the *HMS Erebus*. Many
passengers, regardless of gender or nationality, were surprised by their enjoyment of the Inuit cultural aspects of the trip. Few were worried about their safety, so far from emergency assistance. Perhaps most travelers are unaware of the hazards faced by NWP cruises.

Next, the project reviewed the risks presented by cruises to guests, the environment, wildlife and local communities in the NWP. The passage remains insufficiently charted and its rapidly changing conditions make navigation challenging. The risk of accidents is high. Search and rescue assets are limited and must travel from great distances to reach ships in distress. Oil spill response capability is inadequate. Although tourism revenue is welcome, ships disrupt wildlife and interfere with the traditional way of life along the NWP. Cruises in the NWP are still limited compared to other destination, but they leave a footprint on small communities and the environment.

Finally, the project asks whether cruises in the NWP should be prohibited. The cruise industry has overwhelmed several tourist locations throughout the world and some destinations are limiting or banning cruises as a matter of survival (Saraogi 2019). Should NWP cruises be allowed to continue? Some reviewers have concluded they should not (Daily 2019; Byers 2018).

I conclude that NWP cruises should be allowed to continue, but with additional regulation in four areas. First, additional environmental protections must be imposed. The use of Heavy Fuel Oil should be prohibited, in line with AECO guidance. Although the AECO is a voluntary organization, Canada or its territories could require cruise ships requesting permits to be full members in good standing of the AECO. Alternatively, Canada could impose AECO requirements through their own laws. Itinerary constraints should also be imposed. Once implemented, low impact shipping lanes will allow Nunavut to more closely control cruise ship itineraries. This model should be adopted throughout the NWP.
A solution must also be found to the waste discharge issue. A recent study found ship emissions and wildlife impacts to be the greatest threats to Marine World Heritage sites (Cerveny, Miller, and Gende 2020). The governance models in Glacier Bay, Alaska, which uses permit fees to enforce regulations, and the West Norwegian Fjord, in which the protected areas impose fuel and emissions requirements, should be emulated (Cerveny, Miller, and Gende 2020).

Second, as Alaska did in Glacier Bay, the number of cruise permits should be limited (Cerveny, Miller, and Gende 2020). Arctic tourism depends on sustainable management (Bystrowska, Wigger, and Liggett 2017), so limits should be determined before the NWP becomes over-cruised like Svalbard, Norway. Svalbard is now limiting large ships and curtailing landing sites (Norwegian Polar Institute 2019). Determining a sustainable number of cruise ships in the NWP is beyond the scope of this project but permit limits should be imposed for both full and partial NWP cruises to control their rapid increase. Cancellation of the 2020 season due to COVID 19 offers the opportunity for more study and a reset before the 2021 season.

Third, passenger and environmental safety must be addressed. It is only a matter of time before a more serious accident occurs. Search and rescue capability and oil spill prevention and response must be improved. Only ice-strengthened ships should be permitted to cruise the NWP. Most ships already meet this criterion, but those that do not should be prohibited. Strengthened hulls lower the probability of ship peril and oil spills. Canada and the U.S. do a good job of covering the area for search and rescue with the assets they have, and both are modernizing their ice breakers, but the number of passengers on larger ships simply cannot be evacuated in a timely manner. Ships carrying more than 500 people should be prohibited and serious consideration should be given to prohibiting ships carrying more than 300 people. Cruise ships
should also be required to contribute to a fund to improve search and rescue and oil spill
response capability in the NWP.

Fourth, there should be better coordination with communities. Change and development
are coming to the NWP. Banning cruise ships from the NWP would likely shift them to the west
coast of Greenland, diverting needed revenue from NWP communities. Communities are
concerned about cruise tourism at the same time they welcome it. Their mixed feelings are
understandable and many of their concerns could be addressed through better planning on the
part of government and the cruise industry. Nunavut already issues licenses for cruise visits and
helps communities prepare for visits, but more could be done. An increase in daily fees would
allow the Nunavut Office of Tourism to increase its support program and more closely
coordinate ship visits with communities. Some cruise operators work closely with local
communities, but better procedures would make it easier for communities to prepare for and
accommodate cruise visitors.

These measures would not negate, but would mitigate, the impact of NWP cruises and
make them safer and more environmentally friendly. This would increase the cost of NWP
cruises, but would decrease economic free riding by cruise companies at the expense of the
environment. Most expedition cruise passengers value the environment and would likely be
willing to pay a surcharge. A 2003 poll of over 600 past cruise passengers found more than 90%
would be willing to pay an extra fee to support cleaner cruise operations (Oceana 2003). After
all, wildlife enthusiasts pay a $1500 permit fee to trek to see gorillas in Rwanda (Republic of
Rwanda 2020) and Indonesia has proposed a $1000 fee to visit the famous dragons on Komodo
Island (Gluckman 2020). Protecting the NWP is equally imperative.
Ultimately, this paper concludes that cruises present a significant risk to all of these facets of the NWP, but that they offer economic and educational opportunities that make them worthwhile. With additional limits and safeguards, cruise risks can be minimized and tourists can continue to answer the lure of the NWP.

Figure 5-8
The Author at the End of the Journey
**Appendix I.**

Principal Franklin Search Expeditions

<table>
<thead>
<tr>
<th>Date and references</th>
<th>Commanders</th>
<th>Means of transport</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1848–9</td>
<td>J.C. Ross</td>
<td>HMSs <em>Enterprise</em> &amp; <em>Investigator</em></td>
<td>Wintered at Port Leopold explored w. and e. shores of Somerset Island</td>
</tr>
<tr>
<td></td>
<td>E.J. Bird</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1848–55 (Hooper 1853, Seemann 1853, Pullen 1979, Bockstoe 1888)</td>
<td>T.E. L. Moore, H. Kellett</td>
<td>HMSs <em>Plover</em> &amp; <em>Herald</em></td>
<td>Wintered in Alaska with supplies for Franklin; searched n. Alaska coast</td>
</tr>
<tr>
<td>1848–9 (Richardson 1851)</td>
<td>John Richardson assisted by J. Rae</td>
<td>Small boats</td>
<td>Searched coast from Mackenzie to Coppermine mouth</td>
</tr>
<tr>
<td>1849–50</td>
<td>J. Saunders</td>
<td>HMS <em>North Star</em></td>
<td>Wintered Wulstenholme Fjord; lauded stores for Franklin at Navy Board Inlet</td>
</tr>
<tr>
<td>1850–5 (Osborn 1856, Armstrong 1857, Neary 1967, Collinson 1889)</td>
<td>R. Collinson</td>
<td>HMSs <em>Enterprise</em> &amp; <em>Investigator</em></td>
<td>Explored shores of Banks Island, Prince of Wales Strait and western and southern shores of Victoria Island</td>
</tr>
<tr>
<td>1850–1 (Osborn 1865)</td>
<td>H.T. Austin, E. Ommeney</td>
<td>HMSs <em>Resolute</em>, <em>Assistance</em>, <em>Pioneer</em>, <em>Intrepid</em></td>
<td>Found Franklin’s 1845/6 winter quarters on Beechey Island and Cape Rice; Explored e. and w. shores of Prince of Wales Is. and s. shore of Melville Is. from Cape Walker</td>
</tr>
<tr>
<td>1850–1</td>
<td>John Ross</td>
<td><em>Felix, Mary</em></td>
<td>Ross’s own private expedition</td>
</tr>
<tr>
<td>1850–1</td>
<td>W. Penny</td>
<td>HMS <em>Lady Franklin, Sophia</em></td>
<td>Two whalers in naval service</td>
</tr>
<tr>
<td>(Sutherland 1852)</td>
<td>A. Stewart</td>
<td><em>Prince Albert</em></td>
<td>Private expedition of Jane Franklin</td>
</tr>
<tr>
<td>1850 (Suow 1851)</td>
<td>C.C. Forsyth</td>
<td></td>
<td>Private expedition funded by Henry Grinnell</td>
</tr>
<tr>
<td>1850–1 (Kane 1856c)</td>
<td>E.J. de Haven</td>
<td>USSs <em>Advance</em> &amp; <em>Rescue</em></td>
<td>Explored s. coast of Victoria Island</td>
</tr>
<tr>
<td>1850–1</td>
<td>John Rae</td>
<td>On foot and by boat</td>
<td>Discovered Belot Strait.</td>
</tr>
<tr>
<td>1851–2 (Kennedy 1853, Bellot 1854)</td>
<td>W. Kennedy, J.R. Bellot</td>
<td><em>Prince Albert</em></td>
<td>A private expedition of Jane Franklin</td>
</tr>
<tr>
<td>1852 (Inglefield 1853)</td>
<td>E.A. Inglefield</td>
<td><em>Isabel</em></td>
<td>Private expedition of Jane Franklin</td>
</tr>
<tr>
<td>1852–4 (Belcher 1855, M’Dougall 1857, de Bray 1992)</td>
<td>E. Belcher, H. Kellett</td>
<td>HMSs <em>Assistance, Resolute, Pioneer, Intrepid, North Star</em></td>
<td>Rescued M’Clure and his men from HMS Investigator; Belcher abandons HMSs <em>Resolute, Intrepid, Assistance &amp; Pioneer</em></td>
</tr>
<tr>
<td>1853–5 (Kane 1856a &amp;b)</td>
<td>E.K. Kane</td>
<td>USS <em>Advance</em></td>
<td>Private expedition funded by H. Grinnell, wintered at Benscaual Bay, n.w. Greenland</td>
</tr>
<tr>
<td>1855 (Anderson 1940–1)</td>
<td>James Anderson</td>
<td>By canoe and on foot</td>
<td>A Hudson’s Bay Company expedition. Found relics of Franklin expedition on Montreal Island</td>
</tr>
<tr>
<td>1857–9 (M’Clintock 1859, Petersen 1860)</td>
<td>F.L. M’Clintock</td>
<td><em>Fox</em></td>
<td>Private expedition of Jane Franklin; searched King William Is. shores, found the record of the Franklin Expedition</td>
</tr>
</tbody>
</table>


(Vaughn 1994, 156)
Appendix IIA.
Message Cards, Printed Onboard *HMS Plover*, 1852-1853

**ARCTIC EXPEDITION**
in search of
SIR JOHN FRANKLIN.

Her Majesty’s Ship ‘Plover’ will be found wintering (1852-53) two miles S.E. (true) of Point Barrow, called by the natives Noo-wook.

Parties falling back upon that point are recommended to travel along the low chain of sand spits lying off the coast, as the most direct line.

The natives on the whole are not unfriendly, but must be dealt with cautiously to avoid surprise.

Commander.

Printed on board H. M. S. Plover, on the 29th. of October 1852.

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**ARCTIC SEARCHING EXPEDITION.**

(For the information of Henry Trollope, Esquire, Commander of Her Majesty’s Ship *Rattlesnake*.)

H. M. S. Plover arrived at Point Barrow on the 7th of September, 1853.

A travelling party will be dispatched early in July to place further particulars at Points Franklin and Belcher, (Seahorse Islands); and if possible at Cape Collie.

No news up to this date of Sir John Franklin’s Expedition, or the ships gone in search of him.

The natives have a more friendly disposition towards us this year, but should still be treated by strangers with caution.

Commander.

Printed on board the ‘Plover’ the 12th of November, 1853.

From the John Simpson Collection
David M. Rubenstein Rare Book & Manuscript Library, Duke University
(Simpson 1875)
**Appendix IIB.**
Drawings from the John Simpson Collection

Indigenous Dress, Point Barrow
by John Simpson, Ship’s Surgeon, *HMS Plover*, 1853

“Sketch of the Coast of Point Barrow…by a Native of Point Barrow”
From the John Simpson Collection
David M. Rubenstein Rare Book & Manuscript Library, Duke University
(Simpson 1875)
## Appendix IIIA.
New Expedition Cruise Ship Delivery Schedule

<table>
<thead>
<tr>
<th>New Ships</th>
<th>2020</th>
<th>New Ships</th>
<th>2021</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>Ship Name</td>
<td>Notes</td>
<td>Company</td>
<td>Ship Name</td>
</tr>
<tr>
<td>Lindblad</td>
<td>Nat Geo Endurance</td>
<td>Polar Ship</td>
<td>Coral Expeditions</td>
<td>Coral Geographer</td>
</tr>
<tr>
<td>Hurtigruten</td>
<td>Fridtjof Nansen</td>
<td>Hybrid</td>
<td>Ponant</td>
<td>Unnamed</td>
</tr>
<tr>
<td>Ponant</td>
<td>Le Bellot</td>
<td></td>
<td>Vantage Deluxe</td>
<td>Ocean Explorer</td>
</tr>
<tr>
<td></td>
<td>Le Jacques Cartier</td>
<td>5th and 6th of 6 new ships</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crystal Cruises</td>
<td>Endeavor</td>
<td>First 200 berth</td>
<td>Seabourn</td>
<td>Venture</td>
</tr>
<tr>
<td>Scenic</td>
<td>Scenic Eclipse II</td>
<td>Polar Ship</td>
<td>SunStone</td>
<td>Ocean Discoverer</td>
</tr>
<tr>
<td>Quark</td>
<td>Unnamed</td>
<td>Polar Ship</td>
<td>Oceanwide</td>
<td>Janssonius</td>
</tr>
<tr>
<td>Silversea</td>
<td>Silver Origin</td>
<td>100 berth for Galapagos</td>
<td>Crystal Cruises</td>
<td>Unnamed</td>
</tr>
<tr>
<td>Sun Stone</td>
<td>Ocean Victory</td>
<td>Polar Ship</td>
<td>Hapag-Lloyd</td>
<td>Hanseatic Spirit</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lindblad</td>
<td>Nat Geo Resolution</td>
</tr>
<tr>
<td><strong>2022 Orders:</strong></td>
<td><strong>Viking (2), Seaborn,</strong></td>
<td><strong>Crystal, Mystic,</strong></td>
<td><strong>Mystic Cruises</strong></td>
<td><strong>World Navigator</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Vantage</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

New Expedition Cruise Ships on Order
(Riley 2020; Data from Cruise Critic 2020)
## Appendix IIIB.
North East Passage Cruises

<table>
<thead>
<tr>
<th>Year</th>
<th>Operator</th>
<th>Ship</th>
<th>No. Trips</th>
<th>No. of Passeng.</th>
<th>Starting Fare</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>Heritage Expeditions</td>
<td>Akademik Shokalskiy</td>
<td>2</td>
<td>48</td>
<td>$22k</td>
</tr>
<tr>
<td>2020</td>
<td>Lindblad Expeditions</td>
<td>National Geographic Endurance</td>
<td>2</td>
<td>126</td>
<td>$35k</td>
</tr>
<tr>
<td>2020</td>
<td>Silversea</td>
<td>Silver Explorer</td>
<td>1</td>
<td>144</td>
<td>$42k</td>
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<tr>
<td>2021</td>
<td>Lindblad Expeditions</td>
<td>National Geographic Endurance</td>
<td>2</td>
<td>126</td>
<td>$37k</td>
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<tr>
<td>2021</td>
<td>Crystal Cruises</td>
<td>Crystal Endeavor</td>
<td>1</td>
<td>200</td>
<td>$50k</td>
</tr>
</tbody>
</table>

2020-2021 North East Passage Cruises
(Riley 2020; Crystal 2020; Heritage 2020; Lindblad 2020e; Silversea 2020c)

## Appendix IIIC.
North East Passage Cruise Itinerary

Lindblad Expeditions North East Passage Cruise Itinerary
(Lindblad 2020e)
Appendix IIID.
North Pole Cruise Schedule

<table>
<thead>
<tr>
<th>Year</th>
<th>Operator</th>
<th>Ship</th>
<th>No. Trips</th>
<th>No. of Passengers</th>
<th>Starting Fare</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>Quark</td>
<td>50 Years of Victory Nuclear Icebreaker</td>
<td>2</td>
<td>128</td>
<td>$31k</td>
</tr>
<tr>
<td>2020</td>
<td>Poseidon Expeditions</td>
<td>50 Years of Victory Nuclear Icebreaker</td>
<td>3</td>
<td>124</td>
<td>$31k</td>
</tr>
<tr>
<td>2021</td>
<td>Poseidon Expedition</td>
<td>50 Years of Victory Nuclear Icebreaker</td>
<td>3</td>
<td>124</td>
<td>$29.5k</td>
</tr>
<tr>
<td>2021</td>
<td>Ponant</td>
<td>Le Commandant Charcot Polar Class</td>
<td>3</td>
<td>270</td>
<td>$29k</td>
</tr>
</tbody>
</table>

2020-2021 North Pole Cruise Schedule
(Riley 2020; Ponant 2020d; Poseidon 2020; Quark 2020e)

Appendix IIIE.
North Pole Cruise Itineraries

Quark and Ponant North Pole Cruise Itineraries
(Quark 2020e (left); Ponant 2020d(right))
North West Passage Traveler Survey

Start of Block: Default Question Block

Q0 Thank you for participating in this Duke University Study on Northwest Passage Travel.

This survey is for travelers who are 21 years of age, or older, and who have taken, or who plan to take, an expedition-style cruise inside the Northwest Passage. We hope to learn what motivates travelers to undertake this type of journey. It is estimated that this survey will take 7 minutes to complete.

This survey is strictly confidential. You will not be asked for your name or email address and you will not be identified in the study results. You are encouraged to answer all of the questions, but you may skip any question you do not want to answer.

If you have any questions or concerns about the study you may contact Sharon Riley at sharon.riley@duke.edu, or the Duke Campus Institutional Review Board at campusirb@duke.edu.

Q1 Press "Next" if You have Read the Information Above and Agree to Participate in this Survey.

Next (1)

Q27 Have You Traveled to the Northwest Passage by Ship?

Yes, I have traveled to the Northwest Passage by Ship (1)  
Not yet, but I plan to travel to the Northwest Passage by Ship (2)  
I do not plan to travel to the Northwest Passage by Ship (3)
Q7 How satisfied were you with your trip to the Northwest Passage?

<table>
<thead>
<tr>
<th>How Satisfied Were You? (1)</th>
<th>Not At All Satisfied (11)</th>
<th>Somewhat Satisfied (12)</th>
<th>Satisfied (13)</th>
<th>Very Satisfied (14)</th>
</tr>
</thead>
</table>

Q3 Did You/Will You Travel All the Way Through the Northwest Passage (Atlantic to Pacific Ocean or Pacific to Atlantic Ocean) or Part Way Through?

- [ ] I traveled all the way through the Northwest Passage (either from the Atlantic to Pacific Ocean or Pacific to Atlantic Ocean) (1)

- [ ] I traveled through part of the Northwest Passage (part way into or out of the NWP) but not all the way through (2)

- [ ] Not Sure (Explain) (3) ________________________________
Q2 Who Did You/Will You Travel with in the Northwest Passage: (If you have traveled in the NWP more than once, you may select more than one answer)

☐ Abercrombie & Kent (1)

☐ Adventure Canada (2)

☐ Crystal Cruises (3)

☐ Hapag-Lloyd Cruises (4)

☐ Hurtigruten (5)

☐ Lindblad Expeditions (6)

☐ One Ocean Expeditions (7)

☐ Ponant (8)

☐ Quark Expeditions (9)

☐ Silver Sea Expeditions (14)

☐ Other Carrier (Specify) (11) ________________________________________________

☐ Private Ship (Name) (10) ________________________________________________
Q5 Please Select Your **Top 3** Reasons for Deciding to Travel to the Northwest Passage:

- [ ] Adventure (1)
- [ ] Arctic Scenery (2)
- [ ] Going Where Few Have Traveled (3)
- [ ] History/Following in the Footsteps of Explorers (4)
- [ ] Visiting Local Villages (5)
- [ ] Photography (6)
- [ ] Relaxation (11)
- [ ] See the Arctic Before it is Too Late (12)
- [ ] Viewing Climate Change Impacts (8)
- [ ] Wildlife Viewing (9)
- [ ] Other (Specify) (10) ________________________________________________

Display This Question:

If Please Select Your Top 3 Reasons for Deciding to Travel to the Northwest Passage: = Wildlife Viewing
Q29 What Type of Wildlife Did/Do You Most Hope to See?

Arctic Fox (8)
Beluga Whales (6)
Birds (4)
Caribou/Reindeer (9)
Narwhal (5)
Polar Bears (1)
Seals (2)
Walruses (3)
Whales in General (7)
Other (Please Indicate) (10)

Q31 How Important Were These Factors in Your Decision to Travel to the Northwest Passage:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Not At All Important (1)</th>
<th>Slightly important (2)</th>
<th>Moderately important (3)</th>
<th>Very important (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adventure (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arctic Scenery (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Climate Change Impacts (8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Going Where Few Have Traveled (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>History/Following in the Footsteps of Explorers (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visiting Local Villages (5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Photography (6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relaxation (11)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wildlife Viewing (9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (Specify) (10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
If Have You Traveled to the Northwest Passage by Ship? = Yes, I have traveled to the Northwest Passage by Ship

Q31 What Ended Up Being Your Favorite Aspect of the Trip?

- [ ] Adventure (1)
- [ ] Arctic Scenery (2)
- [ ] Going Where Few Have Traveled (3)
- [ ] History/Following in the Footsteps of Explorers (4)
- [ ] Visiting Local Villages (5)
- [ ] Photography (6)
- [ ] Relaxation (11)
- [ ] Seeing the Arctic Before it is Too Late (12)
- [ ] Viewing Climate Change Impacts (8)
- [ ] Wildlife Viewing (9)
- [ ] Other (Specify) (10) ________________________________________________
Q8 Were You Disappointed in any Aspect of the Trip to the Northwest Passage?

   No, I was not Disappointed in any Aspect of the Trip  (1)
   Yes, I was Disappointed in Some Aspect of the Trip.  (3)

Display This Question:

   If Were You Disappointed in any Aspect of the Trip to the Northwest Passage? = Yes, I was Disappointed in Some Aspect of the Trip.
Q33 Were You Disappointed in the Following Aspect(s) (Rate All That Apply):

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Not Disappointed (4)</th>
<th>Somewhat Disappointed (5)</th>
<th>Disappointed (6)</th>
<th>Strongly Disappointed (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activities (Type or Quality) (13)</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>Changes to the Itinerary (3)</td>
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<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Guides/Naturalists (5)</td>
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<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Hiking Quality or Availability (12)</td>
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<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Local Villages (7)</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>The Ship (4)</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>The Weather (6)</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>Wildlife Viewing (10)</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Other Aspect (Explain) (9)</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
Q34 If You Were Disappointed in Wildlife Viewing, Why Were You Disappointed?

Did Not See Enough Wildlife (1)
Did Not Get Close Enough to the Wildlife (2)
Did Not See Species I Hoped to See (Please Specify) (3)
________________________________________________
Other Reason (Please Specify) (4) ____________________________________________

Q9 Were You Ever Concerned For Your Safety During Your Trip?

No, I was not concerned about my safety (1)
Yes I was concerned about my safety (2)
Q10 On This Trip, Did You Visit Local Villages? (Check All That Apply)

☐ No (1)
☐ Yes, in Canada (2)
☐ Yes, in Greenland (3)
☐ Yes, in Alaska (4)

Display This Question:
If Have You Traveled to the Northwest Passage by Ship? = Yes, I have traveled to the Northwest Passage by Ship

Q11 Did You Buy Local Arts, Crafts or Products? (Check All That Apply)

☐ No (1)
☐ Yes, In Local Village (2)
☐ Yes, On the Ship (3)

Skip To: Q13 If Did You Buy Local Arts, Crafts or Products? (Check All That Apply) = No

Q12 If You Purchased Local Arts, Crafts or Products, Approximately How Much Did You Spend?

Amount (1) ____________________________________________
If Have You Traveled to the Northwest Passage by Ship? = Yes, I have traveled to the Northwest Passage by Ship

Q13 Did You Stay Overnight in an Arctic Town Before or After Your Trip?

- No I did not stay overnight in an Arctic Town (1)
- Yes I did stay overnight in an Arctic Town (2)

Q15 Have You Previously Visited Antarctica or the Arctic/Near-Arctic? (Check All That Apply)

- No (1)
- Yes, Previously Visited Antarctica (2)
- Yes, Previously Visited the Arctic or Near-Arctic (3)
Q16 Where Did You Previously Visit the Arctic or Near-Arctic? (Check All That Apply)

☐ Alaska (Fairbanks, Anchorage and South) (1)

☐ Alaska (Northern, such as Nome, Utqiaġvik (Barrow), Prudhoe) (2)

☐ Arctic Canada (3)

☐ Churchill, Manitoba (4)

☐ Greenland (5)

☐ Iceland (6)

☐ North East Passage (11)

☐ Northern Europe/Continental Norway, Sweden or Finland (7)

☐ Svalbard/Spitzbergen Norway (8)

☐ Russia (9)

☐ Visited Northwest Passage Previously (12)

☐ Other Location (Please Indicate) (10)

________________________________________________
Q17 Have You Previously Taken an Expedition or Safari-Style Trip (Other than the Arctic or Antarctica)

No (1)
Yes (2)

Display This Question:
If Have You Previously Taken an Expedition or Safari-Style Trip (Other than the Arctic or Antarctica) = Yes

Q18 Where Have You Taken an Expedition or Safari-Style Trip (Other than the Arctic or Antarctica) (Check All That Apply)

☐ Amazon (1)
☐ Costa Rica (2)
☐ Galapagos Islands (3)
☐ Patagonia (4)
☐ Tiger Safari in India (5)
☐ Wildlife Safari in Africa (6)
☐ Safari Somewhere Else (Specify Where) (7)

Other (Specify) (8) ________________________________________________
Q14 Did You Gather Information or Do Research About Your Trip to the Northwest Passage From Any of the Following? (Check All That Apply)

☐ Friends/Word of Mouth (1)

☐ Internet Research (2)

☐ Received Email About the Trip (7)

☐ Received Travel Brochure in the Mail (3)

☐ Travel Agent (4)

☐ Traveled With Same Company Before (5)

☐ Other (Explain-Optional) (6) ________________________________________________

Q34 You Are Almost Finished!
Next We Are Going to Ask 5 General Questions About You and Your Background.
You will not be asked to provide your name or contact information and you may skip any question you do not wish to answer. Survey responses are confidential.
Q20 How Old Are You?

21-29 (1)
30-39 (2)
40-49 (3)
50-59 (4)
60-69 (5)
70-79 (6)
80 or Better (7)

Q21 Which Best Describes You?

Female (1)
Male (2)

Q22 Which Best Describe You? (You May Select More than One Answer)

☐ Employed Full Time (1)
☐ Employed Part Time (2)
☐ Retired (3)
☐ Student (4)
☐ Volunteer Work (7)
☐ Working Age But Not Currently Employed (5)
☐ Other (Specify) (6) ________________________________
Q23 What Is Your Highest Education Level?

Grammar/Lower School (8)
Some High School (1)
High School Graduate (2)
Some College (No Degree) (9)
2 Year College or Trade School Graduate (7)
College/University Graduate (4)
Graduate/Professional Degree (5)

Q19 What Is Your Country of Origin?

________________________________________________________________

Q35 Thank You for Participating in this Survey!

Would You Like to Provide Any Additional Feedback?

No, I am finished with the Survey (4)
Yes, I would like to add... (5)

________________________________________________

End of Block: Default Question Block

(Duke 2020d)
Appendix IVB.
Focus Group Script and Consent

Focus Group Script -
“Motivations to Travel into the Northwest Passage”

- Introduction of myself and the study.

- Consent Process (per consent script).

- Thank you for participating in this research. I appreciate your input.

- Why did you decide to take this trip? What were the most important factors in your decision to join the voyage? (I will allow participants to discuss. If any of the “sales points” used in trip brochures are not mentioned I will ask whether those considerations mattered to them.)

- Did you achieve your goals in visiting the Northwest Passage? If you came for wildlife, did you see what you hoped to see? If for history, did the trip deliver on that objective, etc.

- Did the visit live up to your expectations? Was it what you hoped, more, or less?

- Did your favorite experiences match your initial reasons for visiting? Or did you enjoy some other aspect more than you expected?

- Participants may be invited to take an online survey.

- Thank you for participating and for sharing this voyage with me. If you have any concerns, or additional input, please contact me at the address on the card.
Consent Script

Focus Group Consent Information - Verbal
“Motivations to Travel into the Northwest Passage”

KEY INFORMATION

We are asking you to take part in a group discussion that is part of a research project to determine Traveler’s motivations for visiting the Northwest Passage. The discussion will be led by a Graduate Student from Duke University.

What is the purpose of this study?

We hope to learn why traveler’s choose to visit the Northwest Passage and how their experiences relate to their motivations.

What will happen if you take part in the group discussion?

You will be asked to discuss your motivations for taking the trip and how your experiences matched or differed.

The group discussion will be audio taped so I can capture your comments. I will erase the recording after making notes and your names will not be used or associated with specific comments.

How long will your part in this study last?

This focus group will take about 30 minutes.

Participation is completely up to you.

It is completely your choice to participate or not. If you decide to participate, you can answer just the questions you wish to, and it is up to you how much or how little to say. You can also leave at any time.

How will your privacy be protected?

Your name will not appear in any of our notes. You will not be identified in any report or publication of this study or its results. De-identified (anonymous) information may be made public or used for future research purposes.

Will you receive anything for being in this study?

Light refreshments may be provided. No other compensation will be provided.
You are encouraged to ask questions about this study!

I hope that you will ask questions now and at any time before, during, or after the study. I want you to have all the information you need so that you can decide whether to participate.

What if you have questions about your rights as a research participant?

I will provide a business card with contact information.

If you agree to participate in the Focus Group, please raise your hand.

(Riley 2019a)
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