

Extraordinarily Hazardous. Fog, water, ice and human precarity in the aquapelagic assemblage of the Grand Banks (northwest Atlantic)

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Abstract: This article examines the disruptive role that fog and associated weather conditions play in human livelihood activities undertaken on and around the Grand Banks of the north-western Atlantic, the affective atmosphere they create and their effect on human participants. After an introduction to the position and nature of the Grand Banks, relevant weather systems, ocean currents and iceberg trajectories through the region, the article profiles the nature of fishing (and, subsequently, oil extraction) in the area, of the precarity of livelihood activities undertaken and their reflection and inscription in various media. This approach identifies the manner in which aquapelagos (integrated terrestrial and marine systems) are not necessarily safe or stable entities – even in the shortest of terms – and can, indeed, represent assemblages in which humans are stressed and threatened. Within this, the case study examines the manner in which fog is not so much an uncomfortable intrusion into an otherwise manageable industrial operation as a key characteristic to be accommodated. The experience of fog is crucial to the social experience of the Grand Banks and of the aquapelago that is constituted around it. Substantial consideration is also given to the atmospherics of Grand Banks fog in literature and visual art and of the imaginative space created for it.

Keywords: Fog, The Grand Banks, fishing, human perception

The Grand Banks: position and features

The Grand Banks is an elevated, approximately 93,200 square kilometre area of continental shelf that peaks at between 15 and 90 metres below the ocean surface approximately 330 kilometres southwest of the southern tip of Newfoundland (Figure 1). The area is located at the point that the southerly flowing, cold Labrador Current first abuts against and

subsequently flows north of the warm, north-easterly flowing Gulf Stream. The contact of the moist, warm air occurring over the latter and the cold surface of the former causes advection (the horizontal transfer of heat), which produces concentrated water vapour that manifests as fog. The continuous nature of the two currents results in advection fog forming for the majority of the year (often reported as around 300 days p.a.¹), most predictably and intensely in mid-Spring to mid-Summer periods, when fogs are often prevalent for extended durations. As a result, the Grand Banks are commonly recognised as the most fog-bound area of the planet, an attribute that has caused major logistical difficulties for shipping, fishers and the oil industry. The reliable presence of fog in the region in mid-Spring to mid-Summer, even during windy periods,² coincides with the regular arrival of sea-ice and icebergs in the area, swept down from Greenland and the Canadian Arctic on the Labrador Current. As the passengers and crew of the RMS Titanic found in the southern area of the Grand Banks on April 14th 1912, the encounter of icebergs and ships can often be catastrophic for the latter. If this combination of phenomena were not hazardous enough, the Grand Banks is also commonly acknowledged as one of the most storm prone areas of the planet. As the US Department of Homeland Security Navigation Center of Excellence (USDHSNCE) (n.d.) has detailed:

The tracks of the storms leaving the North American continent frequently pass over or near the Grand Banks, particularly in the winter and early spring. In some cases the storms explosively intensify as they leave the east coast, and by the time they reach the Grand Banks they carry storm or hurricane force winds. These storms are sometimes called “weather bombs”, which is defined as a low pressure system that experiences a decrease in central pressure of 24 millibars in 24 hours. Winds can exceed 100 km/h (62 mph) and seas 15 m (about 50 ft).

As the USDHSNCE has summarised, with little (if any) exaggeration, the “combination of frequent storms, persistent fog, and the presence of sea ice and icebergs creates extraordinarily hazardous conditions for mariners” (my emphases).³ Given the extreme precarity of maritime operations in the area, at any time of year, and particularly in Spring and Summer, it is pertinent to consider why maritime livelihood activity has developed and persisted in this region. The answer is relatively straightforward. The mixture of warm and cold waters around the Banks enables nutrients to be constantly elevated from the shallows, ensuring an abundance of fish - principally cod, hake and haddock - in the area before they were catastrophically over-fished in the mid-late 20th Century. The high value of this product in global markets over an extended duration has ensured that there have been substantial profits to be made, however, precarious the livelihoods of those involved.

1 While this is not disputed, Bodaghkhani (2017: 14-15) provides an important qualification in that fog days per year is somewhat arbitrary as a measurement in that “the problem with focusing on a mean annual monthly number of days with fog is that if a day has only one hour of low visibility, it is treated the same way as a day with multiple fog observations” and also that fog only occurs for a fraction of any given day, meaning that a “fog day” is a day in which fog occurs at some point.

2 Fog - at sea and on land – is commonly associated with calm conditions but it can often aggregate in windy conditions if temperature variations and air humidity are sufficiently marked.

3 Precisely these kinds of conditions caused the “perfect storm” represented in Sebastian Junger’s (1997) eponymous account of the loss of the Gloucester fishing vessel the *Andrea Gail* with all hands in 1991 (subsequently adapted into an eponymous film, directed by Wolfgang Petersen, in 2000).

In the absence of any evidence to the contrary, it seems unlikely that the Grand Banks were fished by indigenous communities from (present-day) Newfoundland, the Canadian maritime provinces or the US New England states (the closest land areas to the Banks) in the period prior to European intrusion into the north-west Atlantic in the late Middle Ages. This is not to say that the maritime technologies, skills and/or collective enterprise required were beyond the capabilities of the Beothuk or Mi'kmaq peoples of the region but, rather, that there is no evidence that these were galvanised in pursuit of the fishery, perhaps due to the plentiful supply of fish in safer, more immediate offshore waters (Gilbert, 2011), thereby ensuring that the Grand Bank's fish biota remained unexploited by humans until western fishing commenced in the area in the late 1500s.

Holm, Ludlow, Schere et al. (2018: 1) have identified that the discovery of the Grand Banks and its recognition as a “super-abundant” fishing ground (for cod, in particular) by European mariners in the late 1400s and early 1500s precipitated a “fishing revolution” in Europe. This occurred because fish was “a high priced, limited resource” due to “an already



Figure 1 - Map of the northwest Atlantic shelf showing positions of Newfoundland and the Grand Banks and the Labrador and Gulf Stream Currents (Wikicommons, 2006 UTC).

-severe depletion of European waters” (Holm, Ludlow, Schere et al., 2018: 14). The authors have also contended that the exploitation of the Grand Banks by fishers, initially from the Basque region of Spain and, subsequently, from England and France, led to “a 15-fold increase of cod... catch volumes and likely a tripling of fish protein to the European market” (2018: 1). Given that the European market was geared to fresh fish supply, wholesale and retail, the extreme distance of the Grand Banks fishing grounds from Europe (c 3,750 kilometres)

mitigated against cod being delivered in sufficiently fresh form (given the lack of ice-production and/or refrigeration in this period) and required the fish to be processed, in this case, dried and salted. The small size of fishing vessels and the difficulty in establishing stable drying and salting environments on ships at sea in stormy waters meant that the processing enterprise was best undertaken on land, and, particularly, on the nearest land to the Banks: Newfoundland's southern shore. Seasonal drying operations led to individuals or small groups of mariners 'wintering over' to look after drying facilities thereby creating the first all-year round (micro-)colonies of Europeans on the island.

This pattern of resource exploitation created an aquapelago – a socially constructed space derived from island or coastal locations where humans have developed particularly concentrated engagements with the marine environment for their livelihoods (Hayward, 2012; Suwa, 2012). Evidence of the perception and constitution of this space has been outlined by Rankin and Holm in their (2019) study of the early maritime cartography of the region. Such studies illustrate, as Maxwell (2012) has ably identified, that there are places in the sea that merit attention as assemblages in their own right and that can be inscribed – in various ways, in various media – in a manner that “sets subjective and objective epistemologies into productive dialogue” (Maxwell, 2012: 23).

From the early 18th Century on, as European colonial fishing communities became established in the north-west Atlantic, the central area of the aquapelago – i.e. the Grand Banks – was linked through separate but parallel industrial enterprises to communities on the shores of Newfoundland, New England, the French micro-colony of St Pierre and Miquelon and on to major markets in Western Europe, the north east coast of America and European colonies established in the West Indies⁴. While the broad settlement of New England derived from various factors, Newfoundland and St Pierre and Miquelon were founded as terrestrial adjuncts of the maritime area of the Banks, as exploited by European powers, and, thereby, the livelihood activities on the Banks preceded and prefigured the establishment of the land colonies.

The decline of the Grand Banks fishery and the near-total collapse of cod stocks in the 1990s, following peak, unsustainable extraction in the 1970s, is well known⁵ and marks the (current) endpoint⁶ in the Banks' active maintenance as the focus of Newfoundlandic and trans-Atlantic aquapelagic systems focussed on cod extraction. This illustrates a key point about aquapelagos present in early discourse about them but developed more thoroughly by subsequent discussants (e.g. Guerin, 2019), namely that, as entities “constituted by human presence in and utilisation of the environment” – rather than being ‘objective’ geo-physical entities – they “come into being and wax and wane as climate patterns alter and as human socio-economic organisations, technologies, and/or the resources and trade systems they rely on, change and develop” (Hayward, 2015: 5). In this sense, aquapelagos are “performed entities” (Hayward, 2012: 5) and their performances are finite in duration. They also involve

4 Indeed, the West Indies were linked by an exchange of salt cod, intended for enslaved Africans working on plantations, and molasses, which were subsequently exported to Newfoundland and used for both food and rum production (Tye, 2015).

5 See, for example, Myers, Hutchings and Barrowman (1997) or Kurlansky (1997) for a more generalistic overview.

6 While there is little scientific evidence (or belief) that aquatic biota on the Banks can return to its former levels in any foreseeable future, it is not impossible.

sets of subsidiary performances that involve humans interacting with various aquapelagic actants. Enter the fog...

Fog on the Banks/ Humans in the fog

While the Grand Banks was an “extraordinarily hazardous” area to fish from its earliest stages, with regular losses of ships, an industrial innovation raised the precarity of the enterprise for the humans involved in hauling the catch from the icy waters of the region. Until the early 1800s, fishing was undertaken by crewmembers casting and hauling in handlines from the decks of schooners. While arduous, the schooners’ decks and gunwales offered some stability, a degree of protection from being washed overboard and some shelter from the harshest aspects of the elements. However, initial experiments with launching dories (small boats with high flared sides) from schooners showed that handline fishers working in these over a dispersed area could haul in greater volumes of fish than the same number could working alongside each other on a schooner deck. As a result, by the 1860s dory fishing was the dominant industrial practice (Stoodley, 2021). It was also a far riskier one. The risks were multiple and included being swamped in high seas and the regular danger caused by fog.

Fog is particularly disruptive to human perception and navigation capabilities. Dense concentrations of water vapour foreshorten the limits of human visual perception and also impair our abilities to distinguish objects and their proximity through diminishing – ‘greying out’ – the stimulus contrast (the ratio of foreground to background luminance) between dark and light objects, thereby obscuring details (Figure 2). As Harley, Dillon and Loftus (2004: 198) have identified, “although there are many ways in which visual stimuli may be degraded, a large body of research indicates that stimulus contrast... is critical in determining the fundamental response of the visual system.” Their study also suggests that impairments to distinguishing visual stimuli might complicate mental processing of such stimuli and, consequently, adversely impact recognition, memory and related cognitive operations:

The data from all the experiments allow the conclusion that some function of stimulus contrast combines multiplicatively with stimulus duration at a stage prior to that at which the nature of the stimulus and the reason for processing it are determined, and it is the result of this multiplicative combination that determines eventual memory performance. (Harley, Dillon and Loftus, 2004: 198)

Put more simply, low-contrast visual environments can be confusing and impressions gained from them can be unreliable. Persistent fog thereby impairs human abilities to navigate through visual orientation (which relies on a positional sense that utilises memory) and/or to track their trajectories through space.



Figure 2 – ‘Grey-out’ view from deck of ship on the Grand Banks (National Oceanic and Atmospheric Administration, 2014)

Acknowledging fog’s complication of standard perceptions, Martin (2011) has focused on the human experience of being in fog and of the bodily apprehension of it, asserting that fog acts as a “gathering-force, intensifying the immanent entanglements of body with world” that give fog – and human experience of fog – an associative dimension:

Through its opacity fog connotes feelings of density and dislocation, the suspension of water droplets mid-air communicating a sense of inaction, of stillness... Alongside such representations the presence of fog also forces a phenomenological engagement with embodied immersion: one's body enveloped and entwined with space. (Martin, 2011: 454)

Supporting this characterisation, Martin quotes Michel Serres’ (2008: 69) contention that “Night is empty or hollow, fog is full; darkness is ethereal, mist is gaseous, fluid, liquid, viscous, sticky, almost solid.” These perspectives accord with more general work that has been undertaken on what has been termed the “atmospheric turn” in anthropology (see Griffero, 2019) and, more specifically, to critical work addressed to perceptions of space and of being in space. Vale’s work on the mistiness of the Azores (2018) is a striking example of the latter. She asserts that, “bodily apprehension-immersion” and processes in which “the subject recurrently and continually receives impressions” are crucial to experiences and representations of the islands (Vale, 2018: 92). More broadly, in a contention that could serve as a summary of the framework for this article, Hodges (2022: 122) contends that the atmospheres – understood as affective dimensions of places:

... are more than just isolated destinations, material resources or idyllic representations. They are ecosystems, spheres of influence and sites of collision between competing systems: of the colonial and indigenous, the geologic and oceanic, the gaseous and the liquid. [And to] study these environs involves thinking about their relationship to wider networks and assemblages, both real and imagined.

Returning to fog with such a conceptual framework, Martin identifies that his discussion derives from considering the logistics of movement-space and of how fog disrupts this and needs to be accommodated within such logistics. He moves beyond a discussion of foggy atmospheres to argue that:

... fog positions us in the midst of the aerial, intensifying the schism between lightness and heaviness, entangling us with space in a determinedly material sense. By highlighting such a problematic of immersion, I suggest that fog momentarily strands us in the instant of disorientation, leaving us to ponder our conditional engagements with the near and far. (Martin, 2011: 454)

Drawing on his own experience of walking along the English coast in fog, he reflects that:

... the fog was not simply disorienting in its thickened presence, it also gathered together the spatial, illustrating in an acute sense the relational tenacity of space. Similarly, the corporeal relationship to this phenomenon was such that the bodily inhabitation of space was intensified. (Martin, 2011: 455)

Shifting from Martin's focus on the aerial geography of the English coast to the present article's address to aquapelagic experience on the Grand Banks, we can regard the latter in terms of an "admixture" of ocean, air, ship and ice. Martin's discussions of the physical sensation of fog – which are echoed by the descriptions of being in fog on the Grand Banks detailed in the subsequent section of this article – are not simply imaginative. While humans do not have dedicated physical mechanisms to detect changes in the moisture and humidity of an environment similar to those of insects (for which these are an important environmental sensing mechanism), Filingeri (2015: 763) has identified that in humans "the sensory integration of cutaneous thermal (i.e., evaporative cooling) and tactile (i.e., mechanical pressure and friction) sensory inputs" function to detect skin wetness and humidity and, thereby, perform a similar hygroreceptive function. Feelings of clamminess are therefore very real and, in some individuals, can lead to senses of claustrophobia, of being 'hemmed in' by humidity.

And then there's the auditory element. The water particulates that constitute fog impair human auditory perception, inhibiting the transmission of sound and making sounds fainter and, thus, less easy to perceive, and also blurs their timbres and attack, making their nature and sources both ambiguous and ill defined. Fogs are also tricky. As Shagapov and Sarapiulova (2014: 62) have identified, there is no necessary correlation between the density of fog and the attenuation of sound, "when the mass content of water in drops increases within a certain range, a damping coefficient may decrease; i.e., a thicker fog may turn out to be more acoustically 'clear'" – a phenomenon that is confusing in itself. Similarly, "random inhomogeneities" within fogs may contribute to the apparent "scattering" of sound in foggy spaces (Rozenfeld, 1983: 231). Combined with the disorientations produced by visual impairment and related perceptual-cognitive difficulties, the simple experience of being in fog can be perceived as fraught even

before issues of the safe management of the situation and/or tasks ascribed during it are considered.

Dense fog's ability to cloak objects close to ships combined with its aforementioned capacities to distort sound and an intensified human concentration on sound in such vision-impaired environments has led to particularly disconcerting experiences on the Grand Banks in the Spring-Summer period when drifting ice is at its peak. Aspects of this were calmly understated in reports by US Coast Guard ice patrol vessels sent to the Grand Banks in 1920 to monitor ice incidence in the form of large icebergs and smaller fragments known as growlers (so-called due to the animalistic growling sound of trapped air that escapes from them as they melt) in shipping lanes. Lieutenant Commander John Boedeker, captaining the cutter *Androscoggin* in April-May, for instance, noted that after a brief period of clear weather on April 30th he steamed northward to 43° 44' N, 48° 55' W until:

... we passed a few small pieces of ice close alongside, and stopped at once to await daylight, as it was thought that this ice indicated the presence of a berg or a growler in the vicinity. When completely stopped and drifting, the swash and breaking of the sea against the ice could be distinctly heard about two points on the bow and very close aboard. The sound was unmistakable, but the fog was too dense to make out the berg. At 4.20 a.m., there was a loud, heavy rumbling like thunder, accompanied by a heavy bumping noise and splashing [as a section of ice broke off and fell into the water]. (US Coast Guard, 1920: 11).

Fortunately, the *Androscoggin* was unaffected by this 'close call' but the sonic scenario enacted in the dark, and the material presence it indicated as looming close by in the fog, is a vividly dramatic one.

As previously outlined, the drive for great productivity on the Grand Banks led to increased numbers of small dories being launched from schooners on the banks, usually crewed by two fishers. The boats carried lines, tools, bait, food and water for the crew and foghorns and/or other forms of noisemakers (including conch shells⁷). The latter were necessary in case the dory lost sight of its 'mothership' in the fog and had to signal its whereabouts in order for the mothership to try and locate and retrieve it. Crew remaining on the schooners were tasked with listening out for dory noises and producing their own, using similar equipment, to help the dory crews to locate the ships and try and approach them. However, as the previous discussion of sound transmission in fog outlined, this was not a straightforward procedure – especially in stormy conditions that were both noisy in themselves (with thunder, wind, crashing waves) and made it difficult for dories and ships to locate and approach each other. Additional difficulties arose in fog when other vessels were sailing through fishing areas, with the risk of collisions that were commonly fatal for dorymen. There are extensive examples of dory crews that could not reconnect with their motherships by nightfall and that had to wait until morning to try and use the increased visual opportunities delivered by daylight to find their ships. Others spent longer periods adrift before being picked up by their parent ship or another vessel (which could result in them being carried back to a remote port and having to find their way back home independently) and many examples of crews who simply disappeared, presumably drifting out of populated fishing areas and shipping lanes.

⁷ Conch shells were used to signal for various purposes in Newfoundland, including when small fish arrived inshore, hence their common description as 'bait horns'.

Even for those crewmembers who returned to their motherships, exposure, frostbite and/or injuries were common.



Figure 3 - Winslow Homer's 'Lost on the Grand Banks' (1885) (Wikimedia Commons).

While the early phases of the fishing revolution enacted on the Grand Banks were largely an anonymous, unheralded exercise, the experiences of hardy fishers out on the stormy, fogbound seas were increasingly represented in various media in the late 1800s (in a period when dory fishing was already in decline). These experiences were ably represented by the New England painter Winslow Homer,⁸ who produced a number of significant maritime themed works after sailing on schooners operating out of Gloucester and talking with the crews about their experiences (Provost, 1990: 20). One of his best-known works is 'The Fog Warning' (1885), which shows a schooner on the horizon dwarfed by an ominous fog bank rolling in towards it and a solitary fisherman in a dory gazing back at both. The fisherman's concerned glance suggests an anxiety about whether he will reach his mothership before it becomes obscured from view. Complementing this painting, Homer's work 'Lost on the Grand Banks' (also 1885) ably illustrates key themes explored in this article by representing a dory pitching on a wave with no mothership in sight. Its crewmembers are depicted staring intently off-canvas, as if straining to see their schooner in the foggy gloom, with the colours of water and sky rendered in similar palettes and merging at the mid-right of the image. While these two paintings are not direct visual records of actual events, they are substantially researched and are thereby insightful about issues regarding the precarity of fishing on the Banks and convey the theme of stoicism in the face of adversity that attracted artists to represent them.

⁸ Homer was a New England landscape painter who turned to marine themes after visiting the UK in 1881-1882 and painting fishing themes around Cullercoats, a coastal town on Tyneside associated with the North Sea fishery and home to small artists' colony (Newton, 2001). Inspired by the topic, he returned to the United States and based himself in Prouts Neck, Maine for the remainder of the decade, working on various fishery themed canvases.

Along with Winslow's paintings, perhaps the best-known representation of fishing on the Grand Banks was supplied by British journalist and novelist Rudyard Kipling, who resided in Brattleboro, Vermont, between 1892-1896. Intrigued by tales of the New England fishery related by a local doctor named James Conland, who had worked on it in the 1850s-1860s, Kipling conducted research in Gloucester and Boston, familiarised himself with charts of and general information about the Grand Banks (Ormond, 1995: xii-xvii) and dramatised aspects of these in his novel *Captains Courageous*, published in 1897. One of the most striking aspects of the novel, for this article at least, is the representation of fog, particularly in Chapter 5, which sets the scene of fishing on the Grand Banks, which he describes as "a triangle two hundred and fifty miles on each side a waste of wallowing sea, cloaked with dank fog, vexed with gales, harried with drifting ice, scored by the tracks of the reckless liners, and dotted with the sails of the fishing-fleet".⁹

Given that the volume of schooners fishing on the Banks had declined by the 1890s, the crowded scene is perhaps more representative of an earlier period but the description of the "dank" cloaking fog is astute and his extended description of its effects has some credibility:

For days they worked in fog—Harvey at the bell—till, grown familiar with the thick airs, he went out with Tom Platt, his heart rather in his mouth. But the fog would not lift, and the fish were biting, and no one can stay helplessly afraid for six hours at a time. Harvey devoted himself to his lines and the gaff or gob-stick as Tom Platt called for them; and they rowed back to the schooner guided by the bell and Tom's instinct; Manuel's conch sounding thin and faint beside them. But it was an unearthly experience, and, for the first time in a month, Harvey dreamed of the shifting, smoking floors of water round the dory, the lines that strayed away into nothing, and the air above that melted on the sea below ten feet from his straining eyes... They made another berth through the fog, and that time the hair of Harvey's head stood up when he went out in Manuel's dory. A whiteness moved in the whiteness of the fog with a breath like the breath of the grave, and there was a roaring, a plunging, and spouting. It was his first introduction to the dread summer berg of the Banks, and he cowered in the bottom of the boat while Manuel laughed.

Homer's painting and Kipling's novel merit reference in this essay given that the everyday experiences of fishermen from isolated coastal areas were rarely – if ever - regarded as significant (and/or directly reported) outside of the oral culture of their home communities or the broader fishing community in the period. Those accounts that have survived from this context primarily take the form of songs and verses that were collected by early-mid 20th century folklorists. Elizabeth Bristol Greenleaf and Grace Yarrow Mansfield, for instance, who collected in northern Newfoundland in the 1920s, heard "many songs... about life while out fishing on the Banks" (Greenleaf & Yarrow Mansfield, 1933: 228), including ones that celebrated the adventure of the experience – such as 'The Banks of Newfoundland' (Greenleaf & Yarrow Mansfield, 1933: 230-231) and others that recorded fishers separated from their vessels and/or "the loss of ships and men" – such as 'The fishermen of Newfoundland/The good ship Jubilee' (Greenleaf & Yarrow Mansfield, 1933: 285-287). Historians, folklorists and local writers who worked in areas of regional Newfoundland in the mid 20th Century also were also given various accounts of dorymen lost for days, weeks and even months before being able to return to their home ports by either the protagonists or

⁹ This quotation is derived from the unpaginated Chapter 5 of the online version detailed in the references section of this article.

members of their communities. The story of George May and Charles Williams, who sailed to the Grand Banks in 1927 on a schooner operating out of Fortune Bay, as recounted in Newfoundland historian L.W. James's edited 1961 collection *The Treasury of Newfoundland Stories*,¹⁰ provides one such example:

They had not gone more than a few hundred yards from the vessel when the fog, with the suddenness for which it is noted on the banks, closed down upon them. Bank fishermen are well-accustomed to thick fog, however. May and Williams continued on their way toward the trawls. They were unable to find them, though they spent an hour searching where they thought them to be. They decided to return to the ship, which was to prove as elusive as the trawls. For five hours they rowed and sailed, but never a sign or sound of her greeted them. The dreaded realization dawned in their minds that they were, for the time being at least, quite hopelessly lost:

Brave fishermen that they were, they remained cool, lowered their sails and lay down on the floor of their dory to have a night's rest, in the hope that daylight would find the weather clearer and enable them to locate their ship. The only food they had in the dory was twenty biscuits, and there was not a drop of drinking water. Imagine their bitter disappointment when daylight broke next morning to find the weather just as thick and the fog as dense as before. (Unattributed, 1961a)

Realising that they were unlikely to rendezvous with their ship, they attempted to navigate their way back to St. Johns (Newfoundland) with the aid of a small compass. Either their navigation was awry or they were being carried away by currents but by day 5 – with the heavy fog still in place – they were tired, severely afflicted by the cold and wet and suffering from thirst. Fortuitously they came upon an iceberg and managed to break off ice to suck. Weak and hungry they were eventually discovered on day 11 by the steamship *Albuera*, 600 kilometres from where they had initially become lost, and were given passage to the English port of Tilbury (Unattributed, 1961a). Other dorymen were not so lucky, such as William Butt, the companion of William Strickland, who set out to the Grand Banks from Burin on a schooner in April 1897. Once on the Banks their dory departed from its mothership on a “fine but misty morning” before the weather turned and they found themselves lost in an increasingly windy “thicken-fog” (Unattributed, 1961). A not uncommon fate awaited them:

When darkness came the wind was a gale from the southeast and the sea was running high; it required all our skill and strength to keep our boat from filling. At about 10 o'clock we heard a steamer's fog hooter but, although we pulled frantically in the direction of the repeated sound, which seemed for a while to be looming nearer to us, no lights of a receiving steamer were seen and the mournful bellowing died away in the dark distance. Again, perhaps near midnight, another whistle - clear and distinct - was heard and our hopes were raised only to be shattered once more. (Unattributed, 1961b).

The next six days proved traumatic. After sighting land low on the horizon on the fourth, the pair rowed towards it, only for Butt to expire. After two more days afloat, and severely weakened, Strickland was finally rescued by a fisherman and carried ashore at Ramea Island, off the south coast of Newfoundland.

¹⁰ The authorship of individual entries in the collection is not specified.

Along with these stark accounts of misadventure, one of the most detailed subjective descriptions of dory-fishing in adverse conditions was provided by Australian sailor and journalist-adventurer Alan Villiers in 1952 when he tried (sole) crewing a dory from a Portuguese ship named the Argus “for six cold and foggy weeks” in Spring 1950.¹¹ I quote at length to convey the experience Villiers recalls having in the fog:

...I was mighty glad to call it tried and get on my way back to the ship.

But that infernal fog had blown down. An arm of it was between me and the Argus. Suddenly I found myself alone on the sea, and the ghostly arms of the horrible fog were wraithlike around me! Well, I could anchor and wait. Antonio Rodrigues had said to do that.

“Don’t ever panic,” he had said. “The panicked are dead.”

But the fog didn’t look like the really determined kind. Now and then I could see the gray sky above; sometimes there were lesser clearings. I hoisted the little mainsail and the minute jib, for there was a gentle sailing breeze upon the water. I had my bearings, and I put the boat compass on the thwart before me.

With one of the dory’s three small oars down to leeward as leeboard and rudder, I made grimly off along the bearing that I’d had of the ship, and kept a smart lookout for other dories. I had a conch shell to blow. I also had a loaf of bread, and water enough for a couple of days if used sparingly.

When you go off in a dory, you expect to come back the same day. Dorymen never prepare themselves or their boats against calamity. If it comes, they take it in stride...

After a while I heard a schooner sounding her great fog siren, for they all carried air-raided sirens at their mastheads to summon the dorymen in fog. But where was this schooner? Was she the Argus? I didn’t know. I had no judgment of sound direction in fog.

I knew the distinctive signal the Argus used on her fog bell, the big old church bell which hung in the mizzen rigging. I blew this signal on my conch shell and waited for a reply.

None came. Then that siren wasn’t aboard the Argus, or I’d heard it through some freak condition in the fog. I carried on. I blew my conch again.

What was that? An echo? I blew again. It was no echo! It was a doryman sounding our signal, an Argus man, in the fog like myself. I shouted to catch his attention, to check my compass course with his. He shouted back. I saw nothing but the white and ghastly fog and the greasy cold swirling of the wretched sea.

And then, indistinct at first and almost unbelievable, I saw the triangle of a tiny sail harden in the surrounding murk; a roll of white water gurgled at the little laden bow. There was a dory! No. 16! Baptista, the First Fisher—I couldn’t strike a better man than that. He grinned....

Once I had found the First Fisher, I knew I was all right. After a quarter of an hour of gliding through the pall of fog, a white monstrosity suddenly loomed above us, right alongside. It looked like an iceberg...

“Argus,” Battista grinned. “We come back, no?”

(Villiers, 1952: 596)

¹¹ One of the most significant audiovisual representations of dory fishing on the Grand Banks, John O’Brien’s CBC documentary *The white fleet: Portuguese fishermen on the Grand Banks of Newfoundland*, dates from 1967. The dories depicted in the film, many of the items carried in them and the fishing and processing practices are closely similar to Villiers’ account and also recall Homer’s (previously discussed) paintings.

Villiers' account suggests that his hygroreceptivity led him to feel uncomfortable, disorientated in and even menaced by the fog (as conveyed in phrases such as “the ghostly arms of the horrible fog were wraithlike around me” and “the white and ghastly fog”) compounded by the anxiety about losing the mothership, its safety and comforts. While colourfully phrased, the senses of stress he records are all the more credible since he was an experienced sailor in cold water climes waters, having previously sailed on Antarctic whaling ships in the Ross Sea and having written of these experiences in his book *Whaling in the Frozen South* in a relatively prosaic manner.

Although it peaked in the mid-late 1800s, dory fishing from schooners continued until the 1960s, when it was finally superseded by modern ships that were equipped with sonar, radar and electronic navigation systems that enabled them to more precisely target fish masses from single vessels. Large, industrial-scale fleets of ships briefly dominated the fishery before they decimated regional fish stocks, leading the Canadian Government to declare a moratorium on fishing in the area of the Grand Banks that fell within the 322 kilometre (200 mile) Economic Expansion Zone it had declared in 1992 (Figure 4). The moratorium has been maintained, albeit with variation and no little controversy, to the present (Rose and Rowe, 2022).¹² The period of the dory fishery discussed in this article was thereby just over a century in duration and is now remembered, with some nostalgia, as a time when fish were plentiful and when human grit and labour could secure favourable returns. The sensory confusion, stress and frequent injury and loss of life experienced by dorymen is less often recalled but is nonetheless significant as an example of the manner in which capitalist enterprises can require and inveigle poor workers into working in extreme conditions – in this case, into one of the foggiest, stormiest (and frequently sea-ice populated) areas of the planet's oceans. In this regard, we might view the dorymen's experiences as an effective experiment into human performance under stress and disorientation whose results were recorded, subjectively and haphazardly, in a range of cultural media that can only produce the partial glimpses of and speculations about experience. This history is, nevertheless, significant in itself – as a cluster of vivid experiences – and as another on extractivist capitalism's demanding deployment of labour in harsh and demanding environments while over-exploiting the resource concerned.

¹² Also see Thornhill Verma (2019), for a historical overview of the determinations and implications of over-fishing in the region.



Figure 4 – Extent of Canada's Economic Exclusion one and relationship to the Grand Banks (Herit Newfoundland and Labrador, 1997)

Fog, flight and oilrigs

While the fog, storms, ice and all-encompassing cold may no longer play havoc with dorymen's' lives, the decline of the Grand Banks fishery was followed by a new form of extractivist exploitation in the eastern part of the area, the development of oil-drilling, led by the massive Hibernia platform, which commenced production in 1997 after a fraught exploration and construction process in which the area's full range of environmental hazards had to be negotiated.¹³ Subsequent wells have been developed nearby on the Terra Nova and White Rose fields and local conditions have continued to cause considerable logistical difficulties for their operations, particularly in terms of rotating staff and provisioning by means of ships or helicopters. Difficulties in landing the latter on platforms during foggy daytimes have led to frequent cancellations or turn-backs (and operator pressure to compensate with –

13 Including the loss of the Ocean Ranger in 1982, a semi-submersible drilling unit that sank with 84 crewmembers onboard, leaving no survivors.

equally problematic – flights on clear or semi-foggy nights) and other weather problems have also contributed to a number of crashes by helicopters working the route. These issues were explored in the 2010 Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) inquiry following the 2009 crash of a Cougar Helicopters flight returning from a platform that resulted in the death of those on-board. Along with its examination of procedural and engine part issues, the C-NLOPB report documents that piloting and traveling on helicopters over the Grand Banks to rigs located on it is a singularly risky exercise. The difficulty of predicting and safely negotiating fog patterns around the Grand Banks oilfields has been documented and analysed by Bullock, Isaac, Beale & Hauser (2016) and Bodaghkhani (2017). Referring to his case study area – the Hibernia field – in particular, Bodaghkhani (2017: 20) has contended that fog:

... forms and develops due to multiple local microphysical, dynamic, and radiative processes; these are in turn influenced by boundary layer and synoptic-scale meteorological conditions ... The ways these various influences work in combination and opposition varies considerably between locations, and consequently understanding fog and improving predictability typically requires detailed research on specific locations of interest.

Until such detailed observations, predictive models and monitoring of fog for incoming and outgoing air transport is developed, the precarity of helicopter transit between Grand Banks rigs and shores can be considered alongside dorymen's experiences on the open seas as a direct effect of working in such fraught environments.

Conclusion

As this article has detailed, the Grand Banks are as singularly inhospitable to human perceptions and activity as they are “extraordinarily hazardous” to the conduct of marine livelihood enterprises in general. The creation of such a workplace in the stormy, fogbound area of ocean has resulted from high commodity prices and product demands, initially from the European market for fish and, more latterly, from the global thirst for oil in the final phase of a carbon dependent global economy. With particular regard to the working conditions of dorymen, which have been the principal focus of this article, the experience of being upon the seas in fog and, more broadly, of inhabiting the affective atmosphere of a foggy oceanic space, represents a unique episode in human history. Capitalism can be regarded as having provided the stage, script and directions for a group of human actors to interact with the complex actant system of the north-west Atlantic. Neither the dorymen's experiences – let alone multiple losses of life, injury and/or psychological trauma – are incidental aspects of the fishery; they are key aspects of the human experience of the industrial operation and the low value it placed on human safety and comfort. The role that fog played in this drama is notable. While seemingly a softer, less aggressive agent than storms, raging seas or icebergs, its disruption of human perceptions and abilities to navigate space reveal it to be a singularly problematic entity for humans encountering it for extended durations. Unlike the classic polluted urban fogs of the 19th-mid 20th centuries (Corden, 2015), the Grand Banks' fogs contained no particulate threats to injure human health but, like the urban places that were afflicted by cold seasonal envelopment, severe stress was put on standard perceptual and behavioural modes by being placed within them. In this manner, the Grand Banks provides

an unlikely complement to the streets of cities such as London, where another aspect of unfettered capitalist expansion proceeded without adequate address to issues of human safety and comfort. The study of affective atmospheres and human perceptions, disorientation and stress detailed in this article attempt to centre the former with regard to livelihood activities as the *raison d'être* of such immersions and to keep focus on the extractivist enterprise more generally as it bends human actors to its will.

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