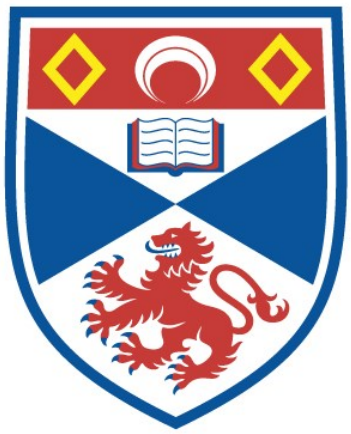
THE DUNDEE ARCTIC TRADE, 1858-1922: PEOPLE, CONNECTIONS AND SPACES ON THE PERIPHERIES

Matthew Warren Ylitalo

A Thesis Submitted for the Degree of PhD
at the
University of St Andrews



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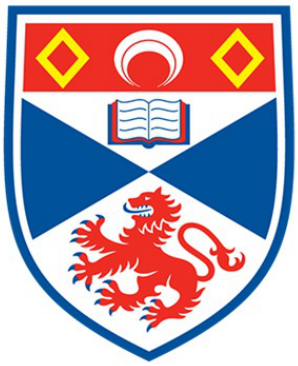

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Abstract

Existing whaling historiography frames the end of the traditional whaling era in the Arctic along established interpretational and methodological paradigms. These perspectives consider the industry almost entirely within the context of ships, men, whales and the sea. This thesis shifts its attention to the industry's historical peripheries to examine the people, connections and spaces which existed within Dundee's widening scope of Arctic commercial activities from 1858 to 1922. As bowhead whale populations diminished, the trade began to diversify its financial base of support, explore additional natural resource to exploit on an industrial scale, and change the dynamics of its labour requirements. Going beyond the men on whaling ships, the thesis seeks to identify what other people and activities defined this enterprise. Research therefore introduces the term 'Arctic trade' to comprehend its investigation into this transitive era more fully. The thesis adopts a transnational/global history approach, enabling it to shift from a national perspective to a changing mix of local, regional and transoceanic historical scales. This makes it possible for research to recognise the various social and spatial boundaries within the Arctic trade and study where they can be found. Research also considers the ways in which the industry became a variable social anchor within the transmaritime communities it engaged.

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Writing Conventions

In nineteenth-century Dundee, spellings for occupational names often collapsed two words into one (for example, shiprigger). For consistency, all occupational spellings, where applicable, are rendered the same way. Dates are presented in a day-month-year format (for instance, 26 February 1887). All references to amounts of money are preceded by the British pound sterling symbol (£), and large cash figures are usually rounded to the tens place. Single coin divisions may be written out (e.g., five shillings), and mixed amounts are abbreviated, such as £12 6s 7d.

All vessel names are written in italics (such as *Terra Nova*), unless they are presented otherwise in articles and documents. Quotations are recorded as they appear, and therefore, they may supersede all the above writing conventions. Ellipses and brackets are occasionally included to condense or help clarify text for the reader. Dundee obtained city status in 1892. References to it as a 'town' or 'city' apply accordingly.

Abbreviations

A.B.	Able-bodied seaman
AFCo	Arctic Fishing Company, Dundee
AGM	Annual General Meeting
AGS	Antony Gibbs and Sons, London
AHS	Abertay Historical Society
BFCo	Balaena Fishing Company Ltd, Dundee
BPP	*British Parliamentary Papers*
B.S.	Boatsteerer
BT	Board of Trade, Great Britain
CA	Crew Agreement or 'Agreement'
CDA	City of Dundee Archives
CLIP	Crew List Index Project website
CNS	Centre for Newfoundland Studies, Queen Elizabeth II Library, MUN, St John's, Newfoundland, CA
cwt	Hundredweight (equivalent to 112 pounds, 8 stone or 50.8 kg)
DA	*Dundee Advertiser*
DAFCo	Dundee Arctic Fisheries Company Ltd.
DAWE	Dundee Antarctic Whaling Expedition, 1892-93
DC	*Dundee Courier*
DD	*Dundee Postal Directory*
DET	*Dundee Evening Telegraph*
DHT	Dundee Heritage Trust
DNLB	*Dictionary of Newfoundland and Labrador Biography*
DPFCo	Dundee Polar Fishing Company Ltd
DPJ	*Dundee People's Journal*
DSWFCo	Dundee Seal and Whale Fishing Company Ltd
DYB	*Dundee Yearbook*
EHR	*Economic History Review*
ENL	*Encyclopedia of Newfoundland and Labrador*
HBC	Hudson's Bay Company
HBCA	Hudson's Bay Company Archives, Winnipeg, Manitoba, Canada
IJMH	*International Journal of Maritime History*
LAC	Library and Archives, Canada, Ottawa
LHC-DCL	Local History Centre, Dundee Central Library
L.M.	Linemanager
LMA	London Metropolitan Archive
McMG	The McManus: Dundee Art Galleries and Museums
MHA	Maritime History Archive, MUN, St John's, NL
MLG	Mitchell Library, Glasgow
MMO	Mercantile Marine Office
MSA	Merchant Shipping Act, [Year]
MTLC	*More Than a List of Crew* website hosted by MHA, MUN
MUN	Memorial University of Newfoundland, St John's, NL
NL	Newfoundland and Labrador

NLHC	Newport Library and Heritage Centre, Newport, Scotland
NLS	National Library of Scotland, Edinburgh
NMM	National Maritime Museum, Greenwich, London
NMS	National Museum of Scotland, Edinburgh
NRS	National Records of Scotland, Edinburgh
O.N.	Official Number of a registered British merchant vessel
O.S.	Ordinary seaman
PA	Parliamentary Archives, London
PANL	Provincial Archives of Newfoundland and Labrador, St John's, NL
RGS	Royal Geographical Society/Institute of British Geographers
RGSS	Registrar General of Shipping and Seamen
SAT	Social Anchor Theory
SMA	Shetland Museum & Archives, Lerwick
SME	Small and medium-sized enterprises
SPRI	Scott Polar Research Institute, Cambridge University, Cambridge
S.S.	Steam ship
SWC	Southwest Collection, Texas Tech University, Lubbock, Texas
TNA	The National Archives, Kew, London
TWFCo	Tay Whale Fishing Company Ltd, Dundee
UDAS	University of Dundee Archive Services
UDMS	University of Dundee Museum Services
UGAS	University of Glasgow Archive Services
UStASC	University of St Andrews Special Collections

Introduction

From the mid-seventeenth century to the First World War and just beyond it, seafarers in British ships prosecuted the 'Northern Whale Fishery' in quest of the bowhead whale (*Balaena mysticetus*). They also regularly hunted the bowhead's close cousin, the North Atlantic right whale (*Eubalaena glacialis*).[1] Turning blubber into oil and lubricants for industrial and domestic consumption, crews scoured the Greenland Sea or Davis Strait-Baffin Bay regions in pursuit of prey (see the map in Appendix G.1). Besides cetaceans, they also opportunistically hunted other marine and terrestrial Arctic fauna. By the second half of the nineteenth century, however, bowhead and North Atlantic right whale populations in the 'eastern' Arctic had diminished to such a point that nearly all British whaling ports had quit the trade. In Scotland, Peterhead carried on in a steadily declining capacity mainly by pursuing harp and hooded seals. In contrast, Dundee reached its zenith during traditional whaling's final era. It did so by diversifying its supporting financial base, operations and extracted commodities and labour for economic exploitation on an industrial scale. These aspects of the trade have received uneven treatment viewed almost entirely within the traditional framework of ships, men, whales and the sea.[2] Nevertheless, Dundee exemplifies the meaning of what the whaling industry really was. The effect was far-reaching, touching global interests. However, socio-economically it most significantly impacted communities spread across the North Atlantic.[3] Not only did Dundee whaling engage other societies through different aspects of a shared trade, but in doing so, it also integrated itself into each locality as a type of social anchor.

The term 'Arctic **whaling'** has a double meaning. On the one hand, it describes the people and elements most directly associated with the hunting of whales. On the other hand, Arctic whaling has a more implicit meaning, functioning as a synecdoche for all auxiliary activities acknowledged as taking place during voyages to the North. No matter, both meanings have produced the same effect. They look past certain groups of

[1] Whalers called bowheads 'Greenland right whales' while North Atlantic right whales were 'black whales'.
[2] For example, Malcolm Archibald, *The Dundee Whaling Fleet: Ships, Masters and Men* (Dundee, 2013).
[3] Chesley Sanger, 'The Dundee-St. John's Connection: Nineteenth Century Interlinkages Between Scottish Arctic Whaling and the Newfoundland Seal Fishery', *Newfoundland Studies*, 4:1 (1988), pp. 1-26, and W. Gillies Ross, *Whaling and Eskimos: Hudson Bay 1860-1915* (Ottawa, 1975).

people and their activities, which lie outside the paradigm of an accepted narrative. In effect, these overlooked groups have been consigned to the historical margins of the Arctic whaling industry.

This thesis examines Dundee's wider scope of commercial Arctic operations and the less recognised people who were involved in it from 1858 until its end in 1922. Those participating in allied activities from the peripheries played vital roles for the evolution and sustained presence of this extractive industry. The thesis, therefore, introduces the term '**Arctic trade**' to reflect this more inclusive approach, and throughout this work, it uses the phrase synonymously with the wider understanding of 'whaling'. Likewise, the term 'Arctic' is used in a broader sense to include the places in the subarctic, like Newfoundland and the Labrador coast. These phrases and the research investigating them here reframe how the industry was defined. Investigating this aspect of the trade, therefore, disrupts and adds to established scholarship on the subject. Furthermore, it links the Arctic trade to other local and global industrial, financial and commercial pursuits not necessarily associated with an Arctic maritime enterprise during the nineteenth and early twentieth centuries. Thus, the findings presented here readily shift from local to regional to global perspectives to study the people, affiliations and changing social and spatial parameters around which the Arctic trade operated.

Three overarching questions direct the research and arguments put forward throughout this work. First, beyond men on whaling ships, what other people and activities defined the Arctic trade? Second, what social and spatial boundaries existed within the trade, and where could these be found? Finally, how and to what extent did the Arctic trade engage wider society? Building on past whaling scholarship, these questions open new avenues for rereading historical sources, uncovering peripheral figures within its remit and reconceptualising the trade more broadly and inclusively.

Why Dundee? Why Whaling? Historical Context

Dundee and the Arctic trade from 1858 to 1922, present a unique industrial past that warrants further examination. Positioned on the shallow side of the River Tay, which is more prone to silting, Dundee does not have a natural harbour. This suggests that geographically the town and its port would be limited to provincial status. Yet during

the long nineteenth century, it exceeded that station to such an inordinate degree that Jim Tomlinson has written,

> Dundee can plausibly be claimed as the most globalized city in the world by 1913, with a greater dependence for its prosperity on events outside its national boundaries than any other significant urban settlement.[4]

Unlike other ports along Britain's east coast, such as Hull, Whitby, Aberdeen and Peterhead, Dundee's maritime economy never became its primary engine for growth. Instead, the town gained its reputation as Scotland's capital for linen production before it transitioned to jute.[5] Whaling, however, did possess a special interdependence with the textile industry. Together they spurred Dundee's economic reach to virtually every region of the globe. As Commander Albert Markham of the Royal Navy once observed after voyaging aboard the whaler *Arctic* in 1873, the foundations of this whaling-textile industrial relationship spread around the world.

> For the skilful seamen…and the ryots of Bengal, are engaged in two branches of the same industry…The jute manufactory, which gives employment to many thousands of industrious ryots, is dependent for its existence on the success of the whale fishery.[6]

The Scottish economic historian, S.G.E. Lythe, flips this dynamic around and attributes much of whaling's rise to the jute industry.[7] Still, harvesting whales in the Arctic and harvesting plants in South Asia for textile manufacture in Dundee did encapsulate the local, translocal and global dimensions of its economy. To appreciate Dundee's rise to the apex of the Arctic trade, one must first understand the socio-economic background in the town's production of textiles.

For nearly the entire latter half of the nineteenth century, Dundee monopolised the world's production of coarse textile goods made from jute, earning it the label 'Juteopolis'.[8] As early as the 1830s, some Dundee merchants began to consider jute's advantages over linen. Materially, jute fibre demonstrated superb strength and

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[4] Jim Tomlinson, *Dundee and the Empire: 'Juteopolis' 1850-1939* (Edinburgh, 2014), p. 3.
[5] Louise Miskell and C.A. Whatley, '"Juteopolis" in the Making: Linen and the Industrial Transformation of Dundee, c. 1820-1850', in *Textile History* 30:2 (1999), pp. 176-177, 192.
[6] Albert H. Markham, *A Whaling Cruise to Baffin's Bay and the Gulf of Boothia. And an Account of the Rescue of the Crew of the "Polaris"* (London, 1874), p. xii-xiii.
[7] S.G.E. Lythe, 'The Dundee Whale Fishery,' in *Scottish Journal of Political Economy* 11 (1964), p. 165.
[8] There is a large historiographical tradition following Dundee's textile heritage; for example, see Bruce Lenman, Charlotte Lythe and Enid Gauldie, *Dundee and Its Textile Industry, 1850-1914* (Dundee, 1969).

resistance to stretching. When woven tightly, it proved satisfactorily impermeable. This suited it for coarse textiles, such as burlap and hessian fabrics, used in the production of canvas, sacking, rope and the backing for carpets.[9] Jute's rigidity in its raw form, however, was not viable for machine processing, and industrialists subsequently sought ways to treat it. By 1845, the textile engineer Peter Carmichael noted,

> The great secret lies in damping the jute thoroughly before you card it. You may with entire safety put in from 250 to 400 lbs of water [mixed with train oil] in every ton of jute you mix. Let it be made up in a batch…and let the batch lie as long as it can with safety for the spontaneous heat.[10]

Train oil was animal oil derived from boiling down the blubber of bowheads or other cetaceans and sea mammals. The process of 'batching' bales of jute in train oil enabled fibres to retain strength while rendering them pliable for machine processing.[11] Petroleum and vegetable-based mineral oils lagged in development, so whale oil functioned as the best and largest source available to textile mills at the time.[12]

Besides its physical attributes, jute was also an economically advantageous commodity. Jute hemp grew in abundance in Bengal, and it was cheap. As Tariq Omar Ali has shown, jute supplied low wages for the indigenous smallholders who tended the crop and were slavishly integrated into its global capitalist market.[13] Despite the long sailing distance from Britain around Africa's Cape of Good Hope to Calcutta and back, merchants could still purchase and import raw jute at prices that significantly increased their gross profit margins over flax and hemp imports from the Baltic.[14] Furthermore, jute proved geopolitically advantageous when flax and other resources were not.

The British had controlled the entire Bengal region since the 1790s, so obtaining raw jute just meant sourcing another 'British' commodity. This helped to keep supply

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[9] Enid Gauldie, 'The Dundee Jute Industry' in John Butt and Kenneth Ponting (eds.), *Scottish Textile History* (Aberdeen, 1987), pp. 117-20.
[10] Enid Gauldie (ed.), *The Dundee Textile Industry from the Papers of Peter Carmichael of Arthurstone* (Edinburgh, 1969), p. 103.
[11] Tomlinson, *Dundee and Empire*, p. 11; and Lenman *et al.*, *Dundee and Its Textile Industry,* pp. 39, 45.
[12] Emma Wainwright, 'Dundee's Jute Mills and Factories: Spaces of Production, Surveillance and Discipline', *Scottish Geographical Society,* 121, 2 (2005), p. 122.
[13] Tariq Omar Ali, *A Local History of Global Capital: Jute & Peasant Life in the Bengal Delta* (Princeton, 2018).
[14] Mattia Bunel, Françoise Bahoken, César Ducruet, Claire Lagesse, Bruno Marnot, Eric Mermet and Séléna Petit, 'Geovisualizing the Sail-to-Steam Transition Through Vessel Movement Data' in César Ducruet (ed.), *Advances in Shipping Data Analysis and Modeling: Tracking and Mapping Maritime Flows in the Age of Big Data* (London, 2017), pp. 189-205.

disruptions to a minimum. By not depending on sourcing materials from other countries, Dundee's merchants exploited the commercial needs of combatants in other armed conflicts. In 1886, the textile merchant, Isaac Julius Weinberg, testified to the Royal Commission on the Depression of Trade and Industry that for Dundee,

> All wars give a stimulus to our trade, which arises through the increased demand for carrying provisions and for sand bags for fortifications, for sacks, for horse fodder and so on.[15]

By the 1850s and the outbreak of the Crimean War, jute usurped flax as Dundee's primary textile concern, and during the 1860s and the American Civil War, jute production in Dundee soared while Britain's cotton industry based further west and south languished. The 'jute barons' earned fabulous wealth, of which some public landmarks and philanthropic gifts can still be seen today.[16]

Rapid growth brought tectonic changes to Dundee's economic, demographic and employment structures. In a case study on 'Victorian Professions', Kim Price argues that Dundee's socio-economic strength deteriorated with the town's 'switch from a diverse hub of trade and industry to a mono-manufacturing jute centre'.[17] One phenomenon associated with this was the textile factories and mills' strong predilection towards hiring women and children at far lower wages than those expected by men. As a result, historians have dubbed Dundee 'a woman's town' due to its high concentration of working women and its disproportionate overall ratio of women to men.[18] Local histories have seized upon this notion, imagining that 'with so many women working in the mills it was left to the unemployed men to become "kettle-bilers" and look after the babies and cook the meals'.[19] If women's presence and labour in the town stereotypes Dundee as distinctively 'female', then concurrently the waterfront and its environs are

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[15] *Second Report of the Royal Commission Appointed to Inquire into the Depression of Trade and Industry*, Minutes of Evidence (London, 1886), para. 6180, 6231.
[16] See Charles McKean and Patricia Whatley, *Lost Dundee: Dundee's Lost Architectural Heritage* (Edinburgh, 2018) and Matthew Jarron, *"Independent & Individualist": Art in Dundee 1867-1924*, No. 56 AHS series (Dundee, 2015).
[17] Kim Price, 'The Victorian Professions: The Galvanising (and Shaping) Force of Death on Families' in Carol Beardmore, Cara Dobbing, and Steven King (eds.), *Family Life in Britain, 1650-1910* (Cham, Switzerland, 2019), pp. 58-62.
[18] Graham R. Smith, '"The Making of a Woman's Town": Household and Gender in Dundee, 1890-1940' (Unpublished PhD thesis, University of Stirling, 1996).
[19] DHT, 'Juteopolis', *The Verdant Works,* https://www.verdantworks.com/exploration-article/juteopolis/ (accessed 7 December 2019).

imagined as a prototypical male domain, called 'sailortown'.[20] Framed in this fashion then, the existence of the Arctic trade appears to accentuate Dundee's gendered division of labour. This thesis contends that both assertions overstate the representation of the town and industry, and it demonstrates the extent to which the trade integrated itself into 'bonnie Dundee' and other places.

Dundee's whaling endeavours date back to as early as 1753.[21] For the next century, its participation in the Northern Whale Fishery, whether in the Greenland Sea or 'Davis Straits', remained fairly steady but modest in scale.[22] While whaling fortunes greatly diminished in British ports during the 1850s, the jute industry's need for train oil, coupled with a bit of technological serendipity, breathed new life into Dundee's Arctic trade. In 1858, a local shipbuilder converted the wooden-hulled Indiaman *Tay* into an auxiliary steam-engine whaler.[23] Over the following decades, the development of this successful type of hybrid wood-sail-steam vessel boosted Dundee's shipbuilding industry.[24] While the whaling fleet became Europe's largest, neither shipbuilding nor the textile industry ultimately shaped the Dundee's Arctic trade and its ethos. This thesis argues that its protean nature ultimately became the Arctic trade's hallmark feature. While whaling always remained its central, most visible and profitable plank, from 1858 to 1922, the Arctic trade became an increasingly transitive enterprise. Long after the days of the large bowhead whale catches, Dundee remained a global emporium for Arctic goods and commerce.

Historiography

Whaling and Arctic literature comprehends an impressive body of fictional and non-fiction works. Growing concerns about climate change and its impact on the polar regions has shifted more attention towards Arctic history across many fields of study. At a global level, David Armitage, Alison Bashford and Sujit Sivasundaram have put forward the concept of 'oceanic histories' as a historiographical revision to traditional treatments of watery spaces. Their intent is to add more 'dimensions, planes and view

[20] Graeme J. Milne, *People, Place and Power on the Nineteenth-Century Waterfront* (Cham, 2016), p. 6.
[21] Chesley Sanger, *Scottish Arctic Whaling* (Edinburgh, 2016), p. 41.
[22] Archibald, *Dundee Whaling Fleet*, pp. 10-20.
[23] *DA*, 'The Tay Screw Whaler', 23 February 1858.
[24] John L. Carvel, *Stephen of Linthouse: A Record of Two Hundred Years of Shipbuilding, 1750-1950* (Glasgow, 1950), pp. 179-82.

points' to the human and non-human aspects of its history.[25] Closer to home, Nanna Kaaland, P.J. Capelloti and others have approached the Arctic through the lenses of history of science and exploration.[26] Recent environmental studies have enhanced the understanding of polar outcomes left in whaling's wake, which sometimes were done in collaboration with efforts to advance scientific learning.[27] Bathsheba Demuth's history of the Bering Strait places animal-based perspectives at the centre of a narrative about capitalists' and communists' dual exploitation of 'Beringia'.[28] GIS-based geographical and marine biology investigations have engaged in quantitative discourses in pursuit of learning the historical extent of Arctic ice formations and bowhead and right whale (de)populations.[29]

Existing British whaling historiography analyses the end of the traditional whaling era along established interpretational and methodological paradigms. These histories roughly divide into two categories: local works and scholarly national histories.[30] Both approach the subject from a similar single-scaled historical vantage point. While scholarship comprises a smaller proportion of whaling history publications, its interpretational authority has proved pervasive and enduring. They have become historical constructs bound up with perspective and hierarchy.[31] Too often geographical or mental borders ignore, or limit connects and peripheries, yet environments and human activities repeatedly transgress these real or imagined boundaries. Like the sea and the whales in it, whalefishing and its many other associated activities crossed regions, national borders and territorial claims. So, how does a whaling ship and its crew

[25] Sujit Sivasundaram, Alison Bashford and David Armitage, 'Introduction: Writing World Oceanic Histories' in David Armitage, Alison Bashford and Sujit Sivasundaram (eds.), *Oceanic Histories* (Cambridge, 2018), pp. 16-21.
[26] Nanna Katrine Lüders Kaalund, *Explorations in the Icy North: How Travel Narratives Shaped Arctic Science in the Nineteenth Century* (Pittsburgh, 2021) and P.J. Capelotti, *The Greatest Show in the Arctic: The American Exploration of Franz Josef Land, 1898-1905* (Norman, 2016).
[27] See D. Graham Burnett, *The Sounding of the Whale: Science and Cetaceans in the Twentieth Century* (Chicago, 2012).
[28] Bathsheba Demuth, *Floating Coast: An Environmental History of the Bering Strait* (New York, 2019).
[29] Matthew Ayre, John Nicholls, Catharine Ward and Dennis Wheeler, 'Ships' Logbooks in the Arctic in the Pre-Instrumental Period', *Geoscience Data Journal*, 2 (2015), pp. 53-62; and Robert C. Allen and Ian Keay, 'Bowhead Whales in the Eastern Arctic, 1611-1911: Population Reconstruction with Historical Whaling', *Environment and History* 12:1 (2006), pp. 83-113.
[30] One of the few scholarly exceptions to this is Anthony Barrow, *The Whaling Trade of North-east England, 1750-1850* (Sunderland, 2001).
[31] Pierre-Yves Saunier, 'Learning by Doing: Notes about the Making of the Palgrave Dictionary of Transnational History', *Journal of Modern European History*, 6:2 (2008), pp. 159-80.

represent the entirety of an industry's people, operations and connections? Accepted predilections stunt meaningful debate and enquiry. Broadening the scope of enquiry reveals gaps in the historiography and promotes new questions and creative approaches to the Arctic trade and the Arctic humanities in general. This section examines past research to identify specific claims made about the Arctic trade. It then discusses historiographical theories and analytical approaches which help this thesis to approach the Arctic trade from a fresh angle of enquiry.

One of the most influential texts in the field is Gordon Jackson's economic history, *The British Whaling Trade*, originally published in 1978. This work analyses every major era in chronological order to cover Britain's traditional and modern whaling experiences.[32] In assessing the era of Dundee's rise to Arctic prominence starting in the 1860s, Jackson argues the period constituted an unqualified economic failure for the Northern Whale Fishery. He bases his argument on quantitative and economic data long emphasised by the trade itself. He states that the industry did not collapse from the lack of market demand, but rather, from an 'unwillingness or inability…to exhibit that enterprise and initiative that would have directed them to modern whaling'.[33] The methodological and quantitative logic that numbers equal success, reduces a complex set of socio-economic factors which prevented this into simple *post facto* historical judgement. Jackson continues to be an influential authority on the subject. Writing nearly forty years later, Malcom Archibald echoes this claim suggesting Dundee's entrepreneurs demonstrated a 'failure in imagination or a lack of enterprise'.[34]

Though the historical fact of whaling's historical decline is undeniable, interpretations differ. Chesley Sanger counters Jackson's economic conclusion with a human-environment case based in historical geography. He argues that a series of imbalanced interactions brought about the industry's decline. He proposes a cyclical process which begins with the discovery of a cetacean resource (i.e., bowhead whales). British whalers would exploit the resource and consequently overly expand their operations. Subsequently, the targeted cetaceans were diminished to the point that the

[32] For more on the differences between traditional ('old') and modern whaling, see J.N. Tønnessen and A.O. Johnsen, *The History of Modern Whaling* (Canberra, 1982), pp. 3-7.
[33] Gordon Jackson, *The British Whaling Trade* (1978; reprinted, St John's, 2005), p. 137.
[34] Archibald, *Dundee Whaling Fleet*, p. 105.

industry largely had to withdraw. Only the discovery of another target population, or advancements in technology, or a shift to new species (i.e., rorquals) would rejuvenate the industry and begin the cycle again.[35] Sanger, therefore, claims that it was the *ability* of whaling's 'sagacious entrepreneurs' to adapt – not their inability or unwillingness – which destroyed whale populations and their own industry.[36] Understanding this adaptive quality and the extent to which it was employed reconceptualises the Arctic trade and its boundaries.

Jackson's assertion also carries wider implications for historiographical approaches in general. His characterisation of the last era as 'marking time' implies that periods of decline only merit marginal historical attention.

> As a consequence [of whaling's 'run-down',] the period is relatively unimportant compared with the great exertions before 1840 and the vast expansion after 1900, and it is only necessary here to outline the main lines of development.[37]

This perspective shows the historiographical limitations that come forward when narratives rely on a single scale of history. Despite the final era covering well over half a century of whaling history, Jackson barely devotes less than eight pages of written analysis to it. Historians, however, have challenged this general approach to history from several different angles.

From an economic and maritime standpoint, scholars agree that over time most businesses are more likely to fail than survive, no matter how much success they experience at one point.[38] Speaking about historical maritime industries in general, Robin Craig remarks that successful commercial endeavours should be regarded as 'the deviants in any society'.[39] Decline is a reality, and the study of failure offers important insights into questions about the shifting social, economic and spatial boundaries of an industry. Despite dating Jackson's argument to 1978, the premise of establishing definitive historical boundaries remains. If someone or something fails to exist within

[35] Sanger, *Scottish Arctic Whaling*, pp. 1-10.
[36] *Ibid.*, p. 117.
[37] Jackson, *British Whaling Trade*, p. 129.
[38] For example, see David Edgerton, *The Shock of the Old: Technology and Global History since 1900* (London, 2006), p. ix.
[39] Robin Craig, *British Tramp Shipping, 1750-1914* (St John's, NL, 2003), p. 16

the prescribed limits of an investigation, then it is possible to discount them as historically irrelevant or even non-existent.

Part of the interpretational stasis for the Arctic trade stems from an overreliance on the same system of knowledge that prevailed during the era in which whaling occurred. Historical accounts, industry papers, government reports and newspaper 'intelligence' supplied the same measurements for quantitative formats in year-to-year evaluations.[40] If scholarship has questioned the numbers, it nevertheless has remained faithful to the industry's informational priorities. This too compounds historiography's limits. First, it reduces 'Arctic whaling' to whaling in its strictest sense of crews hunting whales. Even at that, it only occasionally acknowledges the pursuit of 'scraps' (whalers' term for narwhal ivory, bearskins, walrus hides and the like), often as an inadequate supplemental effort.[41] Thus, current historiography limits its scope to the people, processes and data most directly connected to the hunting and harvesting of whales.

Second, this narrow sense of whaling not only reifies a maritime emphasis on men, material and money, but it also establishes the use of single-scaled histories as the approach for studying the Arctic trade. Whaling monographs readily frame analyses along a national scale of history. Not only is there British and Scottish whaling, but also American, Norwegian, Dutch and Soviet whaling and so on.[42] Pierre-Yves Saunier describes this default to a historical nation-state approach as 'methodological nationalism'. While the technique makes detailed research easier to categorise, Saunier suggests this bias inevitably yields an inveterate perception of value within scaled histories. In short, 'local history is parochial, national history is the key factor, while international or global developments are the big picture'. This becomes problematic when connections and circulations cut across scales of analysis and spatial boundaries as they are wont to do. Local phenomena may simultaneously operate as regional, national or even global spaces. In this way, Saunier recommends the use of transnational

[40] Two classics on 'whale-fishing' are William Scoresby, Jr., *An Account of the Arctic Regions with a History and Description of the Northern Whale-Fishery,* two vols. (Edinburgh, 1820), and Basil Lubbock, *Arctic Whalers* (Glasgow, 1937). The figures in Lubbock's book, however, should be scrutinised.
[41] Norman Watson, *The Dundee Whalers* (East Linton, 2003), p. 149.
[42] See Jackson, *British Whaling Trade*; Sanger, *Scottish Arctic Whaling*; Margaret S. Creighton, *Rites and Passages: The Experience of American Whaling, 1830-1870* (1995; reprinted, Cambridge, 2006);and Joost Schokkenbroek, *Trying-Out: An Anatomy of Dutch Whaling and Sealing in the Nineteenth Century, 1815-1885* (Amsterdam, 2008).

approaches which encourage historians to consider the 'idea of relation [between levels of history as opposed to]…the idea of hierarchy'.[43]

Research on the Arctic trade utilises transnational history perspectives and approaches through the thesis. Transnational history challenges the dominance and explanatory frameworks perpetuated by methodological nationalism. This approach, therefore, corresponds and overlaps with other historical systems such as global and world histories, *Histoire Croisée*, global microhistories and 'connected' and 'entangled' histories. This is not to say that transnational approaches oppose the examination of nation-states or even the use of national scales of investigation.[44] Continuing with the monograph *The British Whaling Trade* as an example, its use of a national scale of economic analysis from 1733 until 1824 warrants usage. During that time, the British government paid bounties to whalers in a bid to increase the whale oil supply, foster innovation at sea and build a 'nursery of seamen' for a naval reserve.[45] Jackson, however, never deviates from this national perspective, even after the government's bounties and direct interest ceased. From that point onward, everything from the strategic to the operational devolved to local and regional whaling interests.

Practitioners of transnational history resist defining it too specifically. For this reason, it takes on a malleability that readily works in conjunction with more specific historical fields. Its most accepted understanding embraces comparisons, transfers, networks, circulations and shared histories that cross boundaries, whether real or imagined.[46] Whaling operations, therefore, are a prime topic for the use of transnational approaches. For Sven Beckert, the strength of this type of history lies in its diverse use of well-established historical tools.[47] Yet the concept of transnational history is not without debate. Some scholars, such as C.S. Maier and C.A. Bayly have challenged the

[43] Saunier, 'Learning by Doing', pp. 169-74.
[44] Kiran Klaus Patel, 'An Emperor without Clothes? The Debate about Transnational History Twenty-five Years on', *Histoire@Politique* (www.histoire-politique.fr), 26 (2015), p. 2 (accessed 16 June 2021).
[45] Jackson, *British Whaling Trade*, pp. 47, 86, 107.
[46] Bernhard Struck, Kate Ferris and Jacques Revel, 'Introduction: Space and Scale in Transnational History' in *The International History Review,* 33:4 (2011), p. 573.
[47] Sven Beckert in C.A. Bayly, Sven Beckert, Matthew Connelly, Isabel Hofmeyr, Wendy Kozol, and Patricia Seed, '*AHR* Conversation: On Transnational History', *American Historical Review* 111:5 (2006), pp. 1454.

term as anachronistic.[48] This is a specific concern, but the general concept has left its historiography open for wider use, different points of interpretation and emphasis. This thesis understands transnational and global histories in their widest sense, and it employs its general ethos, conceptual ideas and methodological approaches for use in conducting research and presenting its historical interpretation of the Arctic trade.

The works of certain transnational scholars have particularly influenced my research. Many scholars believe 'transnational' perspectives must fundamentally address human presence and agency. This type of history for Patricia Clavin is 'first and foremost about people: the social space that they inhabit, the networks they form and the ideas they exchange'.[49] Clavin's emphasis is shared by many social historians. Recognising that many have been left out of such histories, global historians have called for 'fairer' more 'embedded' approaches to develop more representation.[50] Sebastian Conrad challenges global history's fixation with mobility and those individuals and groups who exhibit it, to the exclusion of others.[51] Tonio Andrade shifts historical analysis away from 'big picture' approaches to feature marginal and constrained figures 'from below' from a global microhistory perspective.[52] In *The Many-Headed Hydra*, Peter Linebaugh and Marcus Rediker feature the underclasses whose labour and commercial interests made invaluable contributions in sustaining eighteenth-century Atlantic maritime economies. They argue these people's 'invisible' lives and activities do not exist as such but are constructed in historical narratives.[53]

This emphasis on unrecognised people and their activities across a range of transnational situations speaks to the first research question in this thesis. Acknowledging the extractive, profit-driven and transitive nature of the industry, research organises the Arctic trade along a business-oriented structure. It employs

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[48] C. S. Maier, 'Consigning the Twentieth Century to History: Alternative Narratives for the Modern Era', *American Historical Review,* 105:3 (2000), pp. 807-831.
[49] Patricia Clavin, 'Defining Transnationalism', *Contemporary European History* 14:4 (2005), p. 422.
[50] European University Institute (Florence) Global History Seminar Group, 'For a Fair(er) Global History', *Cromohs-Cyber Review of Modern Historiography* (2021), pp. 1-9 and Jeremy Adelman, 'What is Global History Now?', *Aeon* (2017), https://aeon.co/essays/is-global-history-still-possible-or-has-it-had-its-moment (accessed 16 June 2021).
[51] Sebastian Conrad, *What is Global History?* (Oxford, 2016), pp. 3-16.
[52] Tonio Andrade, 'A Chinese Farmer, Two African Boys, and a Warlord: Toward a Global Microhistory', *Journal of World History,* 21:4 (2010).
[53] Peter Linebaugh and Marcus Rediker, *The Many-Headed Hydra: Sailors, Slaves, Commoners, and the Hidden History of the Revolutionary Atlantic* (Boston, 2000), pp. 6-7, 43-49.

transnational approaches and methods to help uncover figures in peripheral spaces of the enterprise. While not all figures are 'from below', each chapter focuses on groups in the Arctic trade who have been largely overlooked. Yet, though they are peripheral to established narratives, these people – whether in finance, management or manual labour – were not peripheral to the business.

Research framed within the context of Dundee's Arctic trade also brings constraints. Investigating an industry based out of one location can risk becoming another single-scaled representation of history. Bernhard Struck, Kate Ferris and Jacques Revel note that single-scaled histories offering 'monocausal and unilinear macro-explanations' are increasingly viewed with suspicion.[54] To prevent this, transnational approaches should implement 'change of scale [which] might lead to a change of question and of explanation' in research.[55] Durban Ghosh amalgamates all these concepts contending people best fit into global contexts when they are incorporated into wider processes, which are best understood through a mixture of large and small-scale investigations.[56] Ulrike Freitag and Achim Von Oppen suggest that employing 'translocality' as a research method and perspective keys in on connections, circulations, mobilities and transfers which sometimes even operate in opposing ways.[57] Despite the name's inference, translocal approaches go beyond local levels of analysis, shifting scales of study while also developing multiple localities as the basis for reference.[58] The use of multiple scales of historical analysis based on a translocal approach offers an effective means for engaging the second research question within this thesis. Not only does it uncover peripheral spaces of operation, but it also works to identify the social and spatial boundaries that existed in the Arctic trade.

Over the last few decades, researchers have begun challenging women's presence and the constraining tropes about gender in maritime spaces.[59] Helen Doe

[54] Struck *et al*, 'Space and Scale', pp. 575-76
[55] *Ibid.*, p. 580.
[56] Durba Ghosh, 'New Directions in Transnational History' in Sasha Handley, Rohan McWilliam and Lucy Noakes (eds.) *New Directions in Social and Cultural History* (London, 2018), p. 260.
[57] Ulrike Freitag and Achim Von Oppen, 'Introduction' in Ulrike Freitag and Achim Von Oppen (eds.), *Translocality: The Study of Globalising Processes from a Southern Perspective* (Leiden, 2010), p. 5.
[58] *Ibid.*, pp. 5-12.
[59] Hannah Hagmark-Cooper, 'Is There a Place for Women in Maritime History?', *History in Focus: The Sea*, 9 (London, 2005), https://archives.history.ac.uk/history-in-focus/Sea/articles/hagmark.html (accessed 13 August 2021).

exemplifies this by identifying English women who navigated the Victorian period's legal, financial and cultural strictures to live as respected merchant ship owners, managing owners, harbour-based businesswomen and even shipbuilders.[60] Besides drawing attention to the ancillary maritime trades as a possible source for women's involvement, Doe's work has modelled how one might navigate the inherent biases of historical documents to locate and extract evidence of women's commercial connections to whaling.

Beyond Britain, scholars have turned to consider spaces across the globe where women participated in various ways in sealing and whaling efforts. Joan Druett spotlights the experiences of shipmasters' wives who sailed in whalers from New Bedford, Massachusetts to the Pacific in pursuit of sperm and right whales.[61] Lisa Norling, a female pioneer in maritime history, also examines the New England fishery. She acknowledges that relatively few women spent time aboard ships, and 'their connection to the sea was through men'.[62] Still, Norling reveals just how critical women were to the structure, effectiveness and continuance of the American whaling industry. She challenges images of female dependency by asserting that mariners gained their career opportunities through their wives' family position, and they relied on them and female kin to sustain maritime-oriented families and communities.[63] These examples inform this thesis by guiding research efforts to look for women and the boundaries they faced in finance, affiliated businesses, manual labour and joint maritime households within the Arctic trade.

The growing emphasis on non-western historical perspectives has produced works about indigenous people's presence in whaling history as well. Lynette Russell, herself of mixed Aboriginal-Western ancestry, has published a ground-breaking anthropological history about Tasmania's Aboriginal people who went to sea with whalers in the Southwest Pacific. Their hunting and seafaring skills were especially

[60] Helen Doe, *Enterprising Women and Shipping in the Nineteenth Century* (Woodbridge, 2009).
[61] Joan Druett, *Petticoat Whalers: Whaling Wives at Sea, 1820-1920* (New York, 2001).
[62] Lisa Norling, *Captain Ahab Had a Wife: New England Women and the Whalefishery, 1720-1870* (London, 2000); see also Margaret S. Creighton and Lisa Norling, *Iron Men, Wooden Women: Gender and Seafaring in the Atlantic World, 1700-1920* (London, 1996).
[63] Norling, *Captain Ahab,* pp. 6-8, 165-212.

prized by Western whalers.[64] Nancy Shoemaker addresses the relationships and racial challenges that native Americans experienced while working in the American whaling industry.[65] Karen Routledge looks at Inuit men and women's commercial and personal ties to American whalers, both in the Arctic and in the US.[66]

As for the British whaling, few works do more than acknowledge women or indigenous people's contributions. The historical geographer, W. Gillies Ross, has produced several works addressing these issues. His edited and annotated reproduction of Margaret Penny's voyage diary while aboard Captain William Penny's *Lady Franklin* from 1857-1858 attempts to frame a woman's presence in Arctic whaling.[67] Whether it succeeds or not is questionable. It reveals little beyond her own personal experiences, suggesting that the subjects of her diary entries were constrained either by her husband or social convention (or both). On the other hand, Ross's works on Scottish and American whaling relations with the Inuit in Hudson Bay during the mid to later nineteenth century are considered standards in the field.[68] Dorothy Eber's anthropological work, *When the Whalers Were Up North,* captures oral history memories from Inuit elders, who described interactions and often their kinship to whalers during in the early twentieth century. Eber contextualises these anecdotes within a brief, wider narrative set, and they provide valuable insights into women's experiences as well.[69] Ross and Eber's works are important foundational works in the field. Yet, since their publications several decades ago, other written materials have been uncovered and historical methods in material culture have advanced research. Understanding indigenous connections to the maritime and whaling worlds creates pathways for considering how marginalised people demonstrate active agency with translocal roles.

Publications within local historiographies often share similar fixed tendencies as their nation-oriented counterparts. In Dundee's case, the overwhelming proportion of

[64] Lynette Russell, *Roving Mariners: Australian Aboriginal Whalers and Sealers in the Southern Oceans, 1790-1870* (Albany, 2013).
[65] Nancy Shoemaker, *Native American Whalemen and the World: Indigenous Encounters and the Contingency of Race* (Chapel Hill, 2015).
[66] Karen Routledge, *Do You See Ice? Inuit and Americans at Home and Away* (Chicago, 2018).
[67] W. Gillies Ross (ed.), *This Distant and Unsurveyed Country: A Woman's Winter at Baffin Island, 1857-1858* (Toronto, 1997).
[68] W. Gillies Ross, *Whaling and Eskimos: Hudson Bay 1860-1915* (Ottawa, 1975).
[69] Dorothy Eber, *When the Whalers Were Up North* (Boston, 1989).

Dundee's historiography concentrates textile industries and its female factory labour force.[70] Conversely, historical contributions on Dundee's harbour, shipping and other marine activities project a male-dominated atmosphere devoid of women.[71] For example, Malcolm Archibald and Norman Watson have produced important popular histories for contextualising Dundee's whaling activities. Both focus on the Arctic trade's distinctive connections to the Arctic to the exclusion of wider Dundonian society.[72] The caesura between these histories creates a false division that delineates the town's urban geography and gendered labour into misleading representations. The development of coastal and port histories is beginning to mitigate this type of division, starting with critical reassessments of 'sailortown'.[73]

Understanding what the Arctic trade was and the limits within which it operated sheds light on how and the degree to which it engaged wider society. Interdisciplinary discussions around Social Anchor Theory (SAT) examine how certain institutions create or strengthen social networks and constructively contextualise communities. Applying Aaron Clopton and Bryan Finch's reconceptualization of the theory suggests the Arctic trade existed as a historical example of social anchoring within each society where it was actively present. According to them, three fundamental elements define a social anchor and the degree to which it serves a community. A social anchor must support the development of 1) bonding social capital, 2) bridging social capital and 3) a collective identity.[74]

R.D. Putnam's community view of social capital is instrumental to SAT. Social capital fosters notions of community, trust and reciprocity within social networks. Some scholars have emphasised that this is accomplished through individuals or the elite

[70] Among others, Tomlinson, *Dundee and the Empire* and Jim Tomlinson, Carlo Morelli and Valerie Wright, *The Decline of Jute: Managing Industrial Change* (London, 2011).
[71] For example, William Kenefick, 'The Growth and Development of the Port of Dundee in the Nineteenth and Early Twentieth Centuries', in Whatley, Christopher A., Harris, Bob and Miskell, Louise (eds.), *Victorian Dundee: Image and Realities* (Edinburgh, 2011), pp. 38-50; and Gordon Jackson and Kate Kinnear, *The Trade and Shipping of Dundee, 1780-1850*, No. 31 AHS series (Dundee, 1991).
[72] Malcolm Archibald, *Whalehunters: Dundee and the Arctic Whalers* (Edinburgh, 2004), and Watson, *The Dundee Whalers.*
[73] Milne, *People, Place and Power*.
[74] Aaron Walter Clopton and Bryan L. Finch, 'Re-Conceptualising Social Anchors in Community Development: Utilizing Social Anchor Theory to Create Social Capital's third Dimension', *Community Development,* 42:1 (2011), pp. 70-83.

classes.[75] Putnam, however, argues that both individuals *and* communities can create two types of social capital – bonding and bridging. Bonding capital develops a form of 'thick trust' within a homogenous and exclusive group. For Putnam, bonding social capital helps people 'get by' in times of difficulty, but it is prone to the negative elements of 'hyperbonding'. Bridging social capital, on the other hand, displays a form of 'thin trust' which encourages relationships between people from diverse socio-economic and ethno-cultural backgrounds in order to 'get ahead'.[76] In addition to these forms of social capital, Clopton and Finch maintain that a social anchor must promote a collective identity since they function as a 'medium for which individuals can identity, embrace, and exist as an overall community identity'. Nested subordinate identities may exist this broader identity, but critically, as the collective identity fades, so does its benefits to those in it.[77]

The SAT concept of a social anchor founded on bonding and bridging social capital and a collective identity exemplifies the Arctic trade. Not only did it afford forms of 'thick trust' to help people 'get by', but it became an institution that bridged the maritime community with wider society. It engaged jute barons, the middle and working classes, artisans, women, merchants and scientists as well as the Inuit, Newfoundlanders, Norwegians and Shetlanders and the like. At the same time, its 'thin trust' ensured that few people involved in the industry ever committed their entire career, resources or efforts to it. In a town monopolised by the textile industry, it was the Arctic trade which served as an ambiguous, transient, malleable space of opportunity where people from different backgrounds and associations could access and utilise it to 'get ahead' in their own way, if they were willing to accept its risks. Furthermore, as the Arctic trade transformed and declined over time, its influence within communities shifted or faded. SAT furnishes a historiographical approach identifying the degree to which Arctic trade integrated within societies at a translocal

[75] J.S. Coleman, 'Social Capital in the Creation of Human Capital', *The American Journal of Sociology,* 94 (1988), pp. S95-S120 and Pierre Bourdieu, 'The Forms of Social Capital' in A.H. Halsey, H. Launder, H. Brown and A.S. Wells (eds.), *Education, Culture, Economy and Society* (Oxford, 1997), pp. 46-58.
[76] Robert D. Putnam, *Bowling Alone: The Collapse and Revival of American Community* (New York, 2000), p. 23.
[77] Clopton and Finch, 'Re-conceptualizing Social Anchors', pp. 73-74.

scale, and the thesis further develops this argument with specific applications in each chapter.

Sources and Methods

Research findings reflect the exploration of archival sources from numerous institutions across a wide array of subjects. It engages with interdisciplinary and historical fields from business, finance and demography to management and entrepreneurship, and from issues in gender, class, labour and commodity/economic histories to translocal, transmaritime and spatial scholarship. Methodologically, this thesis seeks to reveal and critically analyse marginalised spaces and the people and activities that operated within these areas. Each chapter develops its own relevant discussions in further depth.

Whaling scholarship has created a 'core' narrative focused on ships, men and whales in pelagic environments. This specific perspective carries over from the trade's own historical priorities during the nineteenth century. The sources forming the bedrock of this research prioritise logbooks, voyage diaries, government reports, published and statistical accounts organised by vessel, year, port, master, number of cetaceans killed and amount of product rendered. Newspapers also have an important place disseminating information and publishing features about whalers' experiences and trials.

Translocal practices critically rethink these information pillars within established accounts. By 'defamiliarizing recognizable pasts and returning us anew to well-used archives' which ask 'new kinds of archival questions' to uncover people and activities previously pushed aside.[78] The thesis readily builds on past research and utilises these materials as well, but it also approaches these sources with research questions prioritising transnational concepts and perspectives concerned with the peripheries of the Arctic trade. Focusing on a different range of connections and participants enables research to take advantage of other available/underused manuscripts and published sources as well as previously unknown sources.

Finding and examining these alternate primary sources required extensive archival work in dozens of archives and museums throughout the UK, Canada and the

[78] Fiona Paisley and Pamela Scully, *Writing Transnational History* (London, 2019), pp. 4, 13.

United States. Data derived from these documents were collated into nearly a dozen different databases for further quantitative and prosopographical analysis. Featured primary sources include the Board of Trade's Dissolved Company files (BT 2 series) kept at the National Record of Scotland (NRS), Shipping Registers (CE 70 series) held at the City of Dundee Archives (CDA), privately-owned corporate shareholder ledgers and diaries, recently recovered trading and mining station journals from the University of Dundee Archive Services (UDAS) and the Local History Centre at the Dundee Central Library (LHC-DCL) and British Imperial Crew Agreements and Official Log Books housed at the Maritime History Archive (MHA in Newfoundland), the National Archive (TNA) at Kew and the National Maritime Museum (NMM) in Greenwich. Each of these sources and others are discussed further in their relevant chapters.

Digitised and published reference materials furnished critical assistance too. Decennial census data, statutory registers, legal records and valuation rolls record useful information for correctly identifying and contextualising people at an individual level. Online sources often required a service fee or paid membership for convenient access. These web services included Scotlandspeople.gov.uk, Ancestry.co.uk and *British Newspapers Archive.*[79] It should be noted here that efforts by well-meaning individuals to reconstruct genealogical lines and family trees are fraught with potential errors, and they must be repeatedly scrutinised, if not avoided. These digital aids greatly speed up the process of sifting through volumes of data and positively identifying people with similar names, birth dates and places of residence.

Other important published and online references consisted of the *Dundee Directory* (*DD*) and *Dundee Yearbook* (*DYB*). Both were locally produced, annual-to-biannual publications. The *DD* series offers civic, charity, trade and personal information covering the wider Dundee area. The National Library of Scotland (NLS) hosts digitised, searchable editions running through 1912.[80] The *DYB* provides a helpful abridged review of news events, trade statistics and extended obituaries of leading local figures who died within the past year of publication. Other online reference materials of note are the

[79] NRS, *ScotlandsPeople,* https://www.scotlandspeople.gov.uk; *Ancestry, https://www.ancestry.co.uk;* and BL, *The British Newspaper Archive,* https://www.britishnewspaperarchive.co.uk (all of which are accessed continually from 2015 to present).
[80] NLS, *Scottish Post Office Directories, 1809-1912 Dundee Directory*, https://digital.nls.uk/directories/browse/archive/91049128 (accessed 22 March 2017).

current enacted Acts of Parliament hosted by TNA, *The Newport, Wormit & Forgan Archive* website, and the digital databases connected to the McManus168 project and *Northern Isles Family History* among others.[81] While by no means infallible, these local and regional references do offer leads and confirmation when no other historical sources are available.

The investigations and findings established throughout this thesis employ quantitative and prosopographical methods for analysis. These processes serve to develop evidence about the people, connections and spaces which supported and defined the Arctic trade within their communities and societies. Prosopographical surveys address research questions by evaluating the attributes and involvement of the groups of people highlighted in each chapter. By first identifying these groups, analysis then can proceed to determine their contributions and boundaries within and beyond the industry. At times prosopography utilises historical vignettes and case studies to enhance these representations.

Quantitative research strengthens prosopographical efforts by querying empirical data to support or negate numerical trends and enquiries. It engages research questions by establishing the degree to which the three characteristics (people, connections and space) and their boundaries existed. Since every chapter involves a form of data analysis taken from different primary sources, each will discuss its quantitative methods in more detail. In general, however, the process for data collection involves transcribing and verifying numerical data, reconciling it across sources and summing and comparing numbers between different research categories. Quantitative methods also apply statistical analyses to develop further social context and implications resulting from the Arctic trade. Most quantitative analyses sample data on a quinquennial basis starting in 1861, proceeding to 1866, and so on, until concluding in 1911. Intervals are based on years ending in -1 to allow research to use census data. In some instances, historical data is not available within this interval format, so sample years are provided that best represent the situation and the sources available. The year

[81] TNA, *Enacted UK Legislation*, https://www.legislation.gov.uk (accessed 15 December 2017); William M. Owen, *The Newport, Wormit & Forgan Archive*, https://www.newportarchive.co.uk (accessed 4 September 2019); *McManus168*, https://mcmanus168.org.uk (accessed 31 August 2019); and Tony Gott, *Northern Isles Family History* (formerly *Shetland Family History*), https://www.bayanne.info/Shetland/ (accessed 2 August 2018).

1911 is the last interval before the First World War, at which time many records either ceased or were lost. This end date also fits well with the years available in the *DD* and *DYB* publications.

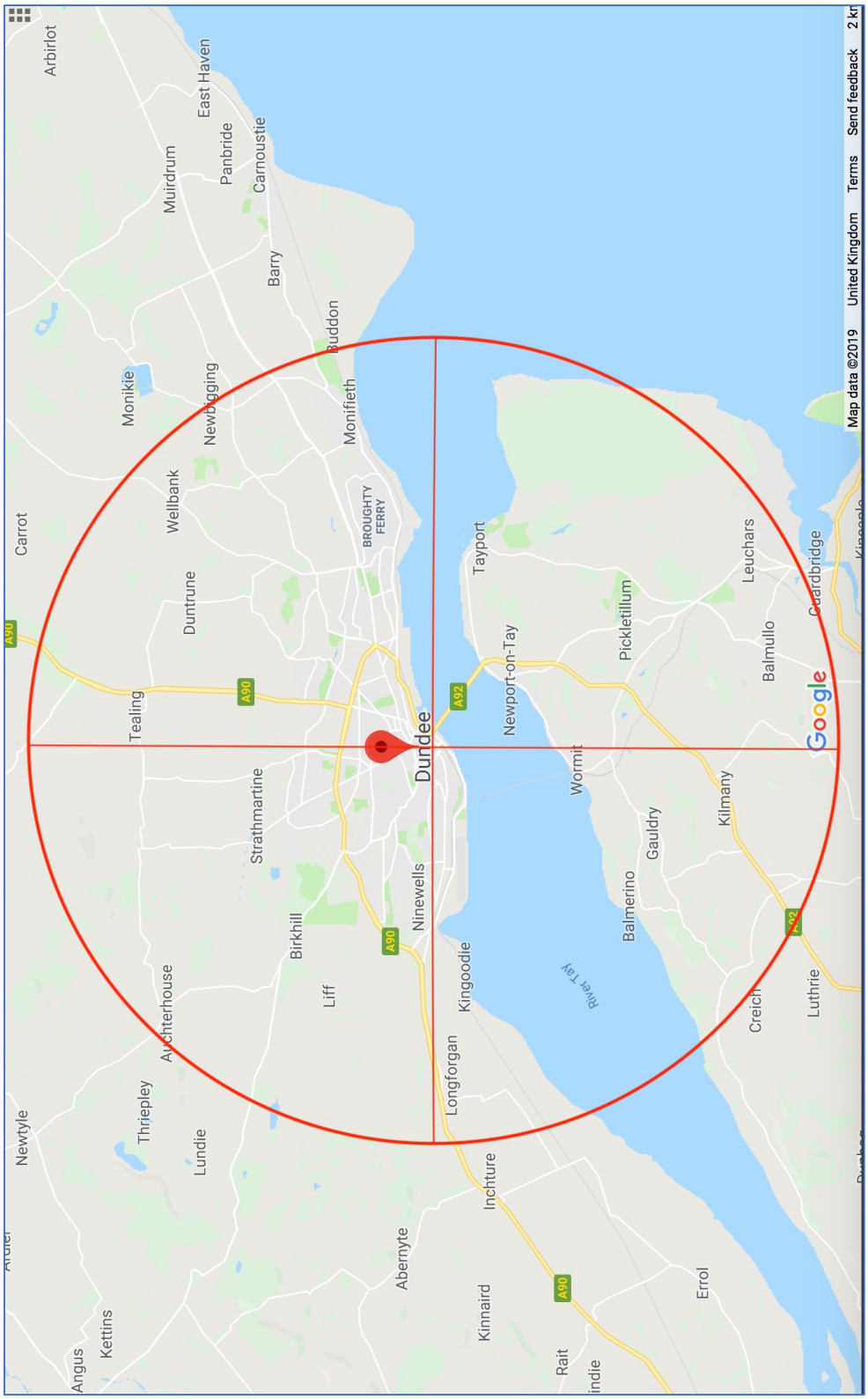
Some fundamental methodological and theoretical premises are applied throughout the thesis in support of its wider arguments. These involve establishing the concept of a greater, 'maritime' Dundee and developing a historical interpretation of Social Anchor Theory (SAT). Regarding demographics, scholars tend to label nineteenth-century Dundee as a working-class city that largely lacked a middle class.[82] The technical application of applying census data based on burgh limits, however, overlooks the practical geographical realities of different urban areas.[83] For example, while Edinburgh ranks highest in most demographic measures in Scotland, data would exclude Edinburgh's port district, the town of Leith. Waterfronts and 'sailortowns' were commonly regarded as bawdy locales filled with brothels, cheap boarding houses and crime.[84] Conversely, Dundee's port district was based in its commercial district. Furthermore, most of the merchant elite and middle classes, who owned businesses or worked in town, resided outside Dundee's immediate jurisdiction. Their associated wealth and status, therefore, do not factor into Dundee's demographics, thus skewing its statistics downward.

This thesis mitigates the issue of residents outside Dundee proper and shifting census boundaries by holding to broadened, maritime interpretation of a 'greater Dundee'. This method follows legislative precedence set forth in the Merchant Shipping Act (MSA) of 1854. The Act stipulated appointees and elected members for the Local Marine Board under the authority of the Board of Trade must be 'resident or having a Place of Business at the Port *within seven miles* [my emphasis] thereof'.[85] Parliament's implementation of MSA (1854) effectively created a maritime metropolitan area around

[82] Michael Anderson, *Scotland's Populations from the 1850s to Today* (Oxford, 2018), pp. 99-104 and Nicholas Morgan and Richard Trainor, 'The Dominant Classes' in W. Hamish Fraser and R.J. Morris (eds.), *People and Society in Scotland, 1830-1914,* vol. 2 (Edinburgh, 1990), pp. 105-11.
[83] Morgan and Trainor, 'Dominant Classes', pp. 103-04.
[84] Brad Beaven, 'From Jolly Sailor to Proletarian Jack: The Remaking of Sailortown and the Merchant Seafarer in Victorian London', in Brad Beaven, Karl Bell and Robert James (eds.), *Port Towns and Urban Cultures: International Histories of the Waterfront, c.1700-2000* (London, 2016), p. 177.
[85] For legislation concerning Local Marine Boards, see PA, MSA, 1854 (17 & 18 Vict. c.104, III.110-121).

every port of registry. The centre of a map depicting Dundee's seven-mile (roughly 11 km) radius begins around King William IV Dock and the nearby Custom House (Map 1).

Map I.1. Seven-Mile Radius for Local Marine Board Eligibility.



Source: Google Maps license terms, 2019.

Its range extends well beyond the limits of Dundee proper, taking in adjacent communities such as Monifieth, Broughty Ferry, Auchterhouse, and Invergowrie. Since the River Tay bisects this circumscribed zone, eligibility to join the Local Marine Board also encompasses communities south of the Tay in Fife, most notably Tayport, Forgan, Newport and Wormit. As early as 1840, John Leighton listed Tayport, Newport and Wormit as possessing ferry harbours in Fife, remarking 'the nearest market town is Dundee, which is *only* [my emphasis] separated by the river'.[86] While modern minds tend to view rivers and bodies of water as natural geographical obstacles, for maritime communities, water features combined with burgeoning steam transportation actually enhanced connectivity.

The area contained within MSA legislation reflects the British government's awareness of transportation's range and capabilities across land and water. During the 1880s, a roll-on, roll-off railway ferry between Tayport and Broughty [Ferry] Pier connected Aberdeen to Edinburgh. Compiled data on whaling's corporate investors, managers and shipmasters also support the concept of a wider 'maritime' Dundee. Far from being a passive 'hinterland', this spatial designation was filled with participants in the Arctic trade who readily used their access to communication, information and transportation networks to advantage. *DD*'s annual editions reinforce this as well. It listed businesses and residences ranging from Inchture (west) and Auchterhouse (northwest) to Tealing (north) and Newbigging (northeast) to Monifieth and eventually Carnoustie (east). The *DD* series reflects the everyday patterns of commercial and social interaction that existed within this region of Scotland. Indeed, if there was any downside to MSA's method, it is due to continuing the use of a seven-mile radius while travel times continued to decrease during the period.[87] Even so, MSA's geographical measure recognised not only a relevant 'lived space', but it also defined a fixed spatial standard for local maritime and urban interests. Incorporating this standard into research analyses not only reduces the complexities of shifting boundaries, but it also reflects the practical and live space of those in the area. It therefore begins to answer research

[86] John M. Leighton, *History of the County of Fife: From the Earliest Period to the Present Time*, vol. 3 (Glasgow, 1840), p. 63.
[87] MSA, 1894 (57 & 58 Vict., c.60, II.244-45) superseded MSA (1854); see https://www.legislation.gov.uk/ukpga/Vict/57-58/60/contents (accessed 7 May 2022).

questions by establishing a spatial construct by which the Arctic trade's social boundaries and its integration into the wider Dundee community can be measured.

Chapter Organisation

This thesis is organised around a business framework centred on the Arctic trade's finance, management and labour sectors. Chapters 1 and 2 work in tandem to consider the fiscal structures and groups of investors who financially invested in the industry. The common perception among scholars is that the jute barons principally financed the Arctic trade. They did not. These chapters reveal that from 1861 to 1911, Dundee's middle class consistently financed operations more than any other group of investors. Together, chapters 1 and 2 address fiscal aspects to the thesis's main research questions, by determining who was investing (as a group and individually) and why. Using quantitative analyses on data compiled from several major sources, they determine the changing fiscal boundaries which enabled or hindered the trade to operate in the North. The quantitative and prosopographical findings presented here constitute the most comprehensive investigation into the financing of the British whaling industry to date. Chapter 1 presents the historiographical discussions, methods of data collection and analysis, and sources used as the basis for research. It covers the wide scope and trajectories over time of the trade's two main forms of capital investment, whale company stocks and ship shares. Chapter 1 then transitions to a prosopographical survey of the Dundee textile merchants involved in whaling. It considers the extent of their involvement at a group and individual level, and it posits reasons for why they did so.

Chapter two continues the prosopographical survey of other groups of investors within the Arctic trade. Looking beyond the men who went to sea to hunt whales, this chapter details the extraordinary range of persons who financially involved themselves in the industry. For many local investors, the purchasing of corporate stock or ship shares did not symbolise an investment in a narrow and declining enterprise. Rather, the Arctic trade functioned as a financial space of opportunity, which family businesses and most other limited liability companies at this time could not offer. The industry's flexibility and openness to investors from all sorts of circumstances made it appealing for a range of reasons. Analysis suggests that people ventured capital not only as an

attempt at personal economic self-preservation but also as a form of civic patriotism. Taken together, chapters 1 and 2 demonstrate how the Arctic trade became a de facto financial anchor within Dundee. This section, therefore, engages with the main research questions of the thesis by delving into the Arctic trade's financial peripheries to identify participants and explore how, why and to what extent they became involved. Findings, therefore, redress past assertions of the Arctic trade's financial boundaries along local and global lines.

Chapter 3 considers the positions and authority of shore-based management within the Arctic trade. Mostly overlooked in favour of whaling captains, the company managers and ships' managing owners formed the real nexus of the industry. Providing the first comprehensive look at management operations within British whaling, this chapter rebuts historiographical claims that Dundee's Arctic trade failed due to a lack of entrepreneurial effort and an inability to adapt. Instead, it shows managers took advantage of their personal and commercial positions and connections to exercise forms of 'relational entrepreneurship'. Facing a constantly changing market and declining whale harvests, managers leveraged their access to contacts and information within the wider maritime industries to diversify both industry operations and personal interests, both inside and outside the industry. Often, their social and/or financial interests went well beyond the maritime industries. The chapter concludes by featuring case studies. This section on engages research questions from a perspective of managerial space. This perspective locates the managers within the trade and probes the extent to which their activities and authority extended across local, regional and transoceanic scales. Furthermore, it considers the ways they locally enabled the Arctic trade to function as a respectable institution within Dundonian society.

Chapters 4 and 5 again shift the focus to the diverse and transitive aspects of labour within the Arctic trade. Historical narratives and scholarship have focused on corporate notions of work at sea. This section shifts the focus to survey translocal groups of labourers on land and at sea whose work was essential to the profitability of the trade. Taken together, the chapters highlight the similarities as well as the unique realities that existed between 'whaling' and each society. Chapter 4 begins the theoretical groundwork of interpreting the importance of Inuit and Dundee seasonal labourers to the Arctic trade. It starts by interacting with historiographical discourses to investigate

how and where to find those 'invisible' to history. They were often figures with limited connections, status and mobility. Considering how these limitations fit into transnational history raises theoretical questions about how we 'do history'. The chapter acknowledges the difficulties faced in researching these ephemeral workers. While there is a great dearth of written and published materials, some historical sources have recently come to light, and oral history and material and visual culture offer methods for advancing knowledge about them. It spotlights the diverse range of work which the Inuit accomplished and using a translocal method of interpretation centred on systems of production, it asserts the value of women's temporal labour in sustaining the Arctic trade well into the twentieth century.

Following this translocal theme of maritime labour, chapter 5 reconsiders and contextualises the transmaritime connections between Shetlanders, their society and the Arctic trade in the late nineteenth century. Data analysis on Shetlanders going to the 'Greenland fishing' provides illuminating evidence about the demographics of Shetlanders in the Arctic trade and wider Shetland society. For example, the chapter challenges the commonly held notion that unmarried young men went to the Arctic. Research suggests Shetlanders' involvement and interests in the Arctic trade extended to the 'joint maritime household', the basis for Shetland society. Therefore, older men as well as women were woven into the economic structure of the trade. Just as with Dundee's history, this chapter pushes the social and spatial boundaries of whaling and the Arctic trade to include Shetland's wider social and economic situation at the time. Dundee's whaling industry became a social anchor within Shetland society by offering economic opportunities that injected cash into a barter economy. Ultimately this enabled many 'whaling' households to take early advantage of purchasing fishing boats at the beginning of the herring boom around 1880. In this way, the Arctic trade played a role in helping shift wider society away from the notorious 'Shetland method' to a money-based economy. Together, chapters 4 and 5 re-evaluate who participated in the Arctic trade and how, and what social and spatial limits were involved in encouraging or distracting them for do so.

Conclusion

This thesis investigates the people, spaces and peripheries within Dundee's whaling industry during its era of decline from 1858 to 1922. It introduces the term 'Arctic trade' to reframe the industry more broadly as a geographically expansive, operationally transitive and humanly diverse business enterprise quite unlike anything else in Scotland, and perhaps the world. Deriving its methods and perspectives from transnational and global histories, it asks new questions about the industry and its reach, focusing on the historically marginalised people, spaces and activities within the trade. Many of the trade's participants were not from the working-classes, but along with the less advantaged or socially constrained, historical constructs have placed all of them into the trade's peripheries.

Since the Arctic trade was a commercial endeavour, the thesis frames its research around finance, management and labour structures. Nonetheless, the thesis is a social history. Humanly-speaking, very few devoted all their resources, careers or efforts to this one thing. It was a sentiment expressed from top to bottom within the industry. The likes of those who invested in Dundee whalers can also be found investing in merchant shipping, American railroads and cattle ranches, mining ventures and international investment trusts. Besides overseeing whaling companies' affairs, managers and managing owners superintended some of Dundee's largest merchant fleets, moonlighted as insurance and shipping agents and leveraged trade information and business relationships for personal advancement. Meanwhile, male and female labourers took on seasonal employment, both in Dundee's whaling yards and around Scottish stations in the Arctic. Seafarers and their joint maritime households, such as those in Shetland, availed themselves of the Arctic trade's cash wages as their needs and opportunities arose.

The extraordinary demands and vicissitudes of voyaging to the Arctic and prosecuting a profitable business relied on the indispensable support of all these peripheral figures. In this way, the Arctic trade effectively created shifting and open-ended spaces for people from different places and walks of life to either 'get ahead' or 'get by'. This made the industry an important asset at various times for each community connected to it. In this process of synthesis, the Arctic trade transgressed imagined

divisions between the local and the global, the maritime and the terrestrial, the waterfront and the industrial town, male and female labour, the Inuit and whalers and mariners and fisher/crofters. These unique relationships extended the Arctic trade's influence beyond hunting whales. It made it a social anchor for each society that it engaged.

Chapter 1

'Juteopolis' and the Financing of the Arctic Trade

Arctic whaling necessitated capital-intensive investment. Since jute manufacturing needed whale oil, scholars have readily accepted that the wealthy textile merchant-manufacturers were whaling's principal financiers. Select examples of evidence certainly appear to support this claim.[1] However, to date no study has critically sampled or comprehensively analysed the financial structures and investor demographics within this sector of maritime Dundee. Doing this shifts the Arctic trade's narrative focus from 'the hunt' to the local, national and even transnational individuals and activities involved in supporting the enterprise financially. Understanding who invested, when and how much, begins to address questions about why they did so. Knowing this clarifies the financial and social limits to the Arctic trade. It also shows how the Arctic trade became a financial social anchor for many middle-class Dundee investors.

Organisationally Chapters 1 and 2 work together, focusing on the various groups of industrialists, merchants, artisans and other participating individuals who financially supported the whaling trade through investment. Together, they consider the role of capital investors financing the industry from 1861 to 1911. That is the time frame best supported by primary sources. Using fiscal data collected from archival sources, they quantitatively analyse this information in its collated form and blend it with prosopographical examinations of different groups of investors.

Chapter 1 begins its financial discussion by contextualising the risks associated with the whaling trade and hence, the risks to capital invested in it. It then describes the primary information sources used, summarises its empirical and social history methods of analysis, considers its sources' limitations and explains how the investigation worked around these issues. The main thrust of the Chapter follows the investment trajectories of the trade over time, and it subsequently divides the era into three distinct phases of activity. Using three key investment factors – the number of investors participating, amount of capital invested, and distribution of shares – the chapter evaluates the

[1] Among others, see Chelsey Sanger, *Scottish Arctic Whaling* (Edinburgh, 2016), pp. 116-17, and Gordon Jackson, *The British Whaling Trade* (1978; reprint, St John's, NL, 2005), pp. 135-38.

performance of each category of financial backers within the three phases then carries out a prosopographical survey specifically highlighting the role of Dundee's textile 'barons' in the Arctic trade. This serves to develop more fully the relationship and participatory interest that existed between the textile industry and the Arctic trade. Chapter 2 then continues the prosopographical surveys, featuring Dundee's middle-class investors and outside financiers.

Chapters 1 and 2 engage with the thesis's main research questions by approaching this topic from both economic and social perspectives. They identify who constituted the Arctic trade's investors and what types of investments they made. Research especially seeks to recognise overlooked groups of investors. By tracing financing trends over time, it demarcates the three phases which reveal the fiscal extent and limits of capital investment. Prosopographical analysis supports the spatial analysis of the industry's investors according to geography and social class. Finally, the Chapter considers the various reasons why groups of people chose to place their money in one of the harshest and riskiest business ventures known. This not only interprets the importance of the financial sector, but conversely it also serves to demonstrate how the Arctic trade became a financial and commercial social anchor in Dundee. The conclusions for these data analyses and prosopographical studies appear at the end of Chapter 2.

Investing money in any form of maritime commerce was by no means a safe investment. Whalers navigating through Arctic ice and facing other climatic and physical dangers made voyages a dangerous and expensive project. For investors interested in steady dividends, there were better options. While sealing and whaling offered the potential for large returns (primarily through the sale of oil and whalebone), profitable seasons became increasingly more difficult to obtain towards the end of the nineteenth century. By the 1880s, whaling in the north was bringing back erratic but predominantly lower returns.

In many ways, the loss of an insured whaler brought less financial concern to its owners than one returning without a catch. In whaling parlance, returning with no blubber or whalebone made it a 'clean' ship. Since whaling operations used earnings from the (last or present) season's catch to pay for repairs, refitting and all other costs for the next season's voyage, a clean ship or consecutive seasons with poor catches

meant businesses, whaling captains and crews and sometimes shipowners faced financial crises. This occasionally prompted desperate measures to avoid bankruptcy. Between 1861 and 1911, 55 vessels voyaged north; 39 (71 per cent) never returned (Appendix G.2).[2] While being crushed or nipped in the ice was an ever-present threat, the Board of Trade held enquiries into lost vessels to determine if there was fault or wilful destruction.[3]

Despite these risks, Dundee's textile manufacturers did financially invest in whaling enterprises. Data analysis, however, debunks their assumed role as whaling's principal financiers. Perhaps surprisingly, men and women from Dundee's middle classes funded the largest proportion of the industry from a grassroots level. These modest investors not only came from Dundee's maritime sector, but crucially, they also included a diverse range of merchants and other individuals from professional vocations and the artisanal trades.

Sources and Methods

During the second half of the nineteenth century, capital venturers chose from two types of investment opportunities in whaling: ship shares and/or whaling company stock. In most instances, the Chapter differentiates between shares and stocks by referring to 'ship shares' or 'shareholders' and 'company stocks' or 'stockholders'. Ship shares involved purchasing a direct stake in a vessel. Following a long-standing maritime tradition of spreading risk, British ownership of merchant vessels used a 64-share system. People who held a share were legally 'shipowners', and their ship shares were recorded in government ship registers.[4] By law, all British ocean-going vessels (with certain exceptions) had to register with a Merchant Marine Office (MMO) at an authorised port.[5] The MMO's superintendent held the responsibility for maintaining or forwarding all maritime-related government documents. A port's ship registers

[2] Data compiled from CDA, CE 70/11 series; MLG, CE 59/11/25; MHA, BT 99 series; TNA, BT 99 and 100 series; and NMM, BT 99 series.
[3] Two such examples were the Dundee whaler *Triune* and *Xanthus* of Peterhead, see *DA*, 'Loss of the Whaler Triune. Board of Trade Inquiry', 18 February 1887, and *Dundee Evening Telegraph (DET)*, [No article heading given], 27 September 1880.
[4] A 'shipowner' is defined in MSA, 1854 and MSA, 1894.
[5] For an online guide to listing where each British ports' papers are kept, see Peter Owens, 'Documents by Port', *Crew List Index Project* (CLIP), http://www.crewlist.org.uk/data/sourcesport [last accessed 3 September 2019).

consisted of numerous folio-sized, leather-bound volumes. Each volume covers a different time period based on when the vessel was registered.

Ledgers identified the ship by its essential administration information and technical measurements. These always included the Board of Trade's (BT) assigned Official Number (O.N.), the ship's current name, date and place of build and propulsion system. Incidentally, while a ship could change names, the O.N. never changed so long as it remained a British vessel. Ship registers also listed all shipowners by their full name, occupation, work or residential address and number of shares held. Besides listing individuals who owned ship shares, Parliamentary law also recognised corporate bodies and joint owners as shipowners.

When people purchased, sold or transferred ship shares, the MMO recorded the changes in the ship's register. Frequently this required redrafting the summary of shareholders and their distribution of holdings on another folio or in another volume, always including a written reference to the previous folio's volume and number. In this way, ship shares traded heavily could fill numerous folios extending across several volumes. This could quickly become a tedious effort to research one vessel or its investors. Officials closed a vessel's registration when the managing owner presented sufficient evidence of one of four situations: the loss of the craft, a ship's transfer to another port of registry, the completion of a sale to foreign owners, or substantial alterations to the physical characteristics of a ship. When the last scenario occurred, such as when owners converted a sailing ship to a steam whaler by adding an auxiliary steam engine and screw, the sailing registration was closed, and a new registration as a steam vessel would be entered (though the O.N. never changed). To the modern mind, record upkeep must have been a jostling and laborious process, but the system allowed every port of registry within the British Empire to track the status of all merchant vessels within its purview.[6]

Starting in the 1840s, the British government offered limited liability protections to companies registered with the BT. In 1862, it extended the privileges and safeguards for stockholders in something more like the older nautical 64-share system for ships.

[6] For example, S.S. *Active* (O.N. 19557) has entries in three volumes, CDA, CE 70/12, CE 70/19 and CE 70/20. In CE 70/20 alone, these include folios 13, 55, 56, 57, 256,257 and 258.

This meant people were only liable for the money they invested. Of course, there were differences. Investors in whaling company stocks were not considered shipowners. Nevertheless, owning corporate stock had its advantages. Whereas shipowners held shares in one vessel, company stockholders owned a portion of a whaling business, which usually operated multiple vessels. This meant company vessels shared whaling results, and if one vessel had a poor season, the effects were limited. The increased magnitude of whaling companies sending multiple vessels to the Arctic also necessitated more investors and extra capital to support the purchase of whaling yards, docks, boiling and processing equipment, storage facilities and office space.

Between 1861 and 1911, six whaling companies in Dundee – Tay Whale Fishing Company (TWFCo), Arctic Fishing Company (AFCo), Dundee Seal and Whale Fishing Company (DSWFCo), Dundee Polar Fishing Company (DPFCo), Dundee Arctic Fisheries Company (DAFCo), and Balaena Fishing Company (BFCo) – issued corporate stock to the public. The Companies' Act of 1862 extended government-recognised protections and privileges to all certified companies meeting its requirements and regulations. Among other things, legislation required companies seeking limited liability status to submit legal documents such as a Memorandum of Association and Articles of Association, codifying company's form of governance. Important elements in the Articles of Association included policies, procedures and schedules for its investing members, publicly identifying company directors, as well as listing an office with a physical address (replete with proper signage) for conducting business. Once the company established its Articles of Association and affirmed them by the company's founders, the document became virtually sacrosanct. Arbitrators and court judges used these to adjudicate decisions regarding company lawsuits.[7]

Parliament's 1862 statute also mandated that these companies submit annual reports to the Board of Trade (BT). These BT forms were labelled as 'Summary of Capital and Shares', and they contained information including 'the names, addresses, and occupations of all the members mentioned therein, and the number of shares held by each of them' as well as the 'amount of the capital of the company, and the number of

[7] *British Parliamentary Papers (BPP)*, 25 & 26 Vict. c.89. Companies Act, 1862.

shares into which it is divided'.[8] Since a whaling company now served as a separate legal and fiscal entity capable of owning ships, the manager and company directors most often served as the company's representative shipowners recorded in the ship register. The National Records of Scotland (NRS) holds most of these records in its Board of Trade Dissolved Company files (BT 2 series) in Edinburgh, creating a nearly complete collection of all known whaling companies investors' lists. The lone exception is a privately held collection which possesses the TWFCo stockholder ledger.[9] Unfortunately, the ledger was uncovered too late to be fully incorporated into this Chapter's data analysis. Partial copies of that ledger are held at the University of Dundee Archive Services (UDAS) under MS 59, and that data has been included.

Besides investment intelligence gathered from primary sources, a range of reference aids support prosopographical research by identifying and categorising every whaling investor. Digital aids greatly assist in the search for contextualising people. The digital service accessed through Scotlandspeople.gov.uk (a paid service of the NRS) offers Sheriff Court records containing official inventories of personal estates. The two most often referenced are the Dundee Sheriff's Court and Cupar Sheriff's Court.[10] When available (or affordable), these documents provide valuable insight on individuals' investment portfolios at the time of their death. Additionally, since many individuals who invested in whaling also subscribed to support Dundee's Albert Institute, now The McManus: Dundee's Gallery and Museum (McMG), upon its establishment in 1867, the McManus168 Project offers an easy-to-access, reliable and cited resource with its online 'Subscriber Database'.[11] This biographical database provides a wealth of cited information that reaches far beyond The McManus.

This thesis examines Dundee's Arctic trade from 1858 to 1922. Using the sources mentioned above, research samples from fifty years of whaling investments and trends in quinquennial-year intervals, starting in 1861 and concluding in 1911. Collected data starts at 1861 and closes in 1911, for two primary reasons. First, intervals for years

[8] *Ibid.,* c.89, II.26.
[9] Private collection, TWFCo Stockholder Ledger, 1813-1913.
[10] NRS, SC 20/50/60-102, Cupar Sheriff Court, Register of Inventories and SC 45/31/26-84, Dundee Sheriff Court, Register of Inventories.
[11] The McManus168 Group was a community-based heritage effort supervised by leading Dundee scholars Jim Tomlinson and Christopher Whatley. For more, see *McManus168*, https://mcmanus168.org.uk (accessed 31 August 2019).

ending in '-1' maximises opportunities to cross reference decennial census records to pinpoint specific people. Second, starting earlier than 1861 does not afford any accuracy advantages since most empirical (corporate) records are either missing or inconclusive. Only Ship Registers provide large amounts of virtually complete records before 1860. Likewise, during the quinquennial interval after 1911, nearly all remaining whaling vessels were appropriated for the Allied war effort. Vessels that did voyage north thereafter were mostly leased.

Helen Doe's study of female maritime (non-whaling) investors in England helps inform decision-making for this study's investor data organisation. Doe classifies maritime investors into four main groups: 'active investors', who make investment decisions (buying and selling shares) on their own; 'financiers', who most often provide mortgage capital for shares; 'passive investors', who gain shares through inheritance; and 'divestors', who only temporarily hold shares before selling them off quickly.[12] Besides the 'financiers' category, Doe's classifications are identifiable in the primary sources. The study has removed divestors and short-term passive investors by only including individual investors who held registered ship shares or corporate stock for at least one sealing or whaling season. Beyond this, data organisation and analysis does not differentiate between active and passive investors.

After compiling investors' known data into a database by year and ship or whaling company, each person involved in financing the Arctic trade through company stocks or ship share is assigned to one of four primary categories: 1) **Local textile merchants**, 2) **Local maritime sector**, 3) **Other Dundonian interests**, and 4) **Outside Investors**. The basis for distinguishing between local and outside investors corresponds with the seven-mile radius corresponding to Local Marine Board eligibility as outlined in the Introduction. This method of classification directly engages the first main research question by identifying investors around socio-economic and geographical factors.

The first category of investors is the local textile merchants and manufacturers. Classification distinguishes the textile industrialists from others for two reasons. First, the jute industry's leaders are commonly perceived as being the most involved financial

[12] Helen Doe, 'Waiting for her ship to come in? The female investor in nineteenth-century sailing ships', *EHR,* 63:1 (2010), pp. 89-103.

backers of the Arctic trade. It therefore is necessary to identify those within this group to test that hypothesis. Second, despite scholars classifying wealthy industrial capitalists within the (upper) middle classes, by all practical accounts their status was closer to the wealthy landed aristocracy than most others in the middle classes.[13] While other individuals in Dundee also accumulated significant wealth, few reached the rarefied status of the textile industry's 'merchant princes'.

The second category of investors, Dundee's maritime sector, amalgamates all those whose primary business dealings and financial interests were predominately linked to maritime commerce. This distinguishing factor gathers a diverse range of business leaders and artisans together. This category included shipbuilders, shipbrokers, marine insurance agents, and whaling and shipping managers. Some had respected maritime careers such as sea captains and harbour masters. Still others worked as artisans and specialists, such as shipriggers, stevedores, blacksmiths (shipsmiths), marine engineers/surveyors, and ship chandlers, rope and sailmakers, and some oil merchants/refiners. One nuanced group that requires case-by-case examination are those who identify themselves as 'shipowners'. As mentioned earlier, anyone owning a share in a ship was one, but this alone does not identify an investor with Dundee's maritime sector.

The third category – 'Other Dundonian interests' – contains all other Dundonians not regarded as textile manufacturers or as those belonging to the maritime sector. Throughout the era examined, this category included the most diverse range of investors. In the 1860s, the group had prominent wine and produce merchants, writer/solicitors, bankers, brewers, farmers and 'landed gentlemen'. Like the maritime sector, however, investors' occupations diversified greatly over time taking in more investors from professional careers, such as physicians and veterinarian surgeons, accountants, jewellers, clerks, ministers, and teachers. Artisans, some quite well off, also invested. These included painters, butchers, bakers, coppersmiths, slaters, shoemakers, plumbers, warehousemen and others. Specialists, like company managers, engineers, bellhangers, civil engineers (architects), and lathsplitters likewise bought shares in the

[13] For example, Claire E. Swan, '"Dundee as a Centre of Financial Investment": The Origins and Development of the Scottish Investment Trust Industry, c.1870-1914' (Unpublished PhD thesis, University of Dundee, 2009).

whaling trade. Furthermore, this category includes those who work in the textile industry but are not distinguished as the manufacturers who owned factories and mill. Although data categorisation distinguishes between Dundee's maritime sector and the Other Dundonians, together these groups represented Dundee's middle-classes. This is an important concession since it enables analysis to follow investing trends on multiple levels.

The fourth and final category registers all Outside Investors who lived beyond Dundee's seven-mile radius. This category is purely defined by geography with no consideration for occupational status. In Scotland, outside investors tended to come from Glasgow, Fife and Forfarshire. Those from Kirkcaldy and Arbroath were usually textile or carpet manufacturers linked to the jute industry. Investors living in England primarily came from the large port cities, mostly London, but scattered throughout the country. Their occupations included bankers, iron and wine merchants, brokers for shipping, produce and the 'colonial' import/export trade, foreign coaling contractors, paint manufacturers, master mariners and marine surveyors.

Limitations and Work Arounds

Ideally, sources documenting Dundee's whaling investors and investments would provide three elements of financial asset information: investors' personal identification (including full name, occupation and address), number of shares held, and amount of capital invested. Analyses of data calculated from these elements help to determine how many people invested over time, how much capital was involved, and who controlled the majority of shares. Constructing investor categories and subcategories from available personal and financial information enables research to detect patterns of involvement over time.

However, sources detailing information about ship shareholders and corporate investors are not entirely compatible. Dundee's ship registers present a virtually complete picture of ship share ownership. It provides intelligence on the number of shares in a vessel held by an individual as well as all follow-on transactions. Critically, however, ship registers do not record information on share prices or capital raised. While managing owners could track who owned shares and the amount of capital raised to go to sea, ship share prices escaped their full control. Conversely, annual whaling

company reports from the BT 2 series supply all the necessary investment information (names, shares, listed stock prices and financed capital). Here, a couple factors complicate assessments. Firstly, there are gaps in corporate records. W.O. Taylor's long-standing and prominent whaling interests are particularly troublesome gaps. No known corporate records exist of any kind for AFCo (1861-1874) and DPFCo (except BT 2/600). Additionally, it does not appear that either AFCo or TWFCo would have needed to submit the same types of reports since their companies were established before the 1862 legislation. TWFCo's stockholder ledger clearly demonstrates this clearly. There is no provision within the ledger for listing stock prices or summing the total amount of capital investment. In this regard, the ledger is much more like a ship's register.[14] Secondly, while BT 2 investment summaries list nominal share prices, this did not necessarily reflect actual market price or even individual stock transactions.

For the purposes of this study, all individuals are classified according to their own known status and business activities at each five-year interval of examination. This means that people do not sort into one primary category simply because they live within a textile-manufacturing or maritime household. For example, Rosena Wilson Guy married the Dundee whaling captain, William Guy, and she also purchased a share in the whaler *Chieftain* in April 1886. In the database she does not register under the 'Dundee maritime' category with her husband. Rather, she fits within the group of 'Other Dundee interests'. Scholars have argued that some women vitally assisted their husbands in a profession. [15] However, the primary sources used for this study do not provide any indication of that, and therefore, each investor is categorised on their own account. This helps data analysis to find individual investors, not just groups of people, who might otherwise have remained hidden in the financial peripheries of the trade. It also leaves open the possibility to change a person's categorical status across each five-year interval. This gives flexibility for reporting data in a way that reflects changes to people's personal situations. Finally, individual assessments recognise the personal agency and connections that people had with the whaling industry.

[14] Private collection, TWFCo stockholder ledger.
[15] Eleanor Gordon and Gwyneth Nair, 'The Economic Role of Middle Class Women in Victorian Glasgow', *Women's Historical Review,* 9:4 (2000), pp. 794-96.

Humans are complex and changing beings, and inherently their lives resist labels and categorisation. Thus, the restrictive nature of assigning every person to one of four mandatory categories necessitates the inclusion of a second, more descriptive and open-ended taxonomic system to support the first. Using numerous subcategories, this subsidiary system not only attempts to profile whaling investors around specific labels, but it also allows multiple entries to better represent the full spectrum of a person's social standing and occupational activities. Too often, occupational classifications pigeonhole people into one fixed or identifiable occupation.[16] Records and directories repeatedly show, however, that in the late nineteenth century, Dundonians ranging from shipriggers and grocers to solicitors and textile 'merchant princes' engaged in multiple business ventures at the same time. Additionally, some held positions of authority within municipal, charitable and leisure institutions. For example, Patrick Hunter (P.H.) Thoms (1796-1882), a graduate of the University of St Andrews and a long-time investor in TWFCo and DSWFCo, actively worked as a bank, insurance and mining agent. Among many other municipal endeavours, he served as Provost of Dundee (1847-1853), Justice of the Peace, and Dundee's Vice-Consul for Denmark. Later in life, he became Chief of Clan MacThomas.[17]

Data Analysis of Dundee Whaling Investments, 1861-1911

Collated financial information on Dundee whaling investments produces several key outputs for analysis and interpretation. These include the number of people holding company shares, ship shares or both; the amount of money invested in corporate capital shares, and the distribution of total shares across the four primary categories of investors. In this section, data analysis examines these outputs for patterns over time and evaluates the processes and circumstances which may have affected them. Following this, a prosopographical section then concentrates on examining and distinguishing the four categories of investors, and select groups and individuals within each, to understand why investors acted as they did.

[16] For example, Kim Price, 'Victorian Professions: The Galvanising (and Shaping) Force of Death on Families', in Beardmore et al, *Family Life*, pp. 58-62.
[17] See 'P.H. Thoms, *McManus168,* https://mcmanus168.org.uk/mcmanus168entry/p-h-thoms/ (accessed 11 September 2019).

Steam whaling in Dundee derived its capital from the ownership of company stock and ship shares. Overall, research identifies 588 individuals and six companies, who invested in Dundee whaling during intervals between 1861 and 1911. Appendix G.3 alphabetically lists the names of these investors. It also details occupations, addresses and the type and number of whaling investments cumulatively owned over time. Appendix G.3, however, does not fully account for all whaling investors. Rather, it lists the known minimum. Several reasons explain this. First, there are missing records. For example, no known documents exist for the Arctic Fishing Company (AFCo) in Dundee. Second, short-term investors who purchased and sold investments in between 5-year intervals are not listed. The same applies to all executors and trustees unless they held the ship or company shares for at least one full season during an interval year. The total number of investors throughout the whole period, therefore, may well exceed seven hundred investors. Finally, investors who sold off their whaling investments before 1861 or purchased shares after 1911 are also not counted in these numbers. By category, Dundee's textile merchants cumulatively had 89 total investors; Dundee's maritime sector, 84; other Dundonians, whose activities fell outside of the first two categories, 265; and finally, 165 investors came from outside Dundee's seven-mile radius.

While Appendix G.3 lists names and investments, Table 1.1 collates this information and breaks down investor numbers by category, investment type and year.

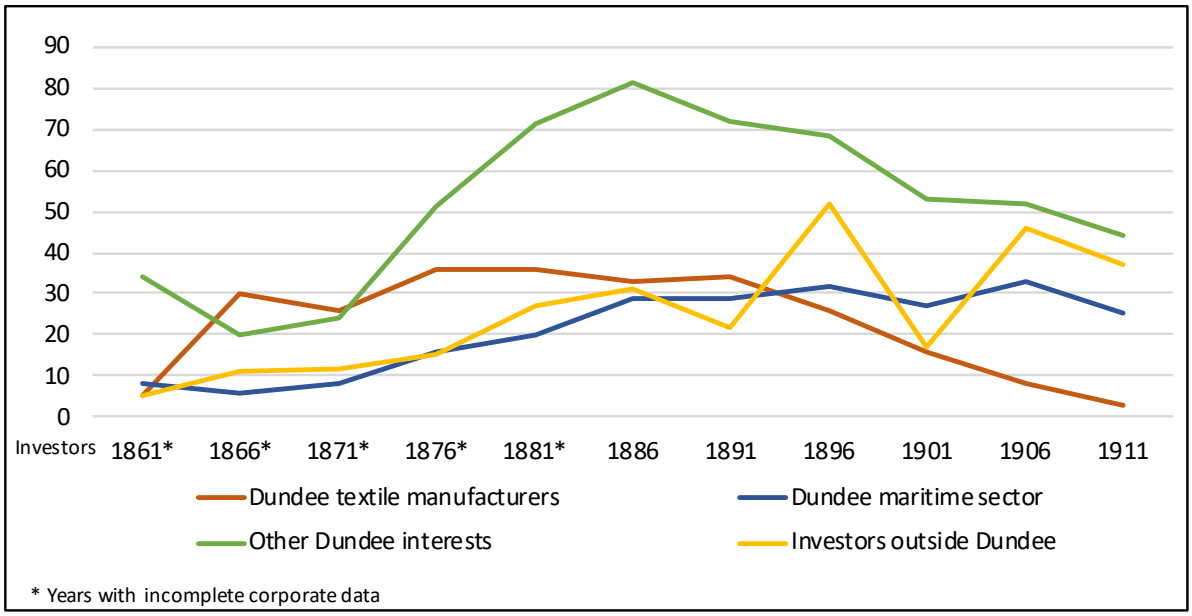
Table 1.1. Investors by Category and Investment, 1861-1911.[#]

	1861*	1866*	1871*	1876*	1881*	1886	1891	1896	1901	1906	1911
Total Textile Merchants	5	30	26	36	36	33	34	26	16	8	3
Company stockholders	3	29	26	35	35	30	33	13	10	6	2
Ship sharesholders	2	1	0	3	5	3	1	13	8	2	1
Total Maritime Sector	8	6	8	16	20	29	29	32	27	33	25
Company stockholders	4	6	8	12	15	8	11	14	14	14	14
Ship sharesholders	4	0	2	8	8	22	22	24	18	28	15
Total Other Dundonians	34	20	24	51	71	81	72	68	53	52	44
Company stockholders	33	20	24	49	67	48	38	29	19	16	20
Ship sharesholders	3	0	0	3	10	36	35	46	38	42	30
Total Outside Investors	5	11	12	15	27	31	22	52	17	46	37
Company stockholders	2	9	9	13	19	17	22	49	7	9	9
Ship sharesholders	3	2	3	3	8	14	0	4	10	39	29
Total Investors	52	67	70	118	154	174	157	178	113	139	109
Company stockholders	42	64	67	109	136	103	104	105	50	45	45
Ship sharesholders	12	3	5	17	31	75	58	87	74	111	75

[#] All year totals reflect the actual number of individuals involved with no duplicate counts.
* Years with incomplete data.

Figures 1.2 and 1.3 serve to visualise Table 1.1's data but in different ways. Figure 1.2 projects the trajectories of the total number of investors *by category*. This helps to show

Figure 1.2. Total Number of Investors in All Whaling Investments, 1861-1911.

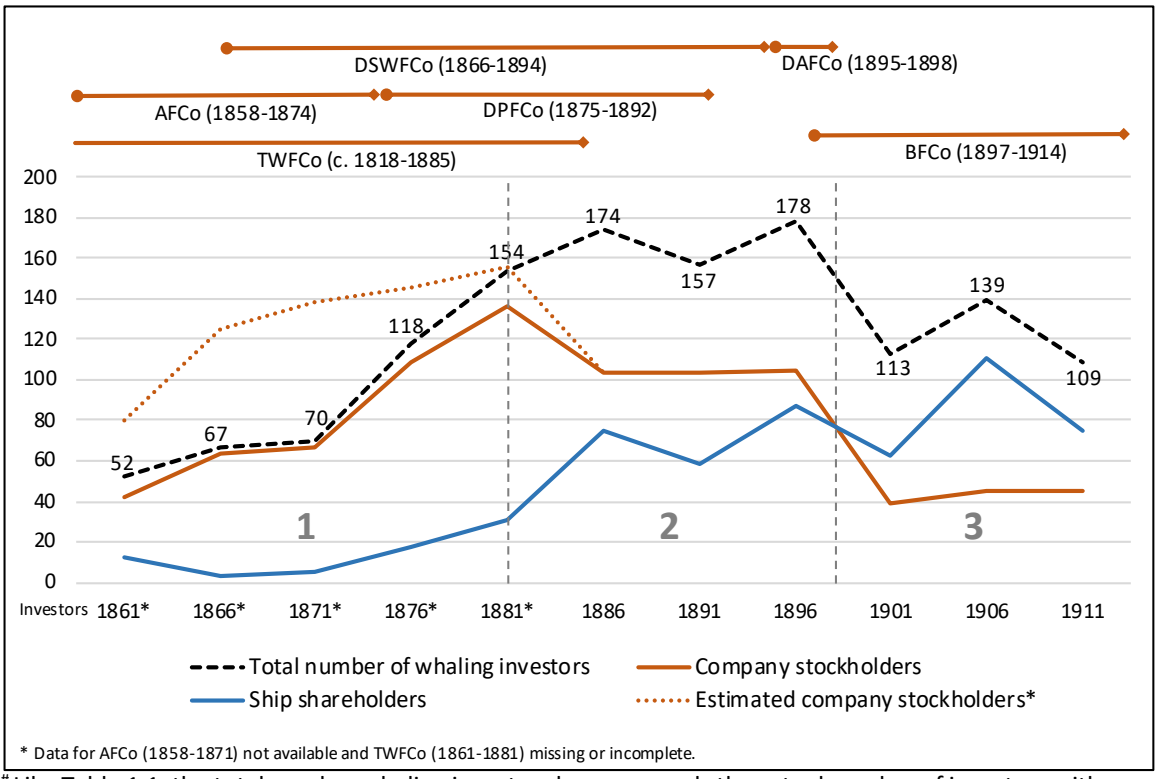


Source: CDA, CE 70/11 series; NRS, BT 2 series.

who comprised the largest categories of investors over time. Figure 1.3 below works in tandem with Table 1.1 by splitting total investor numbers *between ship shareholders and company stockholders*. Visualising information this way aligns the trajectories of investor numbers to the whaling companies operating at the time. This helps to divide the Arctic trade's final era into three distinct phases. Three initial observations are worth noting in Table 1.1 and Figures 1.2 and 1.3: initial trends, the polarisation of investment purchases, and the magnitude of investor numbers by category.

Table 1.1 and Figure 1.3 clearly record an increasing trajectory in the number of whaling investors from 1861 to 1886. Even in the intervals after 1886, however, the declining number of investors still represents far more participants than in the early intervals. The table also details the dramatic changes in the proportion of investors from each category. Between 1861 and 1866, the number of Dundee's textile merchants investing in whaling increased nearly tenfold. They quickly became the largest category of investors, a position they briefly until the Other Dundee investors had surged past them by 1876. Conversely, during that same period, investors from the maritime sector, the ones seemingly closest to the whaling trade, made up the smallest category.

Figure 1.3. Investment Phases during the Steam Whaling Era, 1861-1911.[#]



[#] Like Table 1.1, the total number whaling investors by year equals the actual number of investors with no duplicate counts involved.

As early as 1861, whaling in Dundee reflects an investment pattern in which people tended to purchase company stock or ship shares exclusively. Appendix G.3 provides the total number of investors by category and time interval. All total numbers within these columns and rows reflect the actual number of persons investing in the Arctic trade. The situation for company stockholders and ship shareholders by category and interval, however, is different. As the sum of stockholders and shareholders more closely sums to the actual number of persons in a category, it indicates the degree of exclusive investment choices that category's persons are making. For example, in 1866, Table 1.1 lists 30 textile merchants with whaling investments. Of that number, 29 owned corporate whaling stock and only one held ship shares. Two elements are worth noting here. First, the sum of stockholders and shareholders equals the total number of textile merchants. This therefore shows that textile merchants nearly exclusively preferred one avenue of investment over another. Second, in 1866, textile merchants overwhelmingly invested in whaling companies, not ships. By 1896, however, 13 textile investors held corporate stock and 13 had ship shares, the sum of which equalled the 26 total textile investors. This shows that thirty years later, textile merchants were still exclusively

capitalising either companies or ships. At the same time, however, these choices were now evenly split. Understanding why such preferences occurred like this begins to delineate some of the financial boundaries that existed within the Arctic trade. This Chapter probes this matter in further detail in the jute barons' prosopographical section.

The converse of exclusivity principle is also true. For instance, in 1876, there were a total of 16 investors from Dundee's maritime sector. From that group, twelve owned corporate stock. From the same group, eight held ship shares. Since the sum of the stockholders and shareholders does not equal 16 persons (it sums to 20), this indicates that some investors from the maritime category owned interests in both. So, as the sum of stockholders and shareholders increasingly exceed the number of persons listed, it indicates to what degree people are selecting investment between companies and ships equally.

While Dundee's textile merchants made up the largest number of investors in 1866, by 1871, the number of 'Other Dundonian' category of investors virtually matched them, and by 1876, they had measurably surpassed the jute barons. From then through 1911, the Other Dundonians remained the most numerous of investor categories. Interestingly, after 1881, the polarisation of investments among maritime sector and Other Dundonian investors began to decrease.

Plotting the total number of investors by category from Table 1.1 visually projects the trajectory of investors' participation in the Arctic trade over time. As Figure 1.3 shows, three general phases of investment activity emerge during the steam whaling era. The first phase lasted from 1861 to 1881, revealing the pattern of polarised investment. Company shareholders outnumbered shipowners by a large margin. Spurred by the American Civil War, a great demand for whale oil and the burgeoning strength of Dundee's hybrid wooden-hulled, steam-powered 'screw' whalers, the first phase signified a dramatic resurgence in Dundee's Arctic whaling efforts compared to the relative lull in whaling in previous decades.[18] The prosopographical section following this analysis will further examine why companies flourished instead of ship shares at this time. Flush with cash after 1861, companies built new and larger steam barques or acquired quality second-hand ones so that for most of this phase, three whaling

[18] For a discussion on the lull in whaling prior to steam, see Sanger, *Scottish Arctic Whaling*, pp. 110-15.

companies (TWFCo, DSWFCo and AFCo, which transitioned into DPFCo in 1875) formed the core of Dundee's Arctic whaling fleet. Each sent multiple vessels to the Arctic every season. During this first phase, Dundee ascended to become the world's premier Arctic whaling port.

The second phase, from 1881 through 1896, frames a time when whaling harvests steeply declined. Figure 1.3 shows how corporate investor participation initially dropped then levelled off, while the number of shipowners generally trended upwards. Most telling, however, is the overall increasing trend in total investor participation despite the steep drop in whaling harvests. Quantitatively, investor participation peaks around the 1896 interval, a time when Dundee whaling is at one of its lowest moments.[19] Taken together, the first two phases demarcate Dundee's corporate steam whaling era. It was a time when whaling companies gave the industry most of its strength, and the trade reached its operational, economic and investment zeniths.[20]

Breaking down the total number of whaling investors by primary categories further distinguishes how people participated in financing the trade. Figure 1.3 shows that textile merchants' investor numbers initially surged in the early 1860s, before roughly levelling off. Clearly, by the 1890s, textile merchants had cooled on the whaling trade. The maritime sector's investors seemingly took an opposite course of action. While early investment was tepid, investor numbers continually climbed from the mid 1860s to 1896, where thereafter, it continued to hold steady numbers. As for investors from the Other Dundonian category, they formed the largest number of whaling shareholders. Though their numbers peaked in 1886, they continued to remain the largest group of investors right up to the First World War. Finally, investors from outside of Dundee represent the most irregular pattern of investment among the four categories, and this likely stems from the heterogeneity of the composition.

During the third phase, from before 1901 through 1911, the number of shipowners surpassed the plummeting number of corporate investors for the first time in the records. Scholars interpreting history through its economic outputs view this phase as an industry hovering over death, waiting to die. That, however, overlooks the

[19] Sanger, *Scottish Arctic Whaling*, pp. 112.
[20] *Ibid.*, p. 112.

development of several innovative operational changes as well as continued dynamic social interactions in the Arctic, particularly around southern Baffin. Chapters 3 and 4 challenge these historical limitations. As for financial participation in the whaling trade, the third phase marked a decline in total investor participation from its peak around 1896, but far less than one expected to correlate with current narratives. Participation numbers remained higher than those for much of the ascendant first phase, and when compared in proportion to the amount of capital invested, participation rates within the industry (outside of Dundee's textile manufacturers) had never been higher.

While investor numbers alone do not wholly signify financial strength, drilling down further does increasingly contextualise the composition of Dundee's whaling investors. One aspect involves the remarkable diversity of investor composition that evolved over time within the whaling trade. Cumulatively, over 190 different occupational descriptions represented the 588 businesses and persons investing in Dundee whaling of the fifty-year span (see Appendix 1.1). Appendix 1.2 breaks down the occupational numbers by category. Occupational diversity among investors started to take hold around 1876, and it continued to increase until reaching its peak (along with total investor numbers) in 1896. Perhaps even more remarkable, despite the downturn in investor numbers during the third phase of steam whaling, occupational diversity among investors remained extraordinarily high. This diversity is most embodied in Dundee's middle-class categories.

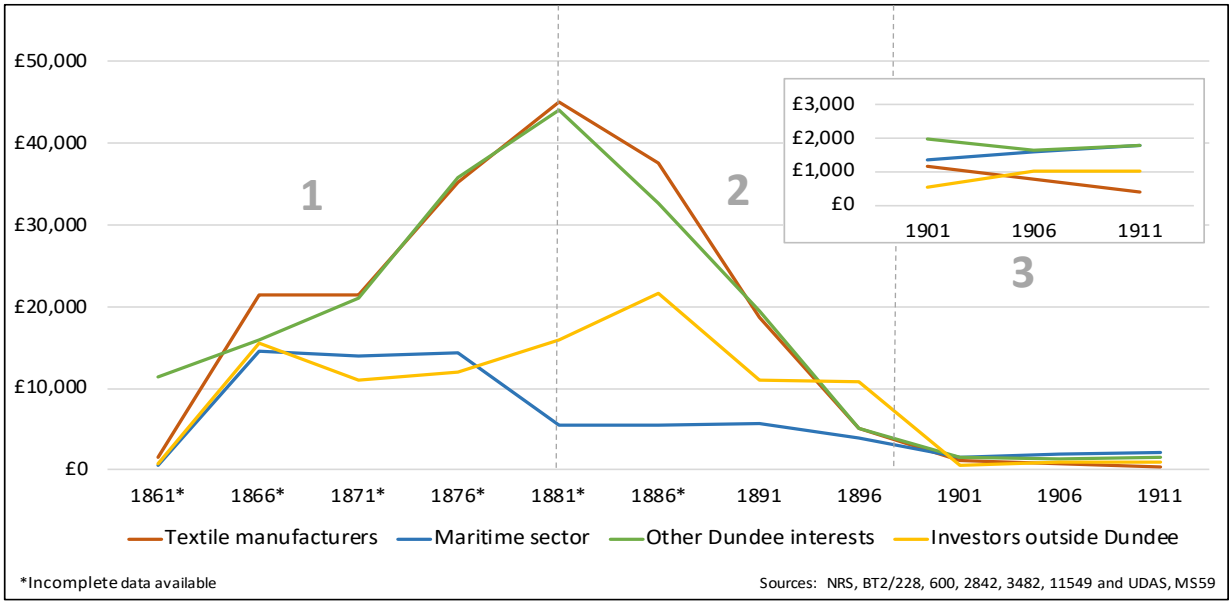
Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer and Robert Vishny have put forward the 'Law and Finance Theory', arguing that ownership concentrations result from 'the quality of legal protection'. In other words, laws must be enacted to open investor diversity. La Porta *et al* contend this did not happen until well into the twentieth century.[21] However, whaling investor diversity provides a local case that challenges this theory. Instead, it supports the findings of Graeme Acheson, Gareth Campbell, John D. Turner and Nadia Vanteeva, who contend that contrary to the law and finance hypothesis, dispersed ownership did occur as early as the second half of the

[21] See Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer and Robert W. Vishny, 'Law and Finance', *Journal of Political Economy,* 106:6 (1998), pp. 1113-55, especially p. 1151.

nineteenth century despite the lack of strong shareholder protections.[22] Other scholars have also supported this claim argument.[23]

Examining the amount of capital invested in whaling companies alongside investor numbers further illuminates the nature of whaling investment, particularly during steam whaling's corporate era. Figure 1.4 depicts the amount of nominal capital invested into whaling companies as listed in the BT 2 series. In contrast, ship shares in

Figure 1.4. Nominal Capital Invested in Dundee Whaling Companies, 1861-1911.



the CE 70 series list the number of shares owned, not the amount of capital invested. The sharp increase in capital invested during the first phase, along with its correspondingly large volume of investors, demonstrates the extent to which the corporate model had won out among investors, especially the textile merchants. By 1866, not only had the number of textile merchant corporate stockholders increased tenfold (Table 1.1), but also their investments reached well above £20,000. Textile merchants' numbers and amounts invested continued to increase until the 1881 interval, at which point their holdings accounted for £46,100 of over £110,700 (or over 40 per cent of the total) invested in whaling companies.

[22] Graeme G. Acheson, Gareth Campbell, John D. Turner and Nadia Vanteeva, 'Corporate ownership and control in Victorian Britain', *EHR*, 68:3 (2015), pp. 911-36, and Aldo Musacchio and John D. Turner, 'Does the Law and Finance Hypothesis Pass the Test of History', *Business History*, 55:4 (2013), pp. 524-42.
[23] Julian Franks, Colin Mayer and Stefano Rossi, 'Ownership: Evolution and Regulation', *The Review of Financial Studies,* 22:10 (2009), pp. 4009-56.

Although the injection of textile merchants' capital into multi-vessel whaling companies certainly fuelled Dundee's rise to the top of the Arctic industry, it cannot be said that the jute barons established themselves as whaling's principal investors. Outside of 1866, the Other Dundonians category virtually matched the textile merchants in the amount they invested in whaling companies, with ship shares not yet having been considered. Even during the 1866 interval, Appendix 1.3 shows that opposite to expectation, the textile merchants, on average, invested less per investor than any other category. Throughout the second phase, from 1881 through 1896, the textile merchants then held the highest average investment, but at that time, their numbers though steady were well below the number of investors from Maritime sector and Other Dundonians. Therefore, at this point, between the number of shareholders and amount of capital invested, there is no conclusive way yet to determine who made up whaling's principal financiers.

Corporate share capital investments by individuals from Dundee's maritime sector feature an altogether different set of trends. Whereas prior to 1866, the maritime sector constituted the second-largest investor category, with the rush to invest in corporate whaling, the maritime investors quickly found themselves the smallest, if not possibly the most financially disenfranchised, group of investors. By the 1876 interval, sagacious but only modestly financed individuals from the maritime category had begun to innovate ways to enter the whaling trade on their own terms. They did so, by purchasing vessels and immediately reselling most of the 64 shares to a large pool of mostly non-maritime owners, always ensuring that they retained enough ship shares to protect their position as managing owner of the vessel.

During the second phase of Dundee's steam whaling era, the most obvious aspect in Figure 1.4 centres on the drastic and seemingly uniform reduction in the amount of capital invested in whaling companies. Doubtless, the 1880s and 90s were financially a diminishing time for whaling companies. Invested capital from the textile merchant category alone dropped by over £40,000. Total share capital plummeted from around £110,700 in 1881 to £25,000 in 1896. What caused such a dramatic decline for the industry? This downturn in invested share capital, however, seemingly contrasts with the trajectory for investor numbers presented in Table 1.1 and Figure 1.4. How are these trends explained? Why were investors responding as they were?

In Gordon Jackson's economic analysis of Arctic whaling during this era, he wholly places the trade's inexorable decline on its inability to 'supply' enough whales at a profitable rate.[24] Unquestionably, the diminishing bowhead and right whale populations were contributing to an increasing number of poor fishing seasons, especially after 1886 and thereafter. Even though failed seasons were part of the accepted risk in whaling, such occurrences often forced companies to borrow against their debts for the next season. Poor fishing seasons meant no disbursed dividends to its investors, and from time to time, companies even had to make a call on shares. In the logic of this economic cause and effect, the decline in invested capital should have been the result of shareholders divesting from the industry. Yet, that was not the case.

Investment patterns indicate that textile merchants who bought corporate shares held onto them until either they died, or the company dissolved. Such was the case with the textile giant, William Ogilvy Dalgleish (1832-1913), partner and later chair of Messrs Baxter Brothers & Co. In 1866, he purchased £2000 of DSWFCo stock at its inception. In 1875, he again bought £500 of shares in the newly formed DPFCo.[25] By 1895, W.O. Dalgleish had retired to his villa in Errol as a gentleman, but he still ventured £500 of capital in 50 shares of yet another whaling company start-up, DAFCo. In all three instances, W.O. Dalgleish kept his investments until the companies ceased operations.[26]

While textile manufacturers held onto their whaling shares for the long term, investors from other categories tended to turnover company and ship shares at much higher rates. Even so, Figure 1.3 and Table 1.1 clearly indicate that up to the 1896 interval, more investors were joining than leaving. Therefore, the drop in invested capital resulted from something other than divesting stockholders leaving the industry.

The most direct reason for the decline in share capital appears to have been the denomination of capital shares due to the material loss of a vessel. Appendix 1.4 depicts both listed nominal share prices as well as market prices for whaling company shares dropped during the 1880s. While market prices often fell below the company's nominal share price, they technically did not affect the amount of capital share already paid into

[24] Gordon Jackson, *The British Whaling Trade* (1978; reprinted, St John's, 2005), pp. 129-37.
[25] NRS, BT 2/228/1-4; BT 2/600/1-4.
[26] NRS, BT 2/228/38, 40; BT 2/600/26-27; BT 2/2842/1-10.

the company. Market prices were the going rates for third-party exchanges of company shares.

Furthermore, not all whaling company denominations of their shares resulted in a decrease in invested capital. DSWFCo first devalued its nominal stock by four-fifths in 1883.[27] This initial move, however, did not affect the overall amount of capital invested in the company, because DSWFCo countered the reduction in stock value by multiplying each investor's number of shares by five. It had little to do with whaling itself. For example, in 1881, the textile merchant John Sharp, who owned the Bower Mill, the Edward Street Mill, and three additional factories on Miln Street, held three shares of DSWFCo stock at £500 apiece. Following the 1883 devaluation, Sharp's holdings increased to fifteen shares, but each was valued at £100 so that his entire investment still came to £1500.

Stock devaluations resulting in a loss of invested capital most often occurred when companies suffered material loss or wound up operations. In Figure 1.4, the initial decline in textile merchants' invested capital after the 1881 interval, corresponded with the loss of TWFCo's last whaler, *Intrepid*, which floundered off Greenland in July 1885.[28] The sudden end to TWFCo's 1885 fishing season also marked the veritable end of the company. With an increasing history of poor harvests and dangerous waters, TWFCo's directors elected not to seek the purchase of a replacement vessel.[29] In 1892, seven years after TWFCo ceased its sealing and whaling operations, TWFCo stock had dropped from a listed nominal share price of £100 in 1881 to an appraised value of £12 per share.

Investment figures for other companies mirrored their struggling company operations too. Up through the 1881 interval, DSWFCo typically sent out four whalers per season, but in 1884, *Narwhal*'s crew abandoned their sinking vessel near Cape Searle in the Davis Strait. A year and a half later in March 1886, ice crushed and sunk the whaler *Resolute* off Fogo Island near Newfoundland during the spring seal hunt. These losses effectively halved DSWFCo's whaling fleet. Later in June that year, ice in Davis Strait crushed and sank *Jan Mayen* (I), one of DPFCo's two whalers.[30] Following the 1886

[27] NRS, BT 2/228/22.
[28] CDA, CE 70/11/11, p. 108.
[29] See UDAS, MS 59.
[30] CDA, CE 70/11/10, p. 149; CE 70/11/13, p. 41; and CE 70/11/12, p. 76, respectively.

season, both companies devalued their stock prices and took steps to reimburse their shareholders. While part of DPFCo's devaluation absorbed the debt incurred from the season's losses, another portion of invested capital (£17 10s per share) was returned to each shareholder. In this way, DPFCo's shareholders continued to hold the same number of shares in the company, but the shares were now worth one-fourth of their original value.[31] Two years later in 1889, DSWFCo devalued its stock again from £100 to £70.[32] This time they followed DPFCo's example. They did not increase the number of shares, but instead likely returned the difference in invested capital to each DSWFCo investor. Therefore, John Sharp's shareholdings before and after DSWFCo's 1889 devaluation remained fifteen shares.[33]

The denomination of DPFCo and DSWFCo stock prices explains the steep decline in capital invested as reflected in Figure 1.4 between the 1886 and 1896 intervals.[34] Yet, the motive remains unclear as to why whaling companies did so. As Appendix 1.4 indicates, market prices for whaling company shares often did not match their nominal share price. By lowering the nominal price but increasing the number of shares, DSWFCo may have been trying to keep current investors' capital while making shares accessible to more investors. On the other hand, DPFCo's and DSWFCo's devaluations coupled with capital returns may have signalled a realisation among large investors that the companies were in unsustainable financial trouble. If so, devaluations could represent attempts by company directors and leading investors to recoup as much money as possible from their investments before the companies went into liquidation. Gareth Campbell and John D. Turner remark that the Companies Act of 1856 did not offer strong investor protections, and any company going into liquidation would necessarily pay its debts first.[35] Finally, it must be noted that the devaluation of a company's nominal share price did not just occur within whaling. According to J.B. Jeffrys, denominating share prices became a common occurrence in Britain during the 1880s, and so DSWFCo's decision merely reflected a wider pattern of corporate action.[36]

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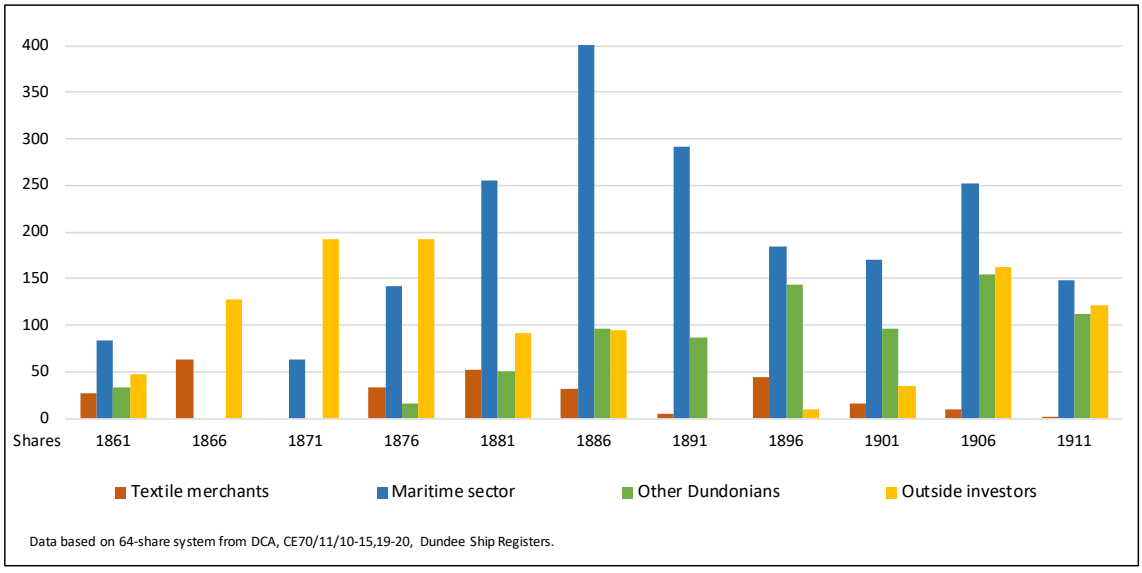
[31] NRS, BT 2/600/20; *DC,* 'Dundee Polar Fishing Company', 19 January 1887.
[32] NRS, BT 2/228/19, 23, 30.
[33] NRS, BT 2/228/16-17.
[34] See J. B. Jeffrys, 'The Denomination and Character of Shares, 1855-1885', *EHR*, 16:1 (1946), pp. 45-55.
[35] See Gareth Campbell and John D. Turner, 'Substitutes for Legal Protection: Corporate Governance and Dividends in Victorian Britain', *EHR*, 64:2 (2011), pp. 571-97.
[36] Jeffrys, 'Character of Shares', pp. 45-55.

The material losses in vessels forced whaling companies to downsize their fleet operations. Downsized operations, in turn, made companies not only increasingly vulnerable to future shortfalls, but also lessened their ability to make up for past shortfalls in the future. Coupling this state of affairs with increasingly poor whaling results decimated the whaling companies' so that by the 1890s, DPFCo (1892), then DSWFCo (1894) and finally DAFCo (1898) successively wound up their activities and went into liquidation.

While the second phase experienced the dissolution of most of Dundee's whaling companies, the remaining whaling presence in Dundee had transitioned to other investment patterns. Despite the failure of whaling companies, the total number of investors in whaling continued to climb until 1896. As the whaling companies dissolved, investors from the middle classes shifted to buying ship shares, led principally by the maritime sector. Early on, most ship shares belonged to wealthy Outside investors. These actors usually built or bought a vessel outright, based it out of Dundee, and hired a Dundee-based whaling manager to handle affairs. From the 1876 interval and thereafter, episodes of smaller, independent whaling endeavours funded with ship share investments started up, initially lead primarily by George Welch. During the second phase, others increasing shifted to or added individual whaling ships to their investment portfolios.

Table 1.1 enumerates this marked shift between 1881 and 1886 towards ship shares, especially for the maritime sector and Other Dundonian investors. Figure 1.5

Figure 1.5. Ship Shares Held among Dundee Whaling Investors, 1861-1911.



further illustrates this from a solely ship share perspective. Together, these visualisations indicate that the maritime sector began to lead an alternate financial and operational model of whaling during Phase 2, which carried on into Phase 3. A comparison between ship shares and the actual number of vessels voyaging north reinforces the point. In 1876, Dundee's whaling companies sent out eight whalers, and individually financed whalers sent three to the north. Ten years later, in 1886, a total of five whalers from DSWFCo and DPFCo deployed, while nine voyaged as individual endeavours. This development within ship share investments, combined with DAFCo's large number of investors during Phase 3, explains how whaling's level of investor participation curiously peaked in the mid 1890s, even after the dissolution of Dundee's three hallmark whaling companies.

The failure of Dundee's whaling companies signalled the beginning of a third phase running from 1898 through the 1911 interval. For many economic and maritime scholars like Gordon Jackson, the failure of Dundee's whaling companies at the end of the second phase only served to underline the 'slow but inexorable decline' of the Arctic whaling trade.[37] This, however, implies that all whaling efforts and their supporting investment structures operated in the same way and with the same purpose. In practice, the trade was never so static or monolithic. It is a portion of Dundee's Arctic history which is often given short shrift.[38] Chapter 4 features this phase and its labour dynamics more closely. As for investments, Dundonians like Robert Kinnes, James Mitchell and his son, John M. Hunter Mitchell of BFCo continued financing activities through ship shareholders, and increasingly they veered away from whaling to embrace all opportunistic forms of resource exploitation in the Arctic. The Mitchells even formed the Dundee Ponds Bay Fishing Company, but it primarily constituted a land station with no vessels. No financial information is available to analyse this endeavour. It does not have any files in the BT 2 series. These evolutions in the Arctic trade came about by cutting crews and their wages, operating on shoestring budgets and placing individual vessels at the centre of operations. Even BFCo, the last of Dundee's whaling companies,

[37] G. Jackson, *British Whaling Trade*, pp. 136-37.
[38] For a detailed history detailing Scottish endeavours during this last phase, see Gavin D. White, *The Far Shores of Baffin* (unpublished typescript, undated), held at Maritime History Archive (MHA), Gavin Donald White fonds, MF-0208.

also adopted this method with its only whaler *Balaena*. In this way, they seized upon earlier Peterhead initiatives by running small-scale, disaggregated business ventures in the Arctic.[39]

Data analysis from whaling investment information clearly demonstrates that Dundee's middle-class made up whaling's principal investors throughout most of the steam whaling era. Though never Dundee's largest individual investors, the cumulative magnitude of their efforts supported the industry well into the twentieth century. Detailed analysis of numbers and trends regarding investors; invested share capital; and the distributions of categories, occupations and ownership of ship shares has shown how the Arctic trade procured capital for operations from a grassroots level. The following prosopographical survey examines the nuances of why investors would choose to do so.

A Prosopographical Survey of Dundee's Whaling Investors

Quantitative trends discussed above signify that Dundee's whaling trade offered spaces of opportunity through its financial investment structures, which attracted a wide range of people for a number of reasons. No other industry or commercial activity in Dundee could make such a claim. The following prosopographical survey serves to contextualise the financial relationships that existed within whaling and discern why such a risky and supposedly 'failed' trade appealed to so many.

The survey first examines Dundee's textile merchants for the rest of Chapter 1 to distinguish aspects of their financial profiles. Based on their patterns of exclusive asset investment, the section first compares the functional differences between company stock and ship shares, then sorts through why Dundee's jute barons overwhelmingly preferred to invest in one type of asset over another. It also considers how these differences in investor preference affected Dundee's prosecution of the whaling trade over time. In Chapter 2, the survey continues by turning to analyse Dundee's middle-class investors. It asks why modest investors, such as the artisanal trades and general merchants, continued to support the whaling trade even as its company and ship-based operations faltered.

[39] Sanger, *Scottish Arctic Whaling*, p. 121-37, and C. Sanger, 'Scottish Over-Winter Whaling at Cumberland Gulf, Baffin Island, 1853-1890', *IJMH*, 19, 2 (2007), pp. 161-99.

By delineating these questions, the survey suggests the development of financial spaces of opportunity facilitated diversity among its investors. These opportunistic spaces stemmed from a confluence of financial and social factors involving wealth, leadership and organisational control, acceptance of risk, access to investments, personal networks, and civic patriotism. Ultimately, the cumulative effect of these grassroots interactions established Dundee's diverse range of middle-class investors as Arctic whaling's principal financiers.

Jute *Prima Facie*

Since jute barons owned the industry most associated with using vast quantities of whale oil, its investors are commonly regarded as whaling's primary base of financial support. While jute was Dundee's leading textile resource, the term has come to represent all forms of textile manufacturing in Dundee. Dundee's industrialists manufactured goods from several types of textiles, including jute, flax and hemp. Others associated with the industry engineered and produced machinery necessary for different textile operations. Since a 'jute only' designation, therefore, is overly reductionist and impractically difficult to isolate from other types of textile production, this study groups all of Dundee's leading textile figures into one category. In this way, identifying Dundee's textile manufacturers serves to determine why and how Dundee's leading textile magnates invested in the whaling industry.

Beyond making textiles their main business or financial concern at the time listed, textile merchants functioned as corporate heads and leading employers, owning mills, factories, foundries and engineering works.[40] Occupational descriptions in this category range from the ambiguous yet seemingly ubiquitous 'merchant' and 'manufacturer' to various combinations of 'jute [or linen] merchant', 'jute- [or flax-] spinner' and 'merchant-manufacturer'. More specific professions include 'engineer' (in this case, usually a designer and maker of textile machinery), 'hacklemaker', 'bleacher',

[40] For this reason, the study has had to construct its own purpose-built categories. The International Institute of Social History, *History of Work Information System* (HISCO) website, https://historyofwork.iisg.nl (accessed 6 October 2019) operates a widely recognised occupational classification system, but as Claire Swan has pointed out, business-owners are omitted from the HISCO structure, see Swan, 'Dundee as a Centre of Financial Investment', pp. 227-28.

'calenderer', and 'reedmaker'.[41] All others associated with the textile industries, such as mill managers, company clerks, secretaries, accountants and other factory-level leaders, are not included in this section.

Linen and jute manufacturers were regular investors in Dundee whaling. Familiar names of those who capitalised the trade included Andrew and James Adie, Thomas Bell and Thomas, Jr., David Cargill, Alexander Chalmers, William Olgivie (W.O.) Dalgleish, Andrew and William Andrew Douglas, John Ewan, Joseph Grimond, William and George Halley, Alexander Henderson and his family, Alexander and John G. Kinmond, Alexander Low, James Fairweather Low and his family of engineers, John Henry Luis, James Luke, Alexander Maxwell Miln, James Mollison, Jr., James Neish, James Guthrie Orchar, James Paterson, John Robertson, William Robertson, James Scott and family, John Sharp, Walter Shepherd, Henry and James Smith and family, James Stiven, James Strachan, Isaac Julius Weinberg, William Wilson and George Worrall. Few industrialists, however, matched the vigour for whaling investments as exhibited by two of Dundee's largest manufacturing titans, the Cox family and the Gilroy Brothers.

The Coxes were enthusiastic whaling investors with no less than eleven family members (all male) holding company stock and some ship shares from 1866 until just after 1901.[42] Over the course of the nineteenth century, the family-owned business, Messrs Cox Brothers, grew to become the world's largest jute manufacturing company. Regarding whaling, the family overwhelmingly preferred to purchase whaling company stock. Chief among them were the four brothers and company partners, James Cox (1808-1885), William Cox (1812-1894), Thomas Hunter (T.H.) Cox (1818-1892) and George Addison Cox (1820-1899).

In June 1866, DSWFCo reported that James Cox held two shares, valued at £500 each; William held four shares; Thomas Hunter, five shares; George Addison, two shares. Together these thirteen shares represented £6500 (about the same cost as the campanile chimney built in 1865-66), just under ten per cent of DSWFCo's total share

[41] For descriptions of peculiar Victorian job listings, see *Victorian Occupations: Job Titles in the 19th Century,* http://www.victorianoccupations.com/victorian-occupations-a/ (accessed 31 August 2019).
[42] Personal and business papers are held at the University of Dundee Archive Services (UDAS), MS 6, 'Cox Brothers Ltd., Jute Spinners and Manufacturers, and Cox Family Papers'. See also McManus168, 'Messrs Cox Brothers, Manufacturers', https://mcmanus168.org.uk/mcmanus168entry/messrs-cox-brothers-manufacturers-lochee/ (accessed 16 October 2019).

capital.[43] By July 1876, the Cox brothers cumulatively owned twenty-four shares in DSWFCo (with eleven shares belonging to James), nearly 18 per cent of the company's stock. They also owned DPFCo and TWFCo shares as well, though not to the same proportions.

The Cox family, however, did not entirely stay away from investing directly in whaling ships. In 1874, Edward Cox (1850-1913), eldest son of James Cox and future chairman of the family firm, joined George Welch, manager of TWFCo, and Joseph Gibson as joint owners of the whaler *Active*, which the three held for twelve years.[44] In 1876, the Cox brothers and James Yeaman, M.P., narrowly avoided financial loss, when the whaler *Spitzbergen*, which they had contracted to purchase from the Hamburg Polar Fishing Company, sank in a storm in the North Sea whilst transiting from Norway to Dundee.[45] This failed venture apparently ended their interest in buying whaling ship shares.

The Gilroys' Brothers also had hard-learned lessons after losing three whalers which they had purchased outright.[46] The consequences of overreaching in this risky maritime endeavour, as well as the Coxes' near financial disaster with *Spitzbergen*, well may have influenced how other Dundee textile manufacturers later chose to invest in the trade. Although very little correspondence explicitly informs our understanding of people's investment strategies, studies have shown that investors take investment risks, as well as countermeasures to mitigate those risks, in relation to their financial ability.

According to Janette Rutterford and Josephine Maltby, risk refers to the possibility that 'the *actual* return can be different from the *expected* return'.[47] In this sense, general merchant shipping proved to be a much different investment strategy than whaling. Linen and jute manufacturers invested heavily in merchant ship shares in Dundee's maritime sector, primarily to transport raw materials and manufactured products. The Gilroys were among the first to begin importing jute directly from Bengal. In an 1866 meeting, Dundee's Harbour Trustees admitted that the Gilroy family owned

[43] Christopher Whatley, David B. Swinfen and Annette M. Smith, *The Life and Times of Dundee* (Edinburgh, 1993), pp. 67-72.
[44] See CDA, CE 70/11/12, p. 47; UDAS, MS 59, Committee of Management meeting, 28 October 1885.
[45] *DC,* 'Loss of a Whaler and All Hands', 28 February 1877.
[46] Archibald, *Dundee Whaling Fleet,* pp. 120, 147, 183.
[47] Rutterford and J. Maltby, '"The Nesting Instinct": Women and Investment Risk in a Historical Context', *Accounting History,* 12, 3, (2007), pp. 306-09.

more vessel tonnage than anyone else in the port.[48] By 1890, however, George Gilroy reorganised the partnership into Gilroy Sons & Co., and the firm ceased all merchant marine activities. As for whaling, many of the jute barons became established investors, who overwhelmingly preferred to put their money into whaling companies.

Whereas ship shares spread risk among multiple investors across one ship, the typically more expensive corporate stocks spread that same risk among multiple vessels and even more investors. If a whaling company lost a vessel, each stockholder shared the loss (though the company could recoup a portion from insurance). However, unlike shipowners and their suddenly defunct investment, each corporate shareholder still retained value in their investment (and perhaps even some hope for a small dividend) because of the potential performance of the company's other vessels. In essence, corporate stocks were a double form of risk management, making it the safest, and most preferred whaling investment for those who could afford it.

Of all the whaling companies, Dundee textile merchants most often preferred to invest their money with DSWFCo. Founded in February 1866, DSWFCo became the premier whaling company in Dundee, ambitiously aiming to raise £100,000 of capital by selling 200 company shares at £500 each.[49] The company formed by purchasing four whalers – *Narwhal, Camperdown, Polynia* and *Esquimaux* – all of which were the newest screw (steam) whalers available. It also hired James Yeaman, a seasoned shipowner and respected businessman along with the young and aspiring David Bruce as joint managers.

DSWFCo immediately became the leading enterprise in Arctic whaling. By late June, its 'Summary of Capital and Shares' report listed forty-one investors holding 135 shares, worth £67,500. As an individual, the shipbuilder Alexander Stephen owned the most DSWFCo stock with twenty shares, but as a category, the Dundee textile merchants constituted the largest bloc with eighteen investors (44 per cent) owning 43 shares (32 per cent) of the company. The textile merchants remained the leading category of investors throughout DSWFCo's operational life, and their involvement remained remarkably steady, numbering seventeen at the company's last interval in 1891.

[48] *DA*, 'Tonnage of Shipping Held by Members of the Seamen Fraternity', 6 February 1866.
[49] NRS, BT 2/228/2.

However, Appendix 1.5 illustrates that their percentage of share ownership in DSWFCo actually increased over time. As the graph shows, DSWFCo leaned heavily on the wider textile industry for financial support. Textile-associated investors across all categories owned about half of the company's shares. Yet, while this explains how Dundee textile manufacturers invested in whaling company shares, it still does not clarify why they sought out whaling investments in the first place.

Historical evidence suggests several reasons why textile manufacturers took such an abiding interest in the whaling trade. Given the jute industry's vast expansion from the 1850s to 1870s, an early impetus appears to have been the need to secure supplies of train oil. This confirms why the Gilroys ventured to invest directly in whaling ships in the 1860s, and it may well represent the Cox Brothers' efforts to buy *Spitzbergen* as late as 1876.[50] It also supports the reasoning for why so many textile merchants participated in founding DSWFCo in 1866. As Lythe mentioned and Appendix 1.6 shows whale oil prices peaked during the early to mid 1860s, around the time when Confederate raiders, like the Alexander Stephen-built *Shenandoah*, were decimating the U.S. whaling fleet during the American Civil War.[51] By the late 1860s, however, the market for oil had begun to settle down again with prices remaining buoyed above £35 per ton through the mid 1870s. Yet even in the years around 1881, while textile merchants were still purchasing corporate shares in whaling, gaining access to train oil through investments no longer seemed a plausible reason to invest in the whaling trade.

Whereas earlier decades had brought tremendous profits for Dundee's jute industry, spurring it to expand exponentially with numerous and enormous factories, by the 1880s, changes in the global market still demanded vast quantities of coarse textile goods but at limited prices. With prices essentially capped, jute manufacturers attempted to make their revenue by producing more and lowering overall production costs. According to Gauldie, this meant jute had become a 'trade where profits were made not by production but by speculations in raw materials'.[52]

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[50] *DA,* 'Sales of Cargoes of the Polynia and Camperdown', 13 November 1861; *Dundee Evening Telegraph (DET),* 'Dundee and the Seal and Whale Fisheries' [reprinted from *Glasgow Herald* of same date], 10 November 1877.
[51] Tom Chaffin, *Sea of Gray: The Around-the-World Odyssey of the Confederate Raider Shenandoah* (New York, 2007).
[52] Gauldie, 'Dundee Jute Industry', p. 114.

Throughout the 1880s, securing cheap train oil as a raw material for jute production was an easy thing to do. Between 1883 and 1885, oil prices tumbled, and then kept tumbling, never to recover. Additionally, Dundee's status as a transnational emporium for Arctic goods attracted competition from further afield. Foreign vessels routinely stopped in Dundee to offload and sell their marine mammal products on the local market.[53] From the late 1870s throughout the 1880s, Norwegian vessels, such as *Aurora, Diana, Elida, Eskimo, Franklin, Harold Haarfager, Hecla, Ora,* and *Patria* from ports like Arendal, Sandefjord, Tonsberg, Drammen and Christiana (Oslo), routinely arrived in Dundee to sell their oil on the Dundee market after the Greenland seal and whale 'fishing' seasons.[54]

By the late 1880s, another challenge appeared. Mineral oils from an expanding petroleum industry began to explode 'the idea that jute spinning could not be carried on without the use of whale oil'.[55] While textile merchants may have initially chosen to buy whaling shares to procure easier access to oil, by the late 1870s/early 80s and thereafter, numerous supply options and low market prices actually served to dissuade investment in whaling. Perhaps more than securing resource commodities through investments, many would contend that profit motives constitute the major, if not only, reason why anyone would venture to risk their capital. Therefore, did Dundee's merchant-manufacturers seek out whaling investments for their higher rates of return? While very little company data exists to detail this, dividends compiled from newspaper accounts reporting on DPFCo's AGMs provide the most complete longitudinal picture of a Dundee whaling company's dividend announcements. Appendix 1.7 shows that whaling did offer solid returns until the 1886 season. From the 1876 through 1885 seasons, DPFCo had five years which yielded a superb, two-figure dividend percentage,

[53] Dundee offered a safe harbour and market for others during times of war. In 1865, Captain Thomas Welcome Roys brought the American whaler *Reindeer* into Dundee; *DC,* 'Arrival of an American Whaler', 15 November 1865. During the Franco-Prussian War, Captain Hogginson [or 'Hashafer' or 'Harshagen'] of Geestemünde [Bremerhaven] brought *Albert* into Dundee harbour to offload produce and wait out the end of the conflict; see *DC*, 'Arrival of a Prussian Whaler', 25 Aug 1870.

[54] For example, see *DC,* 'Arrival of Seal Oil', 21 August 1878; *Aberdeen Evening Express,* 'News from the Greenland Seal and Whale Fishing', 1 August 1882; *DPJ*, 'Arrival of Whalers', 26 July 1884; *DET,* 'Arrival of Norwegian Whalers', 21 July 1885; and *DC,* 'Arrival of a Whaler', 23 August 1887.

[55] *DC,* 'A Decaying Dundee Industry', 2 July 1888. Gordon Jackson maintains that mineral oils never fully matched the quality of whale oil as a batching agent, therefore jute production continued to use some whale oil until the 1970s; Jackson, *British Whaling Trade*, p.135.

another two years with a very good return of seven per cent, two more years at three or four per cent, and only one year without a dividend. For DPFCo, the turning point began with the 1886 season when it lost *Jan Mayen* (I), one of its two whalers. Sensing strain on the company's finances and the trade's future, the company's directors refused to replace the lost vessel. Instead, the company voted at its January 1887 AGM to devalue listed share prices from £100 down to £25, and then return the excess capital to the investors.

Reduced to one vessel, *Nova Zembla*, DPFCo increasingly struggled from year-to-year to bring in a profitable catch and pay its debts. From the 1886 to 1891 seasons, only one season's results (1889) afforded the company enough to disburse a dividend. This information on dividends comes from local Dundee newspapers reporting on AGMs. The fact that textile merchants mostly remained as company stockholders following repeated years of poor performance does not negate that they may have invested for dividend returns. Yet, while investors from other categories demonstrated more short-term investment decisions, textile merchants did not. Why did they continue for the long term?

Textile merchants held onto corporate whaling stocks because they could afford to do so, and yet, that largely defeats the premise for earning a profit. For textile merchants who invested early in the corporate era and then held their whaling stock throughout the company's life, the overall result may have been acceptable, but it certainly was not spectacular. Consider the case of two highly successful Dundee textile-machine engineers and partners, William Robertson and James Guthrie Orchar, who owned the Wallace Foundry. When members founded DPFCo in 1876, both men purchased five shares at £100 per share.[56] By January 1883, William Robertson had purchased two more shares so that he owned seven in total. Like W.O. Dalgleish and most other textile merchants involved with DPFCo, Robertson and Orchar held their shares until the company wound up operations in 1892. When calculating for total profits minus the £4 per share call made in 1888, Orchar collected £450 in dividends, thus clearing £37 10s over sixteen years on £412 10s invested. Although Orchar had

[56] Both Robertson and Orchar were leading figures in Dundee. For more on public displays of private wealth in Dundee, see Matthew Jarron, *"Independent & Individualist": Art in Dundee 1867-1924*, No. 56 AHS series (Dundee, 2015), pp. 8-31.

originally invested £500, the company's denomination in 1887, returned £17 10s per share. Since Orchar held five shares, he received back £87 10s of his original investment. Depending on DPFCo's final balance after liquidation, any remaining credit after all debts were paid would have been proportionally disbursed among shareholders as well. On the other hand, Robertson lost £41 10s over the same time, having made £536 in dividends on £577 10s invested (again, not counting the £122 10s in returned capital). Though both amounts were paltry considering the time elapsed and amount invested, the difference in outcomes between the two hinged on Robertson's additional purchase of two shares in 1883, which only collected five more years of dividends.

Referring back to Table 1.1's steady merchant investor numbers from 1876 to 1891, and comparing them with Appendix 1.3 and Figure 1.5, which all show textile merchants' ownership peaking around the 1881 interval, necessarily implies that others, like William Robertson, chose to buy additional whale company shares after watching the company's performance over time. This early prudence, however, is offset by the merchants' unwillingness to part with shares at the end and suggests that something other than profit motives were driving their decisions.

The notion to doubt merchant investors' profit motives with regard to whaling stocks gains more strength when one considers that during the 1870s and 80s, a range of safer, more diversified or consistently higher yielding investment options presented themselves to investors in Dundee. In 1873, Robert Fleming organised the First Scottish American Trust in Dundee, the first of its kind in Scotland. It aimed to distribute invested monies across a range of carefully selected American railroad bonds. In the next two successive years, the Second, then Third Scottish American Trusts were subsequently founded in Dundee as well. By 1888, the Alliance Trust Company had also started in Dundee, and more overseas investment trusts were based out of Edinburgh as well. Scholars have noted the scale of Dundee's overseas financial investments.[57] Beyond trusts, Dundee and Edinburgh also offered a range of other international investment schemes ranging from land and cattle to mortgage and mining companies, to name a

[57] See Swan, 'Dundee as a Centre of Financial Investment'. For more on the Alliance Trust, see Charles W. Munn, *Investing for Generations: A History of the Alliance Trust* (Dundee, 2012).

few.[58] Dundee's financial investment options largely existed because of wealth derived from the textile industries, and as Claire Swan has shown, textile merchants were the leading investors in these companies in number of investors, amount of capital invested, and number of shares held.[59]

Seeking Corporate Control

All of this suggests that textile merchants likely did not invest in whaling for any one particular reason but rather a combination of factors. Whaling investments never functioned as a panacea for profits or resources. Still, the whaling trade did offer a space of opportunity for wealthy textile merchants through other less tangible benefits. Informationally, investing in a whaling company put textile merchants within a cohort of investors who collectively were privy to up-to-date discussions and intelligence about global markets and maritime concerns. Financially, it served to diversify an investment portfolio. Commercially and socially, owning shares in whaling companies also facilitated pathways of influence and control.

As with any commercial enterprise, business control in the whaling trade essentially broke down into the need for astute industrial expertise and savvy financial decision making. Within older limited liability arrangements, such as the 64-share merchant maritime system, most shareholders invested for a return in dividends, never desiring to operationally control a company. As a result, business control in both its aspects often concentrated itself in the managing owner, although they often navigated a fine line between owning enough shares to obtain control and risking financial burdens/loss by holding too many.

On the investment side, an imbalance or neglect between technical expertise and financial control could and did result in disastrous consequences for all investors. During the 1860s, the Gilroys learned that executive (day-to-day) control demanded a high level of technical, geographical and experiential knowledge in order to sustain any measure of success in Arctic whaling operations. On the other hand, imprudence in

[58] For example, see Claire E. Swan, *Scottish Cowboys and the Dundee Investors* (Dundee, 2004); Swan, 'Dundee as a Centre of Financial Investment', pp. 21-22, 34-72; and Todd David Holzaepfel, 'British Influences on the American and Canadian West: Capital, Cattle, and Clubs, 1870-1910' (Unpublished PhD Dissertation, The University of Texas at Arlington, 2009).
[59] Swan, 'Dundee as a Centre of Financial Investment', pp. 20-21, 195-200.

financial matters, such as foregoing maritime insurance or underinsuring a vessel as a way to cut overall costs, risked huge and permanent financial losses too. Only with the emergence of limited liability corporations consisting of a dispersed range of shareholders did a new and dynamic phenomenon develop within business structures: the separation of ownership from corporate control. Adolf Berle and Gardiner Means introduced this concept and stimulated a range of discussions on the nature of corporate ownership, control, governance, finance and law within business and business history.[60]

Scholars have repeatedly noted the separation of ownership and control as one of the chief distinctions and advantages of corporations from other forms of business organisation, and corporate statutes served as the legal and codified means by which this separation was effectuated.[61] For Dundee's whaling companies in the late nineteenth century, the Articles of Association accomplished this function, largely bestowing financial corporate control to the company directors and executive control to the company manager. In whaling companies' Articles of Association, the largest portion of statements delineated the privileges and authority granted to its company directors.[62] Directors typically were empowered 'to purchase or acquire…a Yard, or other suitable premises…as they think necessary for the beneficial prosecution of the business of the Company'. Among other things, company directors held the power to determine and disburse dividends, borrow money, make calls on shares, declare shares forfeited and dispose of them, call special meetings, set agendas, and chair all meetings. In DPFCo's Articles of Association, company directors also had the power to appoint other company office-bearers, namely the manager.[63] With regard to the transacting of company shares, companies' Articles ubiquitously stipulated in some form that 'the

[60]Adolf Berle and Gardiner Means, *The Modern Corporation and Private Property* (New York, 1932), pp. 69f and 119f. Other key works on this include Acheson *et al*, 'Corporate Ownership', pp. 911-36; Brian R. Cheffins, *Corporate Ownership and Control: British Business Transformed* (Oxford, 2008), and John C. Coffee, Jr., 'Dispersed Ownership: The Theories, the Evidence, and the Enduring Tension Between "Lumpers" and "Splitters"', *European Corporate Governance Institute (ECGI) Working Paper Series in Law*, No. 144/2010 (2010), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1532922 (accessed 23 October 2019).

[61] Stephen M. Bainbridge, *The New Corporate Governance in Theory and Practice* (Oxford, 2009), p. 4.

[62] For further discussion company directors' powers, see Susan Watson, 'The Significance of the Source of the Powers of Boards of Directors in UK Company Law', *Journal of Business Law,* 6 (2011), pp. 597-613.

[63] NRS, BT 2/600/2.

Company may decline to Register any Transfer of Shares, whether on a sale or otherwise, made to a Transferee, who is not approved of by the Directors'.[64]

Other actions not enunciated within the Articles, but very much within the scope of the directors' oversight included taking the lead on replacing vessels (or not), controlling the company budget, authorising the maintenance of insurance, resetting nominal share prices, reissuing share certificates, and refunding capital to investors. In 1888, DPFCo announced, 'your Directors recommend that a call be made on the shareholders of £4 per share, payable on the 17th proximo. This would amount to £1200'.[65] While only a few elements of all this had anything to do with the actual execution of the whaling trade, this non-executive level of fiscal control and corporate governance gave company directors immense influence over the future direction, or even existence, of the company.

During Dundee's corporate era of whaling, textile merchants held company directorships at a disproportionately high rate compared to shareholder numbers. This was partly due the stipulations in Articles of Association which required a minimum number of shares held to qualify for a directorship. For example, DSWFCo set a limit of two shares, which with a nominal share price of £500 per share, was already more than the overwhelming portion of people could afford.[66] While records listing all directors are incomplete for most companies, some initial documents and reconstructed information proves the point. With the founding of DSWFCo in 1866, the Articles designated nine directors by name until seven permanent directors could be elected later at a second scheduled general meeting. Of the original nine, three were textile merchants – Francis Molison, Thomas Smith and Patrick Anderson. By 1887, when DSWFCo and TWFCo, by now a defunct whaling company existing mostly as a land proprietor, held two joint meetings of directors, five of DSWFCo's six participating directors were textile manufacturers, while only one of five textile merchants represented the directors for TWFCo.[67] Slightly less than seven years later, another textile merchant, John Sharp,

[64] NRS, BT 2/228/2. See also BT 2/600/2, BT 2/2842/2 and BT 2/3482/2.
[65] See for example *DC,* 'Dundee Polar Fishing Company', 10 January 1888.
[66] NRS, BT 2/228.
[67] UDAS, MS 59, Combined TWFCo and DSWFCo Meeting Minutes for 25 March 1887 and 6 April 1887.

serving as one of DSWFCo's directors, chaired the special meeting, which proposed and successfully superintended the resolution to voluntarily windup the company.[68]

Similar situations appear with other whaling companies during the two phases of the corporate whaling era. In 1875, textile merchants made up 30 per cent of DPFCo's initial shareholders and owned 31 per cent of all its shares. Still, James Luke, William Cox and Andrew Douglas made up three of the company's six directors. James G. Orchar, William Robertson and Richard Henderson served as DPFCo directors. In January 1887, J.G. Orchar chaired the DPFCo AGM, which elected to not replace the *Jan Mayen* (I), but rather return the remaining portion of its insured capital to the shareholders.[69] As for DAFCo, textile merchants comprised only 12 per cent of shareholders in 1896, yet George Addison Cox, George Methven Cox and Alexander Henderson filled three of its five directors' offices. Robert MacGavin and David Bruce held the other two positions.[70]

At a corporate level, the heavy inclusion of Dundee's textile merchants as company directors served mutual purposes. For the textile merchants, gaining access to a company's financial levers meant they could better manage, preserve or recoup their capital investment. For instance, when ice crushed and sank the whaler *Victor* just south of Elwin Inlet in 1881, the TWFCo's directors announced,

> [They had] pleasure in stating to the Meeting that the ship was insured to the extent of £9000 and £1290 on the Cargo, and that the claims have been passed by the Underwriters and paid with the exception of a small sum outstanding.[71]

As a consequence, TWFCo then showed a credit of £9370 9s 4d, and then as per the directors' recommendation, the members agreed 'to distribute £33 per share absorbing £7920 [over 240 shares] amongst the Partners according to their respective interests'.[72] For a whaling company, operating in a physically and financially hazardous industry could potentially discourage investors from risking their own capital. Therefore, the visibility of Dundee's 'merchant princes' investing in a whaling company and holding key financial responsibilities not only enhanced the image of the company but also

[68] NRS, BT 2/228/36.
[69] NRS, BT 2/600/2, BT 2/600/4, and numerous *DA*, *DC,* and *DET* articles on DPFCo AGMs.
[70] NRS, BT 2/2842/2 and BT 2/2842/6.
[71] UDAS, MS59, TWFCo's Special General Meeting of the Partners, 27 October 1881.
[72] *Ibid.*

potentially garnered trust among the wider investing middle class. Acheson *et al* argued that 'if companies have diffuse ownership and ownership is separated from control, agency problems can arise and unless these can be reduced sufficiently, investors will be reluctant to invest in firms with diffuse ownership'.[73]

Beyond the corporate level, the companies' directorships opened other pathways within the larger community. As a company shareholder, individuals were not considered 'shipowners' according to the Board of Trade, and therefore, did not qualify for election to the Local Marine Board. With the implementation of the Companies Act in 1862, the establishment of an incorporated whaling company created another independent entity that was financially and legally separate from the identities of its shareholders. The House of Lords later affirmed a corporation's separate legal and financial identity in *Salomon vs. Salomon & Co Ltd* (1897).[74]

A whaling company which owned vessels was considered a 'shipowner'. Any shareholder holding the office of a company director, essentially became a human representative of the company, and as such, gained eligibility for triennial election to the Local Marine Board as well appointment to the Harbour Board of Trustees. *DD,* which provides the best lists for municipal, government and charitable offices as well as the Local Marine Board and Harbour Trustees, helps to show this. Prior to 1866, no textile merchants were elected to the Local Marine Board, but from 1866 through the 1891 intervals, textile merchants occupied at least one of six elected 'shipowner' positions, while maritime sector and other Dundee shipowners held another two to three seats on average during the same time. Textile merchants serving as Harbour Trustees more often gained their appointment through the Guildry, but in 1881, for example, James G. Orchar was one of three trustees appointed 'For the Shipowners'.[75]

The system of patron leadership exhibited by Dundee's textile merchants within the whaling companies constituted one element of a larger paternal model of civic patriotism which came to describe all of Victorian Dundee's economic, civic, political

[73] Acheson *et al,* 'Corporate ownership', p. 913.
[74] See Brenda Hannigan, *Company Law*, 4th ed. (Oxford, 2016), pp. 41-46. Hannigan holds this to be the most important legal example in British business law.
[75] *DD,* 1880-81, p. 67.

and charitable scenes.[76] Here, the volume of evidence is simply too overwhelming to chart in detail, so instead, a selection of institutions from 1886 will suffice to show the extent of textile merchants' influence in every facet of community life. In municipal roles, that year, Joseph Grimond, James Luke, George Gilroy, George Halley and John Ewan – all textile merchants with investments in whaling – made up five of the eight Justices of the Peace in Broughty Ferry. In other investment companies, George Halley served as a director for the Matador Land and Cattle Company and the Western and Hawaiian Investment Company. Among religious societies, George Halley, William Robertson, John Sharp, W.O. Dalgleish, Thomas Bell and Alexander Henderson all held the position of Honorary Vice-President within the Dundee Boys' and Girls' Religious Association. Among charitable organisations, Alexander Anderson, Thomas Bell, William Cox, W.O. Dalgleish, Joseph Grimond, John Sharp, and George Halley all sat on the General Committee of the *Mars* Training Ship Institution.

In sum, whaling was a secondary industry that 'belonged' to no one. It occupied social and economic spaces of opportunity which dispersed ownership among the textile industrial elite and the middle classes. In this way, whaling became an economic microcosm of larger processes taking place in Dundee. Dundee textile merchants knew they could not bear the burden of financing everything to meet Dundee's many social needs. As they saw it, their roles were to lead, serve as public models of trust and fidelity, and function as a paternal moralising force for good. In their desire to improve their society, they endeavoured to lead the middle classes to carry the burden.

[76] See Louise Miskell, 'Civic Leadership and the Manufacturing Elite: Dundee 1820-1870' in Christopher A. Whatley, Bob Harris, and Louise Miskell (eds.), *Victorian Dundee: Image and Realities* (Edinburgh, 2011), pp. 45-69; and Walsh, *Patrons, Poverty & Profit*, pp. 24-35.

Chapter 2

Financial Space and Middle-Class Investment

In 1885, the Royal Commission on the Depression of Trade sent a set of published queries to chambers of commerce across the nation. When Dundee's Chamber of Commerce met in September to discuss and vote on their responses, the first question posed was largely procedural. Question two, however, posed an insightful answer.

> [Question 2.] What trades or industries are of special importance to that [Chamber of Commerce's] district as measured by (a) the amount of capital invested; (b) the amount of labour employed; (c) the amount of production?

After a simple discussion, the Chamber elected to accept the answer prepared by the appointed committee to consider the query and how to respond. The answer read,

> Spinning and manufacturing of jute. The same of flax and hemp. Machine and engine building for home and export requirements, also from shipbuilding, steam and sailing, and shipowning; and the carrying out of seal and whale fishing at Greenland, Newfoundland, and Davis Straits.[1]

The answer provided by the Chamber of Commerce – a municipal institution stuffed with wealthy textile merchants as well as numerous middle-class businessmen – underscores the importance of Dundee's whaling and maritime sectors to the overall health of the town. When discussing the roles and decisions that investors throughout the middle classes had within the investment structure the trade, this group's perspective informs how and why some chose to respond financially, even when the industry was struggling.

Investors from Dundee's maritime sector and Other Dundonian interests formed the core of the city's middle classes. Instead of continuing to separate them as categories from Chapter 1, this portion of the prosopographical study will examine investors as more of a composite set of investors. It then proceeds to investigate how and why Dundee's middle classes chose to invest in the Arctic trade. If the data analysis section had combined the two categories, Table 1.1 and Figure 1.3 would have easily

[1] *DC*, 'The Royal Commission on the Depression of Trade', 25 September 1885.

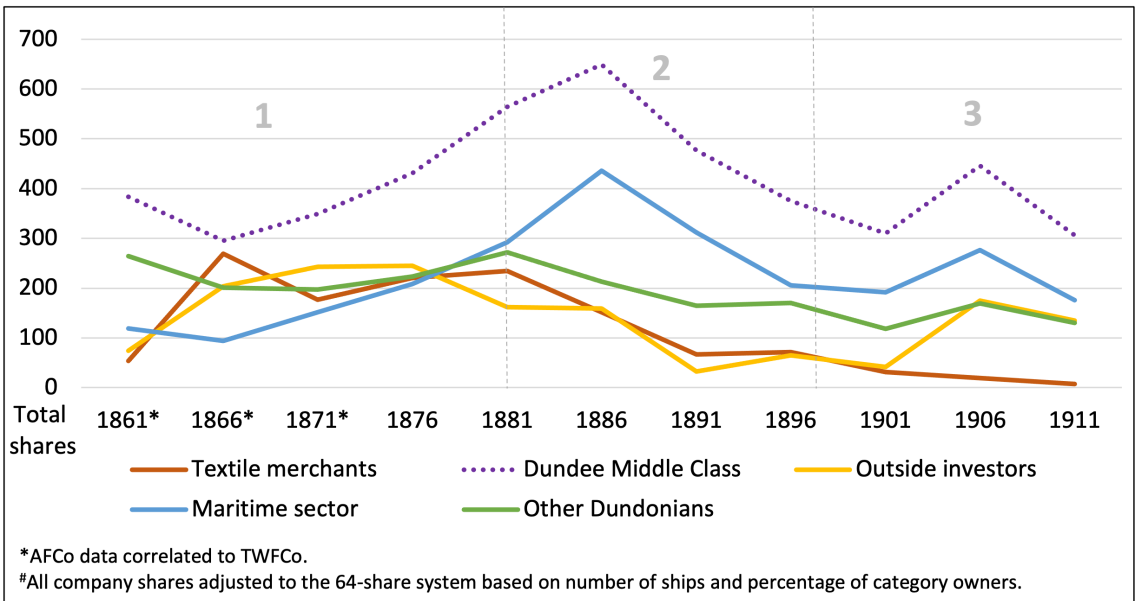
indicated the obvious margin of difference by which Dundee's middle-class investors outnumbered other investors. Whaling's dispersed ownership stemmed from the middle classes. Continuing along this line of thought, Appendix 1.2 would have demonstrated that most of the diversity among investors also came from Dundee's middle classes. The dispersed ownership and diversity of occupations among investors indicates that the middle classes democratised Arctic whaling's financial support.

While numbers and types of investors are readily assessed, the amount of capital invested by all categories is more difficult to fully comprehend, since no reliable source provides any substantial amount of information on ship share prices. This means one of whaling's two primary types of assets cannot be measured accurately for the amount of capital invested. This lacuna obscures objectively determining who made up Dundee's principal financiers in the whaling trade, since Appendix 1.3 presents mixed results regarding the highest average investments by category only among whaling company shares. Could it be that fewer wealthy investors cumulatively invested more capital in whaling than many more moderate investors? Since ship registers do not provide the amount of capital invested, the main problem shifts to the incongruity between whaling company shares and ship shares for analytical comparison.

One method presented here partially resolves this incompatibility by adjusting all company shares to the 64-share system, thus providing a synthetic common denominator by which the full range of company shares may be measured against ship shares. Adjusting corporate shares to a 64-share system requires taking the percentages of categorical ownership and multiplying by 64. The number of vessels held by a company determines how many times this process is repeated. Figure 2.1 shown below, therefore, represents the total sum of these conversions over time. For an example of this process, consider DSWFCo at its incorporation in 1866. DSWFCo owned four whalers, *Camperdown, Esquimaux, Narwhal,* and *Polynia.* Since Dundee textile manufacturers owned 47 of DSWFCo's 135 shares (35 per cent) that year, these textile merchants therefore possessed the equivalent of approximately 22 of 64 shares (35 per cent) of each of DSWFCo's vessels. With four vessels, DSWFCo therefore had a total equivalent of 256 ship shares in its control, and 88 of them (35 per cent) were owned by textile merchants. Taking these adjusted ship share numbers from each whaling

company and summing them over all whaling investments represents the overall proportional ownership of every category featured in Figure 2.1.

Figure 2.1. Total Adjusted Ownership (Ship shares and Corporate Stock), 1861-1911.



Source: CDA, CE 70/11 series; NRS, BT 2 series.

The adjustment of company shares to the 64-share system, however, does have limitations, and by itself, Figure 2.1 cannot support economic analysis. Figure 2.1 is a quantitative representation better used for confirming, rather than proving, evidence. Three critical issues limit Figure 2.1 as an analytical tool. First, in converting corporate shares to a 64-share system, it treats all company and ship shares equally, despite the fact that neither ships nor company shares were ever equal. Second, it completely disregards invested capital as a factor. Finally, while the graph does fairly represent proportional ownership, it does not express who actually controlled the trade as it was prosecuted.

The value of Figure 2.1 primarily rests in its visual presentation of consolidated data, since it summarises the proportionally distributed ownership of all Dundee whaling shares purchased from 1861 through 1911. In this way, it provides two important observations in support of the prosopographical survey of Dundee's middle classes. First, it visually substantiates prior evidence that Dundee's middle classes principally financed the industry throughout the steam whaling era. Most of the shares held by the middle classes represented a large magnitude of modest investments (one to two shares). While the textile merchants had a large and important stake in the trade during the two phases of the corporate era, ultimately it was the cumulative sum of

many grassroot investments, which kept the trade financed and going throughout its steam whaling era. At its core, Arctic whaling was a maritime commercial venture financially supported by the full spectrum of Dundee's middle classes.[2] Perhaps the closest thing to replicating this level of middle-class diversity and participation in Dundee was the subscription charities that operated throughout the nineteenth century.

A second observation from Figure 2.1 indicates that the middle-class trajectory of overall share ownership most closely followed that of the maritime sector's investors. This is important since it shows that the maritime sector was not simply a part of a larger whole. Instead, the trajectory of share ownership among the middle classes was actually a direct function of the maritime sector's investors, particularly, certain leaders within the trade.

Within academic business investment circles, relevant and lively discussions continue to debate the seemingly mutually exclusive aspects of corporate control and dispersed ownership. In evaluating the historical 'enduring tension' between the two, John C. Coffee, has argued that 'dispersed ownership arises principally from private ordering'.[3] Coffee's assertion appears to detail exactly what was financially happening in Dundee's whaling trade during the late nineteenth century.

While nominal corporate share prices were high and textile merchants held a disproportionate level of control among whaling company directorships during the first phase of steam whaling between 1861 and 1881, persons within the maritime sector began privately ordering their own entry into the trade. They were able to do this, in large part, because whaling existed as something of an ambiguous commercial space within Dundee.

Though Dundee can proudly claim a long and important port history, the town never developed a strong endogenous seafaring tradition like the inhabitants and dynastic whaling families of Peterhead, or say, the fisher/crofters of Shetland.[4] Things were different in Dundee, and even by the late 1850s, the town was recognised more as

[2] See Lorraine Walsh, *Patrons, Poverty & Profit: Organised Charity in Nineteenth-Century Dundee*, No. 39 AHS series (Dundee, 2000), pp. 14-21.
[3] Coffee, 'Dispersed Ownership', pp. 1, 6.
[4] Gavin Sutherland, *The Whaling Years, Peterhead (1788-1893)* (Aberdeen, 1993).

a growing industrial textile town than a whaling port. As mentioned earlier, no one 'belonged' to whaling, and therefore, no one 'owned' it either. After the advent of steam whaling in 1858, the trade largely continued that way throughout the rest of the nineteenth century to the Great War. This unique aspect of Dundee's whaling trade therefore created ephemeral spaces of opportunity for all kinds of actors to engage in all kinds of exchanges.

Financial Spaces of Opportunity and Entrepreneurism

Financial spaces of opportunity within the trade therefore promoted both dispersed ownership by increasing the number of investors who purchased shares, and a diverse ownership by accommodating a large range of investors from varied occupational backgrounds. Spaces of investment opportunity were broad enough to accommodate individualised needs or purposes, yet common enough to make the engagements that occurred within them worthwhile for all participants. People from every category engaged in whaling's spaces of investment opportunity, but they proved especially beneficial to women and men within the middle classes. They invested in whaling for a myriad of personal reasons: to innovate and develop their own entrepreneurial activities, to better secure their capital assets by diversifying their investment portfolio, to assert financial independence or take advantage of market access, to implement business/career survival strategies, to express civic patriotism, or to employ networks for personal or corporate gain.

While spaces of opportunity existed within Dundee whaling, engagement was not always so straightforward or apparent. The dispersed and diverse ownership that characterised Dundee whaling during the second half of the nineteenth century existed in a far less robust form in 1861. By most historical indications, the town's most prominent merchants principally financed the whaling industry throughout the first half of the nineteenth century to 1861.[5] Even in 1861, common law partnerships, mostly dominated by tight circles of five to six partners, owned the largest portions the whalers *Narwhal, Camperdown* and *Polynia* along with AFCo.[6]

[5] The few corporate records known to exist include UDAS, MS 57/2-3, and MS 59, Meeting minutes from the TWFCo (1840s and 1850s).
[6] CDA, CE 70/11/10, pp. 121, 148-49, 162, 187.

The maritime sector's contribution alone to these investments in 1861 totalled eight individuals (out of a total of 52, or 15 per cent) from six different marine occupations (refer to Table 1.1 and Appendix 1.2). Among them, three shipbuilders including Alexander and William Stephen; James Yeaman, a prominent fishcuring merchant, shipowner and whaling manager; and W.O. Taylor, a shipmaster-turned-shipowner, owned sizable ship or company shares. Three others – George Welch, TWFCo's manager; James Hynd, ship chandler; and William Bruce, master of *Camperdown* – held one or two shares in TWFCo or *Camperdown*, respectively.

In practice, high market prices and close-friendship arrangements kept financially modest maritime specialists as well as other willing, non-maritime, middle-class investors from investing in the trade and collecting its handsome dividends. Such arrangements may well have prompted maritime investors to embark on a different course. Entrepreneurial innovations in ship ownership during the 1870s began to introduce real change and investor diversity. Referring back to Table 1.1 and Figure 1.2, between 1871 and 1876, the table and graph indicate an uptick in maritime sector shipowners during the latter portion of the first phase.

People who understood the industry and its financial structures and legal frameworks where the first to identify financial spaces of opportunity in which to apply their entrepreneurial efforts. In June 1874, George Welch, manager for TWFCo, purchased *Our Queen* on his own and brought it from Liverpool to Dundee. After converting it for whaling in the Arctic, he subsequently resold 56 shares to nine other individuals. Among *Our Queen*'s ten shipowners, six affiliated with Dundee's maritime sector, and together they held 35 of its 64 shares. Two textile merchants also bought thirteen shares between them, and the final two shipowners, a banker and a builder, owned the remaining eight shares.[7]

Welch's effort marked the first known instance in Dundee's steam whaling era when ten or more shipowners owned shares in one whaler.[8] Before *Our Queen*, the few ship shareholders who were active during this phase had consisted of either small bands of well-situated Dundee goods merchants aligned in common law partnerships, as was

[7] CDA, CE 70/11/12, p. 57.
[8] MSA, 1854, (17 & 18 Vict. C.104, II.37) established a legal limit of 'not more than Thirty-two Individuals' as owners of any one ship.

the case with *Polynia, Camperdown* and *Narwhal* in 1861, or investors from outside of Dundee who were (ad-)venturing into whaling by purchasing all 64 shares of a vessel. George Welch's gambit with the whaler *Our Queen* only lasted five years.[9] Nevertheless, he continued to employ this investment model in ship shares during the 1880s. Robert Kinnes, Welch's future TWFCo clerk and joint manager, adopted and modified his methods too.

While Welch and Kinnes emphasised ship investments, W.O. Taylor brought new levels of investment diversity to whaling companies. In 1875, he managed AFCo as it wound up operations. Its follow-on emerged the same year as DPFCo, a registered limited liability company under Taylor's management. Unlike DSWFCo, which incorporated in 1866, and set an exclusive nominal share price of £500 per company share, DPFCo established capital shares at £100 apiece.[10]

Diversifying (International) Investment Portfolios

A number of Dundee's merchants, wives and widows and landed figures utilised the whaling industry as a space of opportunity for expanding their investment portfolio. People spread their capital investments across many financial fronts in a bid to manage risk. Investors added whaling shares to their portfolio for a number of reasons. For those with specialist knowledge of the maritime trades, whaling offered an investment within familiar territory. For others, whaling afforded an estimated chance to risk some money in the hopes of collecting one or two large dividends. While whaling harvests throughout the late nineteenth century followed a declining trajectory, the vicissitudes of the trade meant some vessels could enjoy a tremendous season while others returned 'clean' and the industry as a whole suffered. For those who could afford it, risking purchasing a few shares in whaling may well have been worth it. One example demonstrates this case in point. In 1883, Capt William Adams, Sr. (1837-1890), one of Dundee's most famous whaling captains, purchased 64 shares in *Maud*, which he converted to a whaler. By the time of his death, he still held 56 shares (or, 88 per cent of the vessel). Based on the official inventory submitted to Dundee's Sheriff Court, Capt Adams's personal estate

[9] CDA, CE 70/11/13, p. 33.
[10] NRS, BT 2/600/1-5.

was valued at over £16,300, with over £8,000 of it recorded as 'Dividend[s] earn[ed] on shares of the Maud'.[11]

These investment portfolio strategies appear to have been the case for a number of keen whaling investors. William James Strong (1814-1884) provides one such example from a band of wealthy wine and spirit merchants who actively invested in the trade. Born in Fair Isle, William Strong and his younger brother, Stewart, settled in Dundee as early as 1841.[12] By the 1850s, they referred to their business partnership as W & S Strong, identifying themselves as ship-store dealers (chandlers) in addition to their wine and spirit interests.[13]

William Strong's first known connection to whaling was as a director for AFCo, which would eventually become DPFCo (both of which were under William O. Taylor's management). Before his death he had owned whaling company shares in TWFCo and DSWFCo, as well as ship shares in the whalers *Dundee*, *Tay*, *Alexander* (I), *Our Queen* and *Jan Mayen* (II).[14] After his death, the inventory to his personal estate listed other investment holdings as including a 1/30 share of the whaler *Active,* hundreds of shares in the Dundee Shipowners Company, a shipping company also managed by W.O. Taylor; the Dundee and Newcastle Steam Ship Company; Northern Insurance Company; Dundee and District Tramway Company; six shares of the barque *Orient*; nine shares of the barque *Oregon*; four shares of the brig *Star of Dundee*; as well as 20 shares in the King Alfred Silver Mining Company, all tallying to an estimated worth over £18,600.[15]

William Strong was one of a number of wine and spirit merchants who invested in a range of whaling interests. George Lloyd Alison (d. 1902), an early colleague/competitor of William Strong, also owned shares in three Dundee whalers and DPFCo. Other investors were more active form the mid 1880s to 1911. Thomas Lyle Peters, a commission and wine merchant invested in DPFCo, DAFCo and four whalers between the 1880s to the 1896 interval.[16] David Crowe (1845-1907) owned interests

[11] NRS, SC 45/31/42, pp. 610-16.
[12] 1841 Census. William worked as an 'agent' at 20 Dock Street, while Stewart was a clerk (perhaps for William); see *DD,* 1844, p. 90.
[13] William Strong was classified as an 'Other Dundonian' investor, since his primary occupational identity was always that of a wine merchant; *DD*, 1871, pp.
[14] CDA, CE 70/11/10, pp. 121, 148; CE 70/11/13, p. 30; CE 70/11/12, p. 57; UDAS, MS 59, TWFCo Meeting Minutes for 1881; and NRS, BT 2/228/9.
[15] NRS, SC 45/31/35, pp. 120-43.
[16] NRS, BT 2/2842/6; and CDA, CE 70/11/20, pp. 56, 70, 96.

across six whalers and DAFCo, over a twenty-year span. Crowe bought his first ship share in the whaler *Star* in 1885. The following year, it struck a reef in Cumberland Sound and was abandoned. Besides his DAFCo stock, Crowe would go on to invest in five other whalers, all through Robert Kinnes. At the time of his death in 1907, Crowe's estate amounted to over £22,500.[17] Finally, James Anton (d. 1919), completed nearly all of his transactions during the first decade of the twentieth century. He owned ship shares in four whalers, *Eclipse*, *Scotia*, *Windward* and *Vegas*, which sank on its only whaling voyage to the Davis Straits. He also invested in BFCo, owning five shares (at £10 apiece) by 1901, but increasing his purchases until he possessed twenty-five corporate shares in 1911.

Another wine merchant, Richard Armit (R.A.) Miller (1818-1909) invested widely in Dundee whaling, using it to help diversify his extensive range of financial holdings. In most of the primary documents, Richard A. Miller referred to himself as a 'shipowner' or 'merchant', but his main commercial activities were as a stockbroker and insurance agent, his office being located on Panmure Street. As such, he too belonged to the 'Other Dundee interests' category through 1891, before he moved as a widower from 17 Windsor Street in Dundee to The Elms in Meigle near the Alyth junction in Perthshire around 1894. This changed his status from 'merchant' to 'gentleman' and reclassified him from 1896 until his death as an 'Investor outside Dundee'.[18] In 1861, he purchased one share of TWFCo stock from William Sime and another share from the trustees of the late William A. Flowerdew.[19] Over the years, he went on to own stock in four other whaling companies – DSWFCo, DPFCo, DAFCo, BFCo – as well as shares in the whalers, *Star, Jan Mayen* (II), *Mazinthien,* and *Nova Zembla.* By February 1891, R.A. Miller owned 44 shares (nearly 15 per cent) of DPFCo's corporate stock.[20]

Besides holding a range of whaling investments, R.A. Miller's estate upon his death in 1909, had ordinary, debenture and preferred stocks in international interests

[17] CDA, CE 70/11/19, p. 20; NRS, BT 2/2842/6; CDA, CE 70/11/20, pp. 56, 70, 257, 270, 271; and CE 70/11/15, pp. 131, 133. NRS, *Calendar of Confirmations and Inventories for 1908* (Edinburgh, 1909), p. 132.
[18] See *DD,* 1893, p. 299; *Leslie's Directory for Perth and Perthshire, 1895-1896* (Perth, 1895), p. 352. Here, Miller is listed under 'Gentry'.
[26] Private collection, TWFCo Shareholder Ledger.
[20] NRS, BT 2/600/24, Summary of Capital and Shares (3 February 1891). See also BT 2/228; BT 2/2482; BT 2/3482; and CDA, CE 70/11/11, p. 161; CE 70/11/13, pp. 17, 30; and CE 70/11/20, p. 95.

such as The Alliance Trust; Matador Land & Cattle Company; Northern American Trust Company; First Scottish American Trust Company; Scottish Northern Investment Trust; Alabama Great Southern Railroad; Atchison, Topeka & Santa Fe Railroad Company; Barberton Exploring & Development Company; British Californian Oil Company; Cincinnati, Richmond & Fort Wayne Railroad Company; Consolidated Gold Fields of South Africa; Crusoe Gold Claims; Durban-Roodepoort Gold Mining Company; Gold Estates of Australia; Grand Trunk Railroad Company of Canada; Montana Mining Company; Palmarejo & Mexican Goldfields; Seattle Electric Company; American Wireless Telephone & Telegraph Company; and many more.

R.A. Miller exemplifies a certain group of wealthy middle-class Dundee investors, who took full advantage of Dundee's situation, both as a whaling port and as an emerging centre of international investments. Miller's investment in whaling and the Matador Land & Cattle Company and Alliance Trust *et al* was not just a lucky match. In 1883 alone, at least one hundred Dundonians out of a total of 457 Matador Land and Cattle Company investors (over 21 per cent) were identified as having invested both in cattle ranching in West Texas and Arctic whaling.[21] One decade later, in 1893, when whaling was struggling with company closures, thirty-one Dundonians were matched as having invested in both the Alliance Trust and Arctic whaling.[22] As such, the financing of the Arctic trade and its investors belong in a wider conversation about Dundee's role in global investment. Arctic whaling simultaneously maintained a local business identity while also providing an additional option for globally oriented investors.

The 'statement of accounts' ledgers from one Dundee family rope and sailmaking firm, James Allison and Sons, provide a particularly valuable comparative summary of the general performance of whaling shares to other international investments held at the time. As a family firm, James Allison and Sons, became something of a small business fixture on Dock Street. James Allison, Jr. (1846-1925) grew up in a working-class family in Dundee, where most of the males joined the rope and sailmaking trade from a young age. By 1858, James Allison, Sr. had succeeded enough

[21] SWC, MLCC Papers, Dundee Division, Shareholders Ledger, No. 4, pp. 1-455.
[22] UDAS, Alliance Trust Papers, Box 4, Minutes No. 2, pp. 1-536. UDAS holds dozens of large boxes of Alliance Trust materials. At this time, UDAS has not assigned an archival reference code to these materials.

to establish his own rope and sailmaking business at 47 Dock Street. James, Jr. soon joined his father and older brother Matthew there.[23] By 1878, Matthew and James, Jr., now sole co-partners, had begun expanding their business into other maritime interests, including purchasing two new sailing barques, *Countess of Derby* and *Countess of Rothes* for tramp shipping.[24] Additionally, they bought two smacks, *Ida Louise* and *Trojan*, became increasingly linked to different marine insurance companies and associations, and began managing the short-lived Dundee & Shetland Fishing Company.[25] By 1884, James Allison and Sons had expanded to 48 Dock Street, and they advertised themselves as rope and sailmakers, ship chandlers, oil merchants, and bonded and free store merchants.[26] James Allison, Jr. led the company to make their first Arctic whaling investments in 1894, the year his brother died.

Matthew's son, James Millar Allison (1865-1951), subsequently joined the firm as a junior partner. The son of Matthew Allison (1837-1894) and Elizabeth Millar, James Millar Allison graduated with an M.A. from the University of St Andrews in 1884, then gained his LL.B. (with distinction) at Edinburgh in 1888. Among other things, he worked in Dundee as a solicitor and notary public, sold insurance from his office at 31 Albert Square, taught Scots Law at University College, Dundee, and aided his family's firm, James Allison and Sons, as a junior partner.[27] That year, the company spent a total of £100 on eight DAFCo shares (which began operations the following year in 1895) and one share in the whaler *Active.* Every year, thereafter, James and the firm increasingly purchased more shares across more Dundee whaling endeavours. In 1906, between James, his nephew John Millar Allison (brother to James Millar Allison), and the company, they combined had 'shipping investments' in four whalers managed by Robert Kinnes: *Morning* (worth £200), *Diana* (£160), *Scotia* (£110), and *Windward* (over £685) as well as ten shares in BFCo (£112), and over £272 in the Ponds Bay Fishing Company, which included four shares in the small, steam-screw ketch, *Albert.*[28] James Allison and

[23] *DD*, 1858, p. 244; *DC*, 'Public Notices', 8 May 1953 and 3 October 1953.
[24] CDA, CE 70/11/13, pp. 6.
[25] *DD*, 1878, pp. 36, 74-76, 144; and CDA, CE 70/11/13, pp. 15, 22.
[26] *DD*, 1884, p. 102.
[27] I would like to thank Robin M. White, Honorary Research Fellow at the University of Dundee's Law and School of Social Sciences, for bringing James Millar Allison to my attention and supplying information on his life.
[28] UDAS, MS 44/12/4, James Allison and Sons Statement of Accounts, 1894, 1906; CDA, CE 70/11/20, p. 283.

Sons were also instrumental investor-owners in the establishment of Cumberland Gulf Trading Company John Millar Allison (son of the late Matthew Allison) alongside Walter Kinnes and Alexander Alexander served as the company's first directors.[29]

Besides Arctic whaling, James Allison and Sons, invested capital in a number of other maritime and corporate ventures. In 1894, these mostly centred on shares in the Vulcan Steam Ship Company and their own two barques. They had also lightly involved themselves in the Hawaiian Investment Company and W.B. Thompson & Company. Over time, they particularly pursued investment opportunities in companies involved in the U. S. James Allison and Sons invested large sums in Western & Hawaiian Investment Company, Scottish American Investment Company, U. S. Mortgage Company of Scotland, and U. S. Steel Corporation among many others. Like so many others at this time, they also showed strong inclinations toward American railroads, including Southern R.R. Company; Southern Pacific R.R. Company; Erie R.R. Company; Missouri, Texas & Kansas R.R. Company; Wabash R.R. Company; and the Atchison, Topeka & Santa Fe Railway Company.[30]

In 1906, along with the six whaling interests worth nearly £1540, James Allison and Sons listed active holdings with American Trust Company, Northwest Development Company, Zambesia Exploration Company, British California Oil Company, Caledonian-Portland Cement Company, the Ockin Syndicate, Stratton Independence, Charter Trust, Chicago Subway, United Collieries, Randfontin Estates, and Chartereds worth over £4540. Therefore, among these large-scale international investments, the rope and sailmakers committed over 25 per cent of their company's investments to Dundee whaling.[31] This is astonishing, considering the amounts involved and the state of business in Dundee's maritime trades. So, how did their whaling investments perform compared to the others?

Whaling investments do not appear to have made James Allison and Sons an exceptional amount of money. That said, they also did not perform too badly. Between 1894 and 1912 (nineteen seasons inclusive), the account ledgers registered at least one whaling investment loss (listed as 'Bad Debts') in seven seasons. Most of these,

[29] NRS, BT 2/11549/4.
[30] UDAS, MS 44/12/4, Statement of Accounts, 1894-1912.
[31] *Ibid.*, 1906.

however, were small losses with the exception of 1908, when four different whaling investments lost a total of £485 11s. Total losses for whaling investments over the years equalled about £1110, but this was comparatively offset by £567 in earned dividends made over two seasons (1909 and 1910) by one small whaler, *St Hilda.*[32] Comparatively speaking, whaling shares did outperform some other ventures. In six of twelve years of registered investments, James Allison and Sons' speculations in sugar lost a total of over £2740. In 1896 alone, sugar cost them £1632, which was more than whaling's total losses over nineteen years of investment.[33]

Contextualising James Allison and Sons' investment activities illuminates how they as middle-class investors in Dundee were incorporating shares in Dundee's Arctic trade within their international investment portfolios. Their ledgers record concentrated investment activity during a time concurrent with the end of Dundee's corporate whaling era and the entirety of its hybridised third phase of steam whaling. Furthermore, their financial commitment to supporting the whaling trade aligns with many other middle-class merchants, such as William Strong and R.A. Miller. Like so many other Dundonians in the late nineteenth and early twentieth centuries, the business activities and connections affiliated with James Allison, Jr.; James Millar Allison; and the family firm, James Allisons and Sons, spanned maritime, industrial and urban Dundee and whaling was a big part of it.

Female Investors

All of these statements and examples apply just as much to women who invested in the trade as men. Over the last several decades, scholars have increasingly uncovered, analysed and debated British (mostly English) female investors' activities during the nineteenth century. Much of this published research has engaged and challenged gender-based notions of 'separate spheres' among middle-class men and women in Victorian society as put forward by Leonore Davidoff and Catherine Hall.[34] Important

[32] *Ibid.*, 1909-10; see also Local History Centre at the Dundee Central Library (LHC-DCL), Log Book of S.S. *St Hilda*, 1908 and 1909.
[33] UDAS, MS 44/12/4, 1894-1912.
[34] Janette Rutterford, David R. Green, Josephine Maltby and Alastair Owens, 'Who comprised the nation of shareholders? Gender and investment in Great Britain, c. 1870-1935', *EHR,* 64, 1 (2011), pp. 157-87; and Mark Freeman, Robin Pearson and James Taylor, '"A Doe in the City": Women Shareholders in Eighteenth- and Early Nineteenth-Century Britain', *Accounting, Business & Financial History,* 16, 2 (2006), pp. 265-91

discussions on the nature of female investments have focused on women's agency (active or passive) and their aversion to investment risk.[35] Some scholars have suggested that widows and spinsters generally avoided risk, preferring stable, but low-yield government stocks or property holdings to preserve wealth.[36] Yet, as Helen Doe has demonstrated, women in sizable numbers were routinely involved in maritime investments, a form of securities investment still considered quite risky during the nineteenth century.[37] Whaling investments would have been considered even riskier still.

Outside of crewing, mastering or managing whaling vessels, women from all social strata interacted with Dundee whaling at nearly every level of the industry. Women's most documented link to whaling, however, was as capital investors. Until now, outside of a few select examples, virtually no consideration has been given to women's participation in the financial underpinnings of British Arctic whaling. Yet, female names regularly appeared in ship registers and corporate capital share reports, prompting the questions: What exactly was the nature and magnitude of female investment in Dundee whaling? Why would women choose to place their investments in such perceptibly risky securities when safer and accessible options were available?

Women's involvement in whaling investment should not come as a surprise, since proportionally there were more women than men in Dundee.[38] Yet women from wealthy elite and middle-class situations often were constrained or limited in ways that the labouring poor were not. This included financial matters. Whaling therefore in this case provided spaces of opportunity for women to actively express their own financial will or take advantage of market access. Women's financial participation was beneficial

[35] See Janette Rutterford and Josephine Maltby, '"The Nesting Instinct": Women and Investment Risk in a Historical Context', *Accounting History,* 12, 3, (2007), pp. 305-27. They contend that widows were counselled to avoid risk; Josephine Maltby and Janette Rutterford, '"She Possessed Her Own Fortune": Women Investors from the Late Nineteenth Century to the Early Twentieth Century', *Business History,* 48, 2 (2006), p. 233.

[36] R. J. Morris, *Men, Women and Property in England 1780-1870: A Social and Economic History of Family Strategies Amongst the Leeds Middle Classes* (Cambridge, 2005), p. 374. See also, David R. Green and Alastair Owens, 'A Gentlewomanly Capitalism? Spinsters, Widows, and Wealth Holding in England and Wales, c. 1800-1860', *EHR*, 55 (2003), pp. 510-36.

[37] See Doe, 'Waiting for her ship', p. 95 and Helen Doe, *Enterprising Women and Shipping in the Nineteenth Century* (Woodbridge, 2009).

[38] Rutterford and Maltby, 'Nesting instinct', p. 314.

to the trade, since female investors from wealthy or middle-class circumstances were potential sources of capital who would help spread investment risks.

Diversity and opportunity, however, do not represent the panacea for all progressive behaviour. As part of the maritime trades, whaling endeavours simply worked within the framework of the law. While capital-intensive whaling companies did nothing to hinder females' holding of shares and investment of capital, in what little evidence that does exist, it does appear that women's actual decision-making input and corporate control were strictly limited due to being female. Some scholars have argued more generally that minor investors as a group had fewer rights and protections than imagined. They cite the precedent of *Foss vs. Harbottle* (1843) as 'seriously restricting minority shareholder rights for the next hundred years'.[39]

In the TWFCo's meeting minutes, no women are mentioned as ever attending meetings, and unsurprisingly, none held corporate office or joined the Committee of Management. As company shareholders, women did have the right to vote, but apparently only by proxy. In 1859, at a general meeting of partners, which gathered to elect TWFCo's next company manager, George Whitton attended to vote 'for himself and as mandatory, conform to Mandates produced…[vote by proxy] for '[Captain] Alexander Deuchars, Mrs. Jane Lawson or Deuchars[,] Relict of George Deuchars[,] and for William Adamson', while James Soot did the same for 'John Crichton and for Mrs. Elizabeth Crockatt or Duncan'.[40]

Nearly forty years later in 1897, BFCo presented its Articles of Association with the latest corporate style (including a coloured-ink title page) and progressive business practices. Yet, as Article 54 indicates, some things were culturally slower to change.

> If any Member is an infant, pupil, minor, married woman, lunatic, or person of unsound mind, he or she may vote by his or her guardian, tutor, husband, or legal curator.[41]

BFCo's inclusion of married women among the list of those deemed incapable of making responsible decisions actually went beyond the legal requirements of Merchant

[39] Julian Franks, Colin Mayer and Stefano Rossi, 'Ownership: Evolution and Regulation', *The Review of Financial Studies,* 22:10 (2009), pp. 4009-56.
[40] UDAS, MS 59, Minutes of the Adjourned Annual Meeting of Partners of TWFCo, 8 June 1859.
[41] NRS, BT 2/3482/2.

Shipping Act (MSA), 1894.[42] While married women still retained the legal right to vote on company matters through a proxy, The company's Articles of Association offer one subtle instance of how financially constrained middle-class women were in late nineteenth-century Dundee society.

All told, women accounted for 60 of the 588 known individuals (about 10 per cent) in Dundee whaling in the five-year intervals from 1861 to 1911. The nature of their investments is diverse, though the context behind their investments often is obscured by the typically narrow relational classification of all women as wives, widows and spinsters, not to mention the greater dearth of primary sources generally documenting most women's lives. As Table 2.2 depicts, wives made up the largest contingent of women, followed by widows and spinsters in near equal numbers. However, whereas widows more often held company stock, spinsters were more likely to own ship shares.

Table 2.2. Women's Shareholdings in Dundee's Arctic Trade, 1861-1911.[#]

Status	Total	Company stock	Ship shares
Widows*	15	11	4
Wives*	25	13	12
Spinsters	17	3	14

[#] Numbers do not sum to 60 because some individuals could not be traced.
* Two women transitioned from wife to widow. They are reflected in both categories.

Within these numbers are compelling cases of women who chose to actively buy and sell shares in the whaling trade. Others opted for a modest but steady income yielding between three to five per cent interest. In one instance, Annie Cowie Cameron, a widow from Peterhead, mortgaged £1000 of John Duthie's sixty-four shares in the whaler *Earl of Mar and Kellie* in 1887 at five per cent interest. Though registered in Peterhead, Duthie based and operated *Earl of Mar and Kellie* out of Dundee, renting dock space from TWFCo. Since the mortgage falls outside of invested shares, it is not counted in the general figures.[43] Other women, often deemed passive investors, still demonstrated agency too, by electing to hold onto these riskier inherited investments, and not divest them. In this way, it could be argued that despite much evidence of women directly managing assets, women's acceptance of investment risk and decision-making reflects

[42] Regarding incapacitated persons and ownership, MSA, 1894 (57 & 58 Vict. c.60, I.55) only goes so far as to codify 'infancy, lunacy, or any other cause'.
[43] NRS, CE 65/11/13, pp. 38, 57.

a higher degree of asset control than first credited. Gordon and Nair have argued that among other things, women's wills also demonstrate their influence through the personal allocation their wealth.[44]

Women's whaling investment, much like that of their male counterparts, fits within a largely exclusive orientation between company stocks and ship shares. Table 2.2 above shows that twenty-seven women (45 per cent) exclusively owned whaling company stocks. Thirty women (50 per cent) solely held ship shares. Only three women – Elspeth Murray Stephen Croudace, Elizabeth McAra, and her sister, Nelly, all from Dundee – held both ship shares and company stock.

Table 2.3 tallies the number of female investors over time by category. It demonstrates that women invested in whaling throughout the period considered, but their participation increased most after 1880 and held steady during the last decades of the trade. Most women, who obtained shares through inheritance, were passive investors in practice. Widows living locally comprised most of these individuals from

Table 2.3. Number of Women Investing in Dundee Whaling, 1861-1911.[#]

	1861	1866	1871	1876	1881	1886	1891	1896	1901	1906	1911
Company shareholders	6	1	1	2	7	7	13	1	0	2	7
Shipowners	0	0	0	0	1	5	7	4	9	9	6
Outside investors	0	0	0	0	5	7	11	4	1	5	4
Total investors	6	1	1	2	7	11	20	9	9	11	11

[#] Limited data from 1861-1881.

1861 to 1876, but after 1881, more inheritances went to married daughters who lived outside of Dundee. Eighteen of the twenty-four females (75 per cent) listed as investors outside of Dundee held company stock. This suggests that recent married rights legislation passed for Scotland in 1880, helped to strengthen female ownership in whaling assets. Of course, widows and spinsters could inherit property under their own names prior to 1880. In Scotland, the Married Women's Policies of Assurance Act of 1880, enshrined most of the rights granted to the English and Welsh under the Married Women's Property Acts of 1870 and 1882.[45]

[44] Gordon and Nair, 'Middle class women in Victorian Glasgow', pp. 804-05,

[45] T. C. Smout, 'Scottish Marriage, Regular and Irregular, 1550-1940' in R.B. Outhwaite (ed.), *Marriage and Society: Studies in the Social History of Marriage* (London, 1981), pp. 204-36. For more on the nature of the Scottish act and its differences with the 1870 and 1882 English Acts, see Scottish Law Commission, 'Report on the Married Women's Policies of Assurance Act, 1880', No. 52 (Edinburgh, 1978).

An early example of this took place shortly after the shipbuilder, Alexander Stephen, Sr., passed away in April 1875. For over four years, the trustees to his estate held his property. In November 1879, they finally distributed nineteen shares of DSWFCo stock (£500 nominal price per share) in two-share increments to his daughters (all married save one) and sons (except William Stephen, who received one share and took over the Alexander Stephen and Son branch in Dundee). Elspeth Murray Stephen Croudace (1824-1916) and Janet Stephen (1840-1912) both resided in Broughty Ferry, the rest lived with their families outside of Dundee.[46] A year later, Janet sold off her shares, but the others all appear to have held their stock long after DSWFCo ceased whaling operations late in 1894.[47]

While this inheritance example predates the 1880 Scottish law, there were clearly ongoing attempts to pass such legislation for Scotland.[48] Claire Swan has suggested that in practical terms, the Scottish act did not change much since marriage contracts could already exclude a husband's *jus mariti. S*wan's research, however, does not extend beyond 1880, so there is no empirical evidence of how investor numbers may have changed. Other scholars have acknowledged that prior to the 1870s and 1880s, wives often made attempts to circumvent coverture laws.[49]

The increase in female ship shareholders after 1881 paralleled an overall surge in ship share ownership, as depicted earlier in Figure 1.3. Some female investors had no obvious affiliation, or at a least tenuous one, with commerce at sea. In February 1890, Jessie Gibson Scrimgeour, the wife of the wholesale provision merchant and ham curer, George Scrimgeour, purchased two shares of *Chieftain* from David Alexander.[50] In early May and again in early June 1905, Harriet Watt purchased from Robert Kinnes one share each in the whalers *Morning* and *Scotia*, respectively. At the time, the Board of Trade employed Harriet's husband, Adam Watt, as a marine surveyor, but he never invested

[46] NRS, BT 2/228/17-33, Summary of Capital and Shares (1879-1894).
[47] NRS, SC 45/31/79, Dundee Sheriff Court Inventory of Personal Estate; and NRS, BT 2/228/40.
[48] *The Scotsman,* 'The Married Women's Property (Scotland) Bill, 11 June 1877, and *U.K. Parliamentary Papers,* 'Married women's property (Scotland). A bill for the further protection of the property of married women in Scotland', Bill 32, House of Commons, 1878, https://parlipapers.proquest.com/parlipapers/docview/t70.d75.1878-053951?accountid=8312 (accessed 24 September 2019).
[49] Swan, 'Dundee as a Centre of Financial Investment', p. 277; Freeman et al, 'A doe in the city', p. 267.
[50] CDA, CE 70/11/20, pp. 56, 68, 70, 114.

in whaling.[51] More often, women with money and familial connections to whaling, purchased ship shares. Such was the case with Rosena Wilson Guy and Jessie Ann Sutherland Mutch, whose husbands were experienced whaling captains in the Arctic. In 1886, Rosena Guy purchased one share in the whaler *Chieftain* from her husband, William Guy, who was whaling captain of *Arctic* II at the time. In the spring of 1903, Jessie Mutch purchased her share in the whaling ketch *Albert* from John Miller Hunter Mitchell, apparently in support of her husband, James Shepherd Mutch, the *Albert*'s ice master for the voyage.[52]

One particularly noteworthy example of a married woman who actively invested in whaling was Elspeth Murray Stephen Croudace of Broughty Ferry. As mentioned earlier, she grew up a daughter and sister to shipbuilders and whaling shipowners. In April 1850, she married Captain William Storey Croudace, at the time an accomplished shipmaster under her father's employment. At age five, William's father, an accountant in Leeds, died suddenly, most likely leaving his mother and three sisters in financial straits. By age twenty-one, W.S. Croudace was reputed to have commanded the *Coquette* to the Baltic.[53] After retiring from seafaring, W.S. Croudace began purchasing merchant vessels, selling the shares and managing business as a shipping broker. Early in 1878, he extended his interests into whaling by purchasing and registering *Mazinthien,* a former Peterhead whaler, at Dundee. William carried out his first whaling ship share transaction with his wife, Elspeth, who on February 13, 1878, purchased fourteen shares (nearly 22 per cent) of *Mazinthien.* In the margin of the ship register, a notes states, 'exclusive of *jus mariti*', which indicates that Elspeth Croudace purchased her ship shares on her own volition. The shares were unquestionably her property. Since ship shares fell under the jurisdiction of long-standing maritime law, shareholders held protected freedoms under a 'tenants-in-common' principle allowing them to sell, gift, mortgage or bequeath ship shares. Therefore, as Helen Doe has noted, by using different legal systems as appropriate, 'both men and women could avoid these restrictions'.[54]

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[51] CDA, CE 70/11/15, pp. 15-16.
[52] CDA, CE 70/11/19, appendix f. 25, CE 70/11/20, p. 283
[53] For documented and anecdotal accounts of portions of his life at sea, see Phil Eagles, *Captain William Storey Croudace: The Voyages of the "White Eagle" 1855 and "Corona" 1866-69*, http://home.iprimus.com.au/phillipeagles/white_eagle.html (accessed 16 September 2019).
[54] Doe, 'Waiting for her ship', p. 90 and David J. Starkey, 'Ownership Structures in the British Shipping Industry: The Case of Hull, 1820-1916', *IJMH,* 8, 2 (1996), pp. 71-95, esp. 79.

Mazinthien operated out of Dundee for six years before it was wrecked in Peterhead Bay in 1883. The following year, Elspeth's husband acquired two more whalers, and again, Elspeth Croudace purchased shares, this time seven in *Triune* in May, and nine in *Cornwallis* in June. Based on these three purchases, it appears that Elspeth Croudace may have been leveraging some of her family's fortunes to support her own husband's business efforts. The example of Elspeth Croudace's investments supports Helen Doe's assertion that female shipowners' motivations very likely differed from male shipowners with their 'economic' or 'financial' motivations.[55] Unfortunately, the following two years successively saw the Arctic claim both whalers. Following the loss of all three whaling vessels, after 1886, William ceased his whaling interests, and Elspeth never again purchased ship shares in a whaler, although she did keep her DSWFCo stock until her death in 1916.[56]

According to Rutterford and Maltby, women's possession of sufficient surplus capital and access to investment information moderated inhibitions toward investor risk.[57] Elspeth Croudace's access to advice through her maritime-based relationships likely encouraged her active investments. For other Dundee women, access to information along with financial and investment advice came from several quarters. The whaler, *Nova Zembla,* provides a longitudinal look into the circumstances, actions and status of a range of Dundee's female maritime investors and how they may have made their decisions.

Built in 1873 in Bremerhaven and originally named *Novaya Sembla,* the vessel was sold to Dundee shipowner, William Ogilvie Taylor, and the textile manufacturer, James Luke in February 1875. The new owners anglicised the steamer's name by registering it as the *Nova Zembla*, and then they promptly sold it to DPFCo where W.O. Taylor served as managing owner.[58] From 1875 until September 1902, when the ship was abandoned in Dexterity Bay during a gale, the *Nova Zembla* sailed every year as an Arctic whaler.[59] In October 1892, after seventeen years of corporate ownership, DPFCo

[55] *Ibid.,* p. 87.
[56] NRS, SC 45/31/79, pp. 623-28.
[57] Rutterford and Maltby, 'Nesting instinct', pp. 307-09.
[58] Archibald, *Dundee Whaling Fleet*, p. 251 (appendix 5).
[59] In the summers of 2018 and 2019, a team from the Arctic Institute of North America (AINA), Calgary, Alberta, located the *Nova Zembla*'s wreck site and its corresponding debris field near Dexterity Bay on

ceased operations and sold its sixty-four shares to twenty-two individuals. Along with Robert Vallentine Scroggie, the vessel's managing owner, Joseph Johnston (J.J.) Barrie, a publicly active Dundee insurance merchant, purchased four shares, but in July 1894, he died intestate at age 58. Having never married, J. J. Barrie's shares were divided as part of his inheritance among four of his siblings. Mary Barrie Ovenstone, the wife of Dundee's Marine Superintendent, William Ovenstone; Charles Barrie, a prominent Dundee shipbroker; and spinsters, Ann Low and Elizabeth Dargie Barrie, each received one share of the *Nova Zembla,* which they kept until the vessel was declared lost and the register was closed.[60]

Another woman, Margaret Stewart Erskine Moir, inherited four shares of the *Nova Zembla* as a widow when her husband, insurance agent William Moir, died intestate in July 1898. She actually never registered the shares in her name until February 1901, when she then sold them to James Ogilvy, a Dundee grocer.[61] While the females of the Barrie family and Margaret Erskine, inherited their stock in the *Nova Zembla*, women in the Gellatly family bought their shares through family connections.

In November 1899, three unmarried sisters, Rose Edward Gellatly, Emily Toulmin Gellatly and Beatrice Jane Gellatly – all in their early thirties – jointly purchased the two shares of the *Nova Zembla* from their father, William Gellatly.[62] By early 1901, these women were among seven females (25 per cent of the ship's investors), who held nine (14 per cent) of the ship's shares. In March 1902, about a year after their father died, the Gellatly sisters sold their shares to the Burntisland textile manufacturer, James Shepherd. It was an astute and lucky move, because six months later, the *Nova Zembla* was lost.[63]

Two other women associated with *Nova Zembla* appear to have made decisions and conducted financial business outside of their family connections. In late February 1901, David Brand, executor for the estate of textile engineer and art enthusiast, James

Baffin Island; Michela Rosano, 'The Hunt for *Nova Zembla*', *Canadian Geographic*, 139, 1 (2019), pp. 63-65.

[60] CDA, CE 70/11/12, pp. 75, 95, 96, 240, 250, 272, 274, 276.

[61] CDA, CE 70/11/20, pp. 249-50.

[62] See 'William Gellatly', https://mcmanus168.org.uk/mcmanus168entry/william-gellatly-esq/ (accessed 25 September 2019); NRS, SC 45/31/53, pp. 227-29; and TTU-SWC, MLCC, Dundee Division, Shareholders Ledger, No. 4 (1883).

[63] CDA, CE 70/11/20, p. 276.

Guthrie (J.G.) Orchar, sold one share each to the Broughty Ferry spinsters, Mary Lyall Linn (c. 1854-1926) and Mabel Leigh Johnson. Like many women in the nineteenth century, tracing their personal histories is both tenuous and fragmented, yet strands of Mary Lyall Linn's personal life emerge through a variety of sources. The *Dundee Directory* annually listed 'Miss M. Linn' as living at 3 Collingwood Terrace, Barnhill, Broughty Ferry from 1890, until her death in 1926. Previously 3 Collingwood Terrace had been owned by a 'Mrs. H. Linn' from 1882-1890. The 1891 Scotland Census lists 'Mary L Linn' as the head of her household, age 37, and living on 'private means'. In addition, her sister, Thomasina L Linn (age 28) and uncle, Thomas Linn (age 60), lived at the house. Valuation rolls also confirm Mary Linn as a tenant of this property.[64] One thing, however, is clear; Mary Lyall Linn actively purchased whaling shares. During a three-month span in the spring of 1901, Mary Linn purchased a share of the *Nova Zembla* from the estate of James Guthrie Orchar. Soon after, she bought another share in the whaler from joint owners, George Alexander and David Pirie. Besides *Nova Zembla,* Mary Lyall Linn acquired two shares of the whaler *Diana* in 1901, from the managing owner, William Ferguson McIntosh.[65] In May 1905, she added to her portfolio by purchasing two shares of the whaler *Morning* from the leading whaler broker in Dundee at the time, Robert Kinnes. Just as Doe has noted with her female shipowners in England, what Mary Lyall Linn and others purchased, they tended to keep, even if it was a declining market.[66] When *Nova Zembla* sank in 1902, she along with Mabel Leigh Johnson and the Barrie sisters comprised 20 per cent of the 25 shareholders still holding ship shares. She also held her share in the *Diana* and *Morning* until Robert Kinnes bought back the ship shares and resold the vessels in 1913 and 1915, respectively.

The appearance of women's names in ship registers' transactions signify that women were readily involved in the Dundee whaling trade as active investors, passive shareholders, divestors and occasionally as financiers. At one point in February 1901, women owned 9 of 64 shares (14 per cent) of *Nova Zembla*. Over the life of the vessel while registered in Dundee, women comprised nine of the forty-nine total investors

[64] CDA, County of Forfar Valuation Roll (1891-92), p. 118.
[65] CDA, CE 70/11/20, pp. 269-70, 272.
[66] Doe, 'Waiting for her ship', p. 92.

involved (over 18 per cent). Furthermore, ten of *Nova Zembla*'s fifty-one registered transactions (nearly 20 per cent) included women either buying or selling shares.

Whaling histories have tended towards narratives that are almost exclusively masculine in orientation. Tales of adventure, daring and hardship certainly have a place, and the truth was British and American ships in the ice were almost entirely male. Nevertheless, casting historical narratives within gender-specific terms confines the wider scope of the phenomena. It essentially draws a line demarcating 'whaling' from overall society. In this way, whaling and other maritime events commonly become niche issues rarely considered as phenomena that integrated spaces on ships with spatial issues and communities on land. Examined individually, the widow, Anne Macintyre of Broughty Ferry, with her five BFCo shares in 1911, or any of the other four widows and two spinsters who held a combined twenty-seven BFCo shares (out of five hundred total), quickly become indistinguishable small shareholders in a crowd.[67] Just the same, the twelve shares of *Nova Zembla* stock held between 1894-1902, by the female Barries, Gellatlys, Margaret Erskine Moir, Mary Lyall Smith and Mabel Leigh Johnson appear meagre, if not almost trivial. Nevertheless, the corporate stock and ship shares held by these sixteen women materially prove their role in financing the whaling trade. More than that, the sum of their whaling assets, especially when tallied with other (male) small-share investors, tells a larger, more complex story of the power of Dundee's middle-class grassroots investments.

Civic Patriotism

Besides investing purely for profit, individuals from across the spectrum of middle-class investors also engaged the whaling trade as a financial space, by which they could execute personal and/or civic economic 'survival' strategies. Scholars examining Dundee whaling have argued that the 1880s clearly marked a turning point in the industry. In 1884, the Dundee shipbuilders, Alexander Stephen and Son, constructed their last whaling and sealing vessel, *Terra Nova*.[68] After the loss of the whaler *Intrepid* in 1885, TWFCo did not seek to replace its last vessel, and its whaling operations ceased. In 1886,

[67] NRS, BT 2/3482/24.
[68] John L. Carvel, *Stephen of Linthouse, A Record of Two Hundred Years of Shipbuilding, 1750-1950* (Glasgow, 1950), p. 182; and TNA, BT 100/50, *Terra Nova* (O.N. 89090).

the loss of four whalers, and even more returning home 'clean', made the banner season for investing in whaling ship shares (refer to Figure 1.5) a veritable physical and financial disaster for the industry. Additionally, as Appendix 1.7 indicates, DPFCo's payment of share dividends faltered terribly from the 1886 season until its investors voted to wind up operations in 1891.

For those basing their economic evidence on vessels, whales caught and earned profits, 'the trend was inexorably downwards' from there for the industry.[69] Yet by treating Arctic whaling as if it existed (or failed) alone in a vacuum, or rather, as an industry only at sea and all to itself, that general conclusion actually serves to decontextualise whaling's and Dundee's historical moment during the late nineteenth and early twentieth centuries. Not only does it fail to connect the industry's importance to Dundee's wider maritime sector and the town itself, but it also serves to occlude the role of the middle class in its civic patriotism.

Within a few years of the difficulties that had begun to severely grip Arctic whaling, Dundee's entire maritime sector began to suffer financial downturn as well. As Table 2.4 summarises the vessels registered to Dundee's port steadily declined from the 1850s to the First World War. This factor alone, however, was not a worrying issue prior to the 1890s, since it reflected a general and universal transition over time from sailing vessels to steam vessels for maritime trade and transportation.[70] From 1892 and

Table 2.4. Number of Vessels Registered to the Port of Dundee, 1858-1909.[#]

	1858	**1867**	**1876**	**1884**	**1892**	**1898**	**1909**
Registered Vessels	271	205	184	188	160	112	86
Total Registered Tonnage	52,700	50,000	75,300	107,600	122,700	102,700	76,900
Highest Vessel Tonnage	846	1,287	1,854	2,447	2,652	3,416	3,416

[#] Some tonnage entries from the shipping lists report net or gross tonnage instead of registered tonnage. Vessels under 25 tons were not included in the count.
Source: 'List of Shipping' published in *DD* series; CDA, CE 70/11/21.

thereafter, both the number of registered vessels and the total registered tonnage began dropping precipitously. This did create concern, since it increasingly indicated that shipowners were selling off merchant vessels without replacing them. In 1893, David Bruce, manager of DSWFCo and the Dundee Clipper Line, addressed a gathering

[69] Norman Watson, *The Dundee Whalers* (East Linton, 2003), pp. 132-33.
[70] Among others, see Yrjö Kaukiainen, 'Coal and Canvas: Aspects of the Competition between Steam and Sail, c. 1870-1914', *IJMH*, 4, 2 (1992), pp. 175-91.

of shipowners, stating that they 'required a word of encouragement in the present trying times. At the same time, it was a pity to see ships disposed of for an old song to people [foreign buyers] who would sail them in competition with the original owners'.[71] With whaling and shipping down, Dundee's entire maritime sector was in the doldrums.

Maritime historians readily acknowledge (and debate how) some form of economic depression in shipping and overseas trade occurred on regional, national and global scales, a phenomenon contemporaneous to and perhaps linked with the Baring Crisis of 1890. Maritime historians generally have recognised and situated an international shipping industry depression with a larger contended phenomenon labelled the 'Great Depression' (1870s through the 1890s). Derek H. Aldcroft argues for a later set of dates in the early twentieth century. Either way, the entire era spans Dundee's era of decline in whaling. [72] All of this therefore should have given reason for a general decline in investor interest and activity to mirror the general trends taking place within Dundee's whaling trade and maritime sector. In fact, the opposite is true.

Data compilations in Table 1.1 and Appendix 1.2 clearly indicate that what middle-class investors, like the wine merchants, R.A. Miller, Harriet Watt and Mary Lyall Linn, were doing was actually a trend in the other direction during 'trying times'. From 1886 through the 1890s, investor numbers and their occupational diversity increased, with both peaking around 1896. Thereafter, both sets of numbers declined somewhat, but occupational diversity remained strong, never retreating below figures before 1886. These trends clearly represent the investment activities of Dundee's middle classes, since the number of textile merchants in the trade had halved between 1891 and 1901, and then halved again with each successive five-year interval after 1901. This therefore raises an interesting question. Why did Dundee's middle-class investors, especially the likes of artisans, decide to invest in a failing whaling industry when clearly signs of depression were everywhere?

The issue is certainly complex with many factors at play, yet it is altogether possible that artisans and other modest income investors made financial decisions as

[71] *DC*, 'Trial Trip on the Tay', 10 June 1893.
[72] *Dundee Evening Telegraph (DET)*, 'Trying Time for Shipowners', 20 February 1895; *Dundee Evening Post,* 'British Shipping Declining, Big Decreases', 22 June 1901. See Derek H. Aldcroft, 'The Depression in British Shipping, 1901-1911', *The Journal of Transportation History*, 7, 1 (1965), pp. 14-23.

part of personal/business survival strategies. Ships fitting out for, or returning from, sea required an extraordinarily vast range of both general and specialised goods and services. While all merchant vessels potentially supplied business to artisans and other general merchants, those ships homeported out of Dundee that frequently returned would have been crucial clients. By investing in a whaling or merchant ship, artisans were making financial decisions at several levels.

First, their personal investments had the potential to produce some personal dividends, even if the likelihood of receiving a steady pay out was increasingly diminishing. Second, there was precedence for whaling companies or ships' managing owners to give preference to their own shareholders when awarding contracts for goods and services. For example, in 1878, George Welch, TWFCo manager and managing owner of the whaler *Active*, purchased coverage from twelve different sources to insure *Active*'s hull and machinery for up to £9,000. Eight of the twelve agents with whom he had made arrangements were either shareholders in *Active* or TWFCo (including Dr. P.M. Baxter, surgeon and insurance agent).[73] Finally, beyond cash dividends and contract leverage, artisans may have invested in whaling or merchant ships which would enable their clientele to continue operations. While unwritten financial motives are extremely difficult to discern, perhaps even impossible at an individualised level, quantitative information and trends identified through data analysis and coupled with examples may show how this actually functioned at the municipal level.

John Jack (1832-1918) worked as a blacksmith/shipsmith mostly along the east side of King William IV Dock for over forty years. As a master shipsmith, Jack's trade furnished a secure living during the 1860s through the 1880s. The census in 1881 notes that John Jack, employed ten men and two boys. One of them was likely his twenty-one year old son, Jack, Jr., a steam engine fitter. Together, John Jack and his wife, Margaret Elder, six years his senior, had six children, four daughters and two sons.

In 1882, John Jack began investing in whalers, first purchasing two shares in *Star* and six shares in *Polar Star*.[74] Over the next decade he added to his holdings, buying ship shares in the whalers *Active*, *Balaena*, and *Diana*, but by 1897, Robert Kinnes

[73] UDAS, MS 59, Company Manager's Notebook.
[74] CDA, CE 70/11/11, p. 161; CE 70/11/13, p. 74.

bought up all shares for *Balaena* and *Diana*, and subsequently sold the vessels separately to BFCo and Robert Ferguson McIntosh, respectively.[75] Around 1900, John Jack retired, and he sold his remaining shares in *Active*.[76]

Yet, while John Jack, Sr. was getting out, his son, John Jack, Jr., took his place, both as shipsmith and whaling investor. In 1905, Robert Kinnes acquired all sixty-four shares of the *Scotia,* which in turn, he resold to interested investors. John Jack, Jr. purchased one share, as did other artisans, such as Thomas Mitchell, stevedore; Andrew Scott, shiprigger; Alexander McAra, coppersmith; John Smith Lawson, ropemaker; Thomas McIntosh, tentmaker; and John Young, baker. Alongside them, wealthier middle-class individuals including James Allison, Jr., the rope and sailmaker; Charles Yule, former whaling captain-turned harbour master; James Anton, Thomas Lyle Peters and David Crowe, wine merchants; Alexander Stewart Rae, iron merchant; Charles William Scrymgeour, wholesale produce merchant and ham curer; Harriet Watt, married to marine surveyor, Adam Watt; and John Christie, farmer from Tayport, also purchased one or two shares in *Scotia*.[77]

Whether knowingly or not, these purchasers were executing a 'survival strategy' at a community level, which essentially constituted civic patriotism through the form of commercial investment. The term 'civic patriotism' has taken on a range of meanings over the last twenty years. Two come from modern history and philosophy. In examining the history of Victorian Liverpool's quest to shape its civic image during the late nineteenth century, Matthew Vickers describes civic patriotism as the variety of behavioural responses which a civic image provokes. For Vickers, civic patriotism was class-led and aimed at expressing the grandeur and power structures of the city. In philosophy, Pauline Kleingeld relates it directly to a subset of Immanuel Kant's 'cosmopolitan patriotism', which Kant argued co-existed as 'world patriotism' and 'local patriotism'. For Kleingeld, the consistency of Kant's concept hinges on a global moral principle that is put into effect at a local level. Since humans are all 'members of a single moral community', they are obliged to regard one another. Civic patriotism involves serving the common good of the (local) community in any way a person can that is not

[75] CDA, CE 70/11/14, pp. 27, 33; and CE 70/11/20, pp. 69, 71.
[76] CDA, CE 70/11/19, p. 131; and CE 70/11/20, p. 57.
[77] CDA, CE 70/11/15, p. 16.

paternalistic or self-serving. [78] Civic patriotism, here, refers to individual actions of any kind, which, when subscribed by a group of people, collectively serve the imagined good of the community. For Dundee in the late nineteenth and early twentieth centuries, the collective good for the whole of Dundee was to keep its port and maritime trades alive in the face of depression.

Maritime Dundee and the Arctic trade were imagined to be a 'man's world' within a 'woman's town'. While women, children and 'half-timers' accepted low wages at Dundee's jute mills and factories, general employment opportunities lagged for men, especially the young and unskilled. Besides the foundries and textile machinery-making plants, Dock Street and its industrial environs was one of the few spaces in the city which offered men the potential to gain a respectable, skilled job. If that was not possible, at least they could go to sea.

A diminishing whaling sector not only hurt maritime employment opportunities for men, but it also proportionally downsized supporting positions available to skilled labourers and specialists. As the Chamber of Commerce in 1885 replied to the Royal Commission, Dundee's elite and middle classes recognised whaling and the maritime sector's important economic contributions to the town. Those sectors did much to prop up male employment in Dundee. With these under threat, not only were even fewer seafaring and unskilled positions available, but also the businesses that supported them would have fewer contracts to fill. While textile merchants could afford to look the other way, middle-class Dundonians recognised the prospect of harder times.

Although perhaps Dundee's social and economic well-being has never been quite expressed this way, men and women with financial means appear to have understood it that way. Middle class Dundonians had a precedent for practising civic patriotism in other forms. When the Albert Institute (now the McManus, Dundee's Art Gallery and Museum) began taking subscriptions for its founding in 1867, 327 investors raised over £21,000. In assessing the town's participation with the founding of the institute for the

[78] Matthew Vickers, 'Civic Image and Civic Patriotism in Liverpool 1880-1914' (Unpublished D.Phil thesis, University of Oxford, 2000). See Pauline Kleingeld, 'Kant's Cosmopolitan Patriotism', *Kant-Studien, Philosophische Zeitschrift der Kant-Gellschaft*, 94, 3 (2006), pp. 299-316. For a consideration of Kant's reception in nineteenth and twentieth-century Scotland, see Paul Guyer, 'The Scottish Reception of Kant: Common Sense and Idealism', in Gordon Graham (ed.), *Scottish Philosophy in the Nineteenth and Twentieth Centuries* (Oxford, 2015), pp. 118-53.

public good, Jim Tomlinson notes that a high degree were men of the 'middling sort'.[79] Although 1867 was still early in the first phase of steam whaling investment, a database comparison reveals that 34 DSWFCo investors (or 10 per cent) also invested in the Albert Institute. Since DSWFCo had a high concentration of textile merchants, many of the investors probably were textile merchants. Tallying all Dundee whaling investors who also subscribed to the Albert Institute reveals that between 64 to 69 (about 20 per cent) participated in both.

The participation of middle-class investors in civic patriotism occurred at many levels, from funding the Albert Institute, to supporting the *Mars* Industrial Training Ship for destitute and orphaned boys when it arrived two years later in 1869. Likewise, the civic patriotism that fostered civic participation and charitable participation also brought about economic participation within the last two decades of the century.

Outside Investors

Outside investors were an important and intriguing bloc within the Arctic trade. Like the middle-classes sectors of Dundee investors, the outside investors came from diverse backgrounds. Most were regionally based in Scotland, primarily from Forfarshire, Fife and Glasgow. Investors from major port cities in England, Wales and Ireland accounted for most of the rest. As a category, they consistently demonstrated the second highest rate of investor diversity at 54 per cent. This statistic represents average ratio of number of investors to number of different occupations (Appendix 1.2). Investors came from occupational backgrounds including shipbrokers, colonial brokers and foreign coal contractors; merchants, manufacturers numerous master mariners; gentlemen-adventurers, naturalists and meteorologists; and a missionary to southern Africa, Calcutta mill managers and a wealthy English firm whose global investments matched those of some nations. Most investors were people of respectable social status. Not many outside investors were artisans who put money into whaling, but there were exceptions. John Young, a baker from Perth, held one share in *Scotia* during the 1906 and 1911 intervals.[80]

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[79] See Jim Tomlinson, 'The Subscribers', *McManus168*, https://mcmanus168.org.uk/2018/07/27/the-subscribers/ (accessed 23 January 2020). See also Christopher Whatley's website article, 'A Story about 'Victorian Crowdsourcing', https://mcmanus168.org.uk/2017/11/27/a-story-about-victorian-crowdsourcing/ (accessed 23 January 2020).

[80] CE 70/11/15, pp. 131-32.

Statistically these investors appear to be a consistent group of financiers in the Arctic Trade. Between 1861 and 1911, they averaged about 18 per cent of the trade's total investors overall, but the rates from interval to interval are very similar for most of the time (Table 1.1). Among all four categories, investors from outside of Dundee had an average modal rank of 3.[81] Only Dundee's other investors category was more consistent in their modal average ranking since they were easily the largest group for nine of the eleven 5-year intervals. Some trends even appear consistent. As Figure 1.2 shows, the trending of the participation numbers mirrored those of the maritime sector, the greatest exception being the outside investors' spike in the 1896 interval.

Yet, statistics suggesting investor consistency are misleading. Investor numbers and the amount of capital they infused into the Arctic trade from interval to interval indicate an array of motives were influencing people to invest in the Arctic trade. Besides those who inherited shares, many small to medium-scale investors did not subscribe to the 'buy-and-hold' strategy of investment lauded by many wealth advisors of the time.[82] Even though investor numbers mirrored Dundee's maritime sector, their selection of securities clearly move in opposite directions. As seen in Figure 1.5, between the 1866 to 1876 intervals, outside investors owned more ship shares than any other category. In the decades that followed, however, their investments in vessels faded and Dundee's maritime investors took over the leading role. The first decade of the twentieth century saw a rebound into ship shares, but even this seems curious when the Arctic trade was struggling to make a profit. What was happening in these instances to prompt a category of people to invest so strongly in particular directions?

In the case of ship shares, the issue derives more from methodological classification than historical phenomenon. A few wealthy investors manipulated the overall numbers for the whole group. Between 1861 and 1911, seven shipowners owned vessels out right, having purchased all 64 shares. Of the seven, five were outside investors. They included Antony Gibbs and Sons (AGS), James Lamont, Ninian Lockhart, Andrew Barclay Walker and Osbert Clare Forsyth (O.C.F.) Grant. Three of these vessels owned by outside investors were not registered to Dundee. Sometimes, therefore, they

[81] A modal average is the number most often repeated within a dataset.
[82] Dimitris P. Sotiropoulos and Janette Rutterford, 'Financial Diversification Strategies before World War I: Buy-and-Hold Versus Naïve Portfolio Selection', *Business History,* 61:7 (2019), pp. 1175-98.

are not recognised among Dundee's 'whaling fleet'. Nevertheless, outside of this administrative detail, these vessels were managed, maintained and crewed in Dundee.

In 1865, AGS purchased the whaler *Erik* (registered to London) and hired Dundee's David Bruce, the future manager of DSWFCo, to manage its affairs.[83] The Gibbs family possessed virtually unimaginable wealth, which their family had derived from the Bristol slave trade in the eighteenth century and the South American nitrate (guano) mining industry in the nineteenth century. By the 1860s, Henry Hucks (H.H.) Gibbs was seeking new ways to invest the family firm's vast wealth. They already possessed global assets that made them informal political heavy-weight powers in their own right.[84] In 1863, H.H. Gibbs expressed his logic to his uncle William Gibbs for extending their investments to the Arctic trade.

> The Greenland business is a totally new class of business for us. It may succeed entirely, or utterly fail – of the latter, we know or should soon know…[if it will be] very profitable, and will be capable of considerable extension.[85]

Working through David Bruce, AGS attempted to establish 'a settlement', named Exeter, on the southeast coast of Baffin Island. Part of the endeavour even involved sending one of the company's London chemists for a year.[86] Although the Exeter settlement project only lasted a few years, AGS continued to own *Erik* until 1883, when they sold its 64 shares to a Peterhead managing owner.[87] AGS's motivation for investing in a Dundee-based whaling vessel was two-fold. They saw it as another opportunity to diversify their global investment portfolio, and it served a speculative gambit, which for them was not a notable risk.

Three gentleman-adventurers were also full shipowners. James Lamont, of Knockdhow, Argyllshire, owned *Diana* (O.N. 60416) and voyaged three consecutive years with it as 'a Scientific and Sporting Cruise to the Arctic Seas'. From the early 1870s until 1880, he operated it as a sealer/whaler based out of Dundee before selling it to the

[83] LMA, CLC/B/012/MS 11053/020, AGS London Ledger, 1863f.
[84] William Edmundson, *A History of the British Presence in Chile: From Bloody Mary to Charles Darwin and the Decline of British Influence* (New York, 2009), pp. 131-40.
[85] LMA, CLC/B/012/MS11036/003 - Private out-letter book of Henry Hucks Gibbs (1861-67), 19 September 1863.
[86] LMA, CLC/B/012/MS 11053/020.
[87] Maritime History Archive (MHA), CA, *Erik* (O.N. 52665), 1866-1883.

Hudson's Bay Company.[88] Other adventurer-owners included Andrew Barclay Walker (1865-1930), son of First Baronet, Sir Andrew Barclay Walker of Walkers of Warrington fame. In 1899, he purchased the Dundee whaler *Esquimaux* and voyaged with it. He sent the vessel to the Arctic another year then sold it to an American expedition.[89] Finally, Osbert Clare Forsyth Grant, whose distinguished family owned Ecclesgreig Castle, near St Cyrus in Kincardineshire, owned *Snowdrop* from 1905, until it sunk in the Arctic in 1908. He then purchased *Seduisante*, which was lost with all hands in the Arctic in 1911.[90]

Other regional investors purchased stocks and shares for business interests. Ninian Lockhart, a textile manufacturer in Kirkcaldy owned *Ravenscraig*, operating it out of Dundee from 1863 until it sank in 1879. John Wilson of Potomahana in Arbroath was also a textile merchant and manufacturer who began investing in the Arctic trade during the early 1900s. Although he did not purchase a vessel outright, he did invest in five Dundee whalers and BFCo. He owned 40 of DFCo's 500 stock shares in 1906, and 8 of 64 shares in *Windward*.[91]

Besides gentleman-investors and textile manufacturers, some regionally well-known figures also put capital into the trade, albeit on a very modest scale. Robert McVitie, a biscuit manufacturer from Edinburgh whose brand became well-known throughout Britain, purchased one share in the whaler *Scotia.*[92] James Powrie of Reswallie in Forfarshire, a noted gentleman-scientist who was a widely respected geologist, owned two shares nominally worth £1000 in DSWFCo in 1866.[93] He kept those shares until the company ceased operations in 1894.[94] He also inherited TWFCo from his late father in 1852. By 1911, he was still holding TWFCo as a trustees of James Soote's

[88] MLG, CE 59/11/25; TNA, BT 100/282, CA, *Diana* (O.N. 60416), 1869-1880.
[89] Andrew Barclay Walker, *The Cruise of the Esquimaux, Steam Whaler, to the Davis Straits and Baffin Bay, April-October 1899* (Liverpool, 1909); and Matthew Ylitalo and Sarah Easterby-Smith, 'Ships' in Riccardo Bavaj, Bernhard Struck and Konrad Lawson (eds.), *Doing Spatial History* (Abingdon, 2022), pp. pp. 121-38.
[90] Robert J. Fraser and William F. Rannie, *Arctic Adventurer: Grant and the Seduisante* (Lincoln, Ontario, 1972). For an Inuit perspective on O.C. Forsyth Grant and *Seduisante*, see Dorothy Eber, *When the Whalers Were Up North* (Boston, 1989), pp. 135f.
[91] NRS, BT 2/3482/16, 1906; and CDA, CE 70/11/15.
[92] CDA, CE 70/11/15.
[93] R.G. Davidson and M.J. Newman, 'James Powrie, Chronicler of the Scottish Lower Devonian', *Proceedings of the Geologists' Association*, 114 (2003), pp. 243-46.
[94] NRS, BT 2/228/1-33, 1866-92.

estate.[95] Others connected to the Scottish National Antarctic Expedition from 1902-04, invested in the whaler *Scotia*, newly acquired by Robert Kinnes in 1905. Robert Neal Rudmose Brown, Robert Cockburn Mossman, James Hunter Harvey Pirie (all from Edinburgh) voyaged to the Antarctic for scientific research. They had been supported back in Edinburgh by a fourth investor, James Geekie Ferrier.[96] With each purchasing one ship share in *Scotia*, they likely did so for nostalgic purposes.

Women were also outside investors. Most resided in Great Britain and would have been considered passive investors since they inherited their securities. The shipbuilder and whale ship owner, Alexander Stephen, bequeathed his shares to his daughters, two of whom were Anne Fleming Paterson (1827-1910), who lived with her husband, Duncan Wilkie Paterson, a solicitor in the Supreme Courts, in Edinburgh, and Williamina ('Mina') Stewart (1848-1928), the youngest daughter of Alexander Stephen, Sr. and wife to the well-known Free Church missionary and physician, James Stewart (1831-1905), of Lovedale, South Africa.[97] A few women held a large number of shares. One such person was Dame Elizabeth Frances Molison (E.F.M.) Dalgleish, a locally famous philanthropist. Her family relations included her grandfather, William Baxter, and brother, Sir David Baxter, both of whom led one of Dundee's largest and most successful textile manufacturing firms.[98] In 1884, Lady Dalgleish, as she was known, acquired 30 shares in DSWFCo, and she held them until the company ceased active operations in 1894. Her husband, Sir William Ogilvie Dalgleish, owned another 20 shares so that together, they held over 7 per cent of the company's nominal capital.[99] In all likelihood, her shares were purchased through her husband or family's retinue of business advisors. Lady Dalgleish lived at Mayfield Place, Dundee in 1884, when the acquisition took place, but the following year, she inherited her mother's home at Errol Place in Errol, Perthshire, where she and her husband resided for the rest of their lives.[100]

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[95] Private collection, TWFCo Shareholder Ledger.
[96] CDA, CE 70/11/15.
[97] James Wells, *Stewart of Lovedale: The Life of James Stewart, D.D., M.D.* (New York, 1908).
[98] UDAS, MS 11, Baxter Brothers & Co. Ltd, 1795-1992.
[99] NRS, BT 2/228/25, Summary of Capital and Shares (3 July 1885, 6 February 1894).
[100] 'William Ogilvie Dalgleish', *McManus168,* https://mcmanus168.org.uk/mcmanus168entry/william-ogilvy-dalgleish/ (last accessed 6 July 2022).

Conclusion

Besides the men who went to sea, those who invested their capital in Dundee whaling company stocks and ship shares financially defined the Arctic trade. Chapters 1 and 2 uncover the people, connections and spaces that existed within the financial structure of Dundee's Arctic trade between 1861 and 1911. Together, they form a section which analyses the most comprehensive dataset of financial information gathered on any aspect of Arctic whaling. Besides a perfunctory nod, whaling histories have not regarded the investment dimension within the trade. Past macro-level analyses focused on men, materiel and profits. This approach leads to presupposing that an era of industrial decline and failure also amounts to a financially unexceptional one. The premise also assumes that since whaling principally existed in Dundee to support jute manufacturing, the textile manufacturers were the most invested financial participants in the trade. This line of thought reasons that when the surge in whaling during the 1860s later shifted to one of irrevocable decline, the textile magnates' interests did too. This result-oriented narrative has produced a unilinear explanation that fails to explore the trade's real financial dimensions. As a result, many who were fiscally invested in the trade's operations have been relegated to the trade's historically constructed margins.

Quantitative research shows Dundee's middle classes were the principal financiers of the Arctic trade. This group included Dundee's maritime investors and Dundee's other investors besides the textile manufacturers. The middle-class investors contributed both the largest core of participants and sum of capital to the industry. The jute barons still provided important infusions of capital, and they brought civic trust and corporate leadership to the enterprise. Nevertheless, chapters 1 and 2 overturn previous assertions about textile manufacturers. Middle-class investors fundamentally defined the financial dimensions of Dundee's Arctic trade. This directly contributes to the first major research question the thesis sought to answer. Qualitative research addresses the other research questions within the financial sector of the Arctic trade.

Prosopographical research develops findings that detail the financial boundaries and the extent to which they existed within Arctic whaling. Identifying individuals and categories of investors spotlights preferred investment activities and helps explain how the trade evolved in Dundee. Between the 1860s and 1890s, wealthy investors, namely

Dundee's textile manufacturers, preferred owning corporate stock. This offered more regulatory oversight, and it spread the risk of investment across multiple whaling vessels. On the other hand, investors from Dundee's maritime sector found themselves 'outpriced' for purchasing corporate stock. During the 1880s, they led a middle-class shift back to investing in ship shares. By the late 1890s, this idea had become the primary financial trend within the Arctic trade, and it continued throughout the early twentieth century. Mark Freeman and others argue that in the nineteenth century, 'shareholders were chiefly interested in the level and regularity of dividends'.[101] The analysis of local investors within the Arctic trade complicates the financial limits of this statement in Dundee's case. If dividends were the chief interest for whaling investors, by the end of the nineteenth century, few would have participated and risked their capital, much less expected dividends. Surprisingly, however, the Arctic trade's participation rate continued to hold steady, and even increased, during some of the industry's toughest years of decline. The level and trajectory of financial participation, therefore, opens other spatial and social factors, and their limits, for consideration.

Analysing investor patterns illuminates the spatial boundaries connected to the financial sector of the business. Compiled data reveal an overall high participation rate across all categories of investors, especially from the 1870s to 1911. The transmaritime aspect of the trade goes well beyond ships and men voyaging into Arctic waters, or commodities establishing the trade's transnational links. Money flowed locally, regionally and internationally to invest in whalers. For investors, these spaces were malleable. As in the case of the Dundee ropemakers and chandlers, James Allison & Sons, investing in whaling happened alongside other global investments in railways, mining endeavours, sugar and oil. Not only was it a local investment, but it diversified their global investment portfolio. In this way, whaling investments cannot be regarded purely within their own industry. Rather, investors and the capital they infused in the Arctic trade must considered as part of a larger network of local-global investment.

Finally, investors' participation and their financial decisions also indicate the extent to which local social factors influenced investment activities. This underscores

[101] Mark Freeman, Robin Pearson and James Taylor, 'Technological Change and the Governance of Joint-Stock Enterprise in the Early Nineteenth Century: The Case of Coastal Shipping', *Business History*, 49:5 (2007), p. 577.

how dynamic the financial component of the industry functioned as a social anchor within Dundonian society. Looking back to Clopton and Finch on Social Anchor Theory (SAT), they contend a social anchor must develop 'bridging' and 'bonding' trust as well as a collective identity.[102] The Arctic trade's financial sector did this in both ways.

First, the industry bridged social status, occupation, gender and location by offering a financial space for people to participate and 'get ahead'. Since many investment avenues were not accessible for middle-class artisans, merchants and others, investing in whaling offered one of a few local-global opportunities to do so. Family textile firms did not furnish opportunities for them to reap the rewards of the global textile industry. International investment trusts required ample cash reserves, which usually exceeded modest investors' means. And even though merchant shipping technically offered ship shares for purchase, these were overwhelmingly held by the 'merchant princes' who could afford their elevated prices.[103] Therefore, the whaling trade became a social anchor for middle-class investors seeking opportunities to get ahead. The extraordinary number of participating investors (Appendix G.3) and the breadth of their occupations (Appendix 1.1) gives evidence of this interest.

Finally, investing in whaling became a social mechanism by which others could 'get by' during tough or threatening times. For those worried about the spiralling effects which a declining maritime business might impart on their own businesses, investing became an act of self-preservation. For others concerned to maintain Dundee's limited male employment opportunities, investments represented grass-root efforts at civic patriotism. This indicates the social boundaries which the middle-classes faced and the extent to which they sought to push those limits through access to the Arctic trade. In this way, the Arctic trade exerted an outsized impact on Dundee, especially for the middle class. The middle-classes became whaling's financial anchor while the industry served the community as a social anchor for employment, commercial stability and financial opportunity. Besides its investors, Arctic whaling's commercial activities included managers and labourers who participated in the trade, pushed its social and

[102] Aaron Walter Clopton and Bryan L. Finch, 'Re-Conceptualising Social Anchors in Community Development: Utilizing Social Anchor Theory to Create Social Capital's third Dimension', *Community Development,* 42, 1 (2011), pp. 70-83.
[103] For example, 24 of 35 investors in the Dundee Clipper Line were textile merchants. One widow and one artisan held small shares; NRS, BT 2/BT 2/2803/8, 1897.

spatial boundaries and strengthened the industry's role as a social anchor. With regard to management and administration, the nexus of power and influence within the industry rested in its middle-class managers.

Chapter 3

Middle-Class Managers and Relational Entrepreneurism

The ability for Dundee's whaling trade to adapt to changing times has been the focus of some scholarly debate. Was Dundee whaling innovative enough to 'not fail'? Were they not able to observe change and act accordingly? Scholars focusing on concepts of entrepreneurship recognise how flexible the subject can be. Most, however, build on one of two general theories or a combination of them. The Austrian neoclassical economist, Joseph Schumpeter, argues that economic systems naturally seek 'equilibrium'. For Schumpeter, entrepreneurs disrupt these equilibriums through innovation. Innovation takes places when entrepreneurs make new combinations of things to create new products, markets, sources of supply or methods of production. For Schumpeter therefore an entrepreneur is one who accomplishes 'creative destruction'. In this sense, entrepreneurs are always needed since marketplace competition may change, but the role of innovative disruptors does not change.[1]

On the other hand, another Austrian economist, Israel Kirzner, disagrees with Schumpeter and equilibrium theory. He contends that in a perfect state of equilibrium where actors make perfect decisions, there would be no need for entrepreneurs to disrupt the economy. He instead envisions economies as being in states of 'disequilibria'. From this viewpoint, an entrepreneur is not a creator or innovator, but rather one who is alert to opportunity. When things are out of balance, as they are in disequilibria, opportunities arise to exploit these differences for advantage.[2]

Folding these two viewpoints on entrepreneurship back into the Arctic trade during its final era of operations, Gordon Jackson, a maritime economic historian, makes it clear that Dundee's whaling trade failed due to its decisionmakers.

> It must be emphasised that the run down and final demise of British whaling was caused not so much by a failure of the market as by a failure on the supply side…The final stage of the trade should not be viewed as a minor success…It should be seen rather as a failure on the part of entrepreneurs to cut themselves off from a dying trade before bankruptcy overtook it, and an

[1] Robert F. Hébert and Albert N. Link, *History of Entrepreneurship* (London, 2009), pp. 67-74.
[2] Steffen Korsgaard, Henrik Berglund, Claus Thrane and Per Blenker, 'A Tale of Two Kirzners: Time, Uncertainty, and the "Nature' of Opportunities', *Entrepreneurship Theory and Practice,* 40:4 (2016), pp. 868-74.

> unwillingness or inability on their part to exhibit that enterprise and initiative that would have directed them towards modern whaling.[3]

Jackson's argument takes on elements of both Schumpeter and Kirzner. A 'failure on the supply side' suggests the needed innovation to create a new avenue of supply never materialised. His assertion that 'entrepreneurs' failed to observe other opportunities in modern whaling and seize them reflects Kirzner's outlook.

Chesley Sanger sees things differently. His theory of exploitation cycles implies that whether an industry stopped operations at the end of traditional whaling or moved to modern whaling, ultimately the same reduction in targeted species would lead to the industry's cessation. Sanger credits Scottish textile manufacturers with providing the investment capital for the trade, but he assigns the role of 'sagacious entrepreneurs' to others in the trade.[4] Sanger's use of 'sagacious' may take on a complimentary or ruthless implication, but either way, he makes it clear that Dundee's whaling trade was led by entrepreneurs. Though Jackson and Sanger take different views about the actions of whaling's entrepreneurs, neither makes it clear who exactly these people were.

Common perceptions from the late nineteenth-century newspaper features, or even among whaling histories today, would suggest the whaling captains who led the voyages north and slaughtered the whales were whaling's entrepreneurs. They were the ones who risked their lives, and they were the ones who became the faces of the trade (see Appendix 3.1.1 and 3.1.2).

This chapter argues that Dundee's whaling company managers and managing shipowners held the pre-eminent position of authority and action within the Arctic trade. They constituted the nexus of a trade that was constantly in flux. Everything that happened within the business operation eventually passed through them. Therefore, for better or worse, Jackson and Sanger's appellations of entrepreneurs within the industry belong to them. The term 'manager' and 'managing owner' (or 'managing partner') technically have distinct meanings. A manager carried for concerns within a whaling company while a managing owner was just that, a shipowner who handled the affairs of the vessel. For the intentions of this chapter, the two terms are used

[3]Gordon Jackson, *The British Whaling Trade* (1978; reprint, St John's, 2005), p. 137.
[4] Chelsey Sanger, Scottish Arctic Whaling (Edinburgh, 2016), pp. 116-17.

interchangeably since the details of their whaling duties were very similar. They only differed in scale.

Historical research has almost entirely overlooked the role of whaling's company and ship managers. This chapter therefore identifies those who managed Dundee's whaling fleet and all its other commercial activities from 1858 to 1914. It examines their duties and responsibilities and contextualises those aspects within a new term introduced here as 'relational entrepreneurism'. The chapter also shows how managers constantly navigated between different social, business and personal spaces, depending on what was needed to keep operations and profits moving forward. These spaces sometimes clashed, and oftentimes, managers were subject to limitations they could not control. Since the management of an enterprise alone does not constitute an institution, a manager's presence did not become a social anchor. Nevertheless, their decisions and extra personal pursuits carried influence which often affected the degree to which Dundee's Arctic trade functioned as a social anchor in transmaritime communities.

The chapter first discusses relational entrepreneurism and the aspects within the whaling managers' ambit of responsibility that situated them for this type of role. It then discusses the sources used throughout the chapter, followed by a historiographical discussion relating to the whaling managers' middle-class position in society. The chapter then engages historiographical discussions about middle-class Dundee and segues into a prosopographical look into the lives of these managers. This not only helps to expound the lives of previously overlooked persons, but it also complicates entrenched demographic perspectives about Dundee as well as historiographical narratives on Arctic whaling. These sections together contend for a more middle-class perspective of Dundee, and it demonstrates that by arguing for a maritime, middle-class that lived just beyond Dundee's proper city limits. To conclude, it then transitions back to how managers applied relational entrepreneurism to their business and personal interests.

Relational Entrepreneurism

Whaling managers were different from other types of industrial managers. Some of Dundee's most successful whaling managers did not come from maritime households

or seafaring careers. Managers entered the trade from many different backgrounds, but nearly all lacked the money to risk making investments themselves. Instead, these individuals practised a form of 'relational entrepreneurship', which leveraged connections and created spaces of opportunity, not only for their companies and others, but for themselves as well. As defined here, it builds on a synthesis of Schumpeter and Kirzner's theories. Relational entrepreneurism is a combination of innovativeness and opportunism facilitated by business connections and personal influence. The chapter briefly sketches out some of the areas where managers leveraged relational entrepreneurship methods to turn a profit despite operating one of the most uncertain enterprises in global maritime commerce. For this reason, Arctic whaling in Dundee did not exist as an independent or insular industry, and few managers and managing partners focused solely on the whaling trade. They supplemented their full-time whaling obligations with additional business ventures. Managing owners worked as shipbuilders (or vice versa), shipping company managers and agents and maritime insurance brokers. Some became tenement proprietors. Others ventured into soap works, tanneries and mica processing. Some arranged emigrant transportation to locations around the world. Three primary attributes at the nexus of every whaling interest enabled managers to develop their connections and apply their innovativeness when opportunities arose.

First, managers were information specialists. They had to become experts in every aspect of whaling, from understanding the specific tools and materials needed to ensuring these materials were purchased or repaired. They had to understand the roles each type of capacity (job) needed onboard, not only to sail the ship, but also to carry out hunting operations. Besides whaling, managers had to be conversant in all aspect of Dundee, national and international maritime affairs and procedures. They had to have a firm grasp of local, national and imperial administrative and legal requirements. They stayed up-to-date with political issues circulating in Parliament which directly affected themselves, their operations or their fellow shipowners or shareholders.

Managers also operated the financial levers of the company. While directors made capital decisions, managers often brought the issues to them and offered recommendations for action. They had responsibility over day-to-day financial and investment matters. Managers hired and paid labourers and crews, paid insurance and

budgeted for regular maintenance and repair work as well as outfitting the vessel for sea and carrying out commerce in the Arctic, such as keeping the shareholder ledgers, issuing stock/share certificates, overseeing dividend pay-outs, and compiling data for committee meetings and corporate reports to the Board of Trade. Whaling managers had oversight on material concerns, managed ships going to sea and supervised an industry that extracted natural resources from the Arctic. Each of these aspects had their own particular matters to address, especially when purchasing insurance.

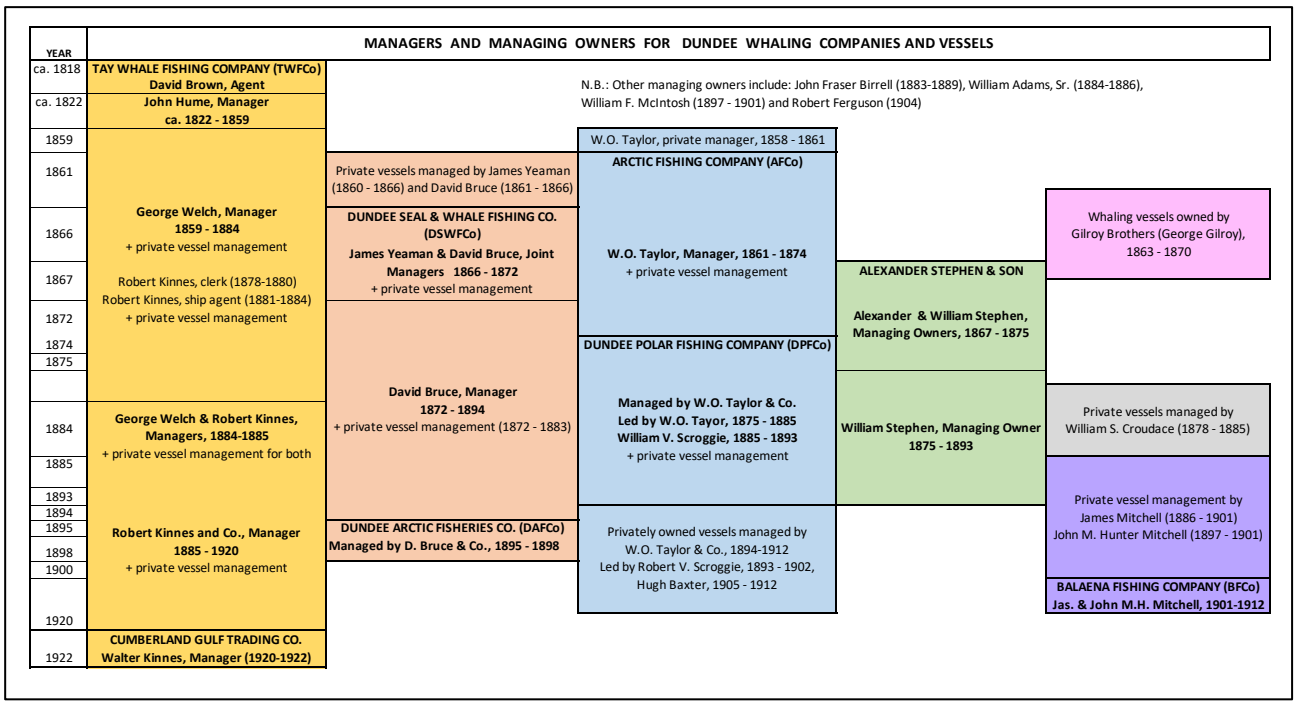
Second, managers were situated at the nexus of communications. They were the ones who received all reports from the North. They stayed in contact with families of mariners, especially when overseeing the payment of allotments or the family notification of a sailor's death. Managers communicated with the public by relaying updates to the newspapers since they were the ones privileged to receive information directly from other vessels returning from the North. Eventually, their access to news extended to telegrams received from Shetland and Newfoundland. They also oversaw the release of all advertisements for the sale of oil, auctioning of shares or the availability of employment. The ability to guard information and share it judiciously established them as informational gatekeepers, and it enabled them to leverage and extend their influence corporately and publicly.

Finally, despite any banal or landlubber connotations associated with the term 'management', these maritime professionals possessed a latitude and authority which far exceeded the roles of other comparable terrestrial contemporaries, such as factory managers and commercial clerks. Virtually all other participants linked to the whaling trade trace a connection in some way back to management. Managers' wide-ranging responsibilities, day-to-day oversight, and situational decision-making meant that they held the greatest amounts of authority at the most effective levels of operation. A unique set of business records from the Tay Whale Fishing Company (TWFCo) effectively demonstrates this by enumerating the range of the corporate duties over which they held responsibility. While annual general meetings (AGMs) and meetings of committees of management and directors imparted some important financial and organisational directives at a strategic level, even they ultimately looked to the company managers for the execution of their will and the preservation of their best interests. Managers worked closely with the whaling captains that they directed and supported, and together, they

often formed highly effective teams of middle-class maritime experts.

This chapter focuses on the various figures engaged in management from 1861, shortly after the advent of steam whalers, to 1914, when Dundee's final Arctic enterprise ceased operations. During that span, some sixteen different men managed 55 Arctic vessels, which voyaged to the Arctic for a combined 562 seasons (see Appendix G.2). Many left the trade through loss of a vessel or an inability to make a profit. Some of their stories are included here. Particular attention, however, is given to several cohorts of managers, managing owners and trading companies who, from 1861 to 1911, controlled nearly 85 per cent of all the Arctic whalers sent out from Dundee. Individuals within this category included George Welch (1814-91) and his successor, Robert Kinnes (1854-1937) of TWFCo; William Ogilvie (W.O.) Taylor (1823-84) of the Dundee Polar Fishing Company (DPFCo); William Stephen (1826-93) of Alexander Stephen and Sons; and James Yeaman (1816-1886) and David Bruce (1837-1917) of the Dundee Seal and Whale Fishing Company (DSWFCo). This list features the primary figures who revived Dundee whaling in the 1860s, brought it to pre-eminence in the 1870s and continued to direct the trade with varying degrees of success to the end of the 1890s. Figure 3.1 provides a visual summary and chronology of these managers.

Figure 3.1. Managers for Dundee Whaling Companies and Vessels.



Sources: Compilation from NRS, BT 2 series; UDAS, MS 59; CDA, CE 70 series; LHC-DCL files; *DD*; *DYB*; Local Newspapers; and Archibald, *The Dundee Whaling Fleet: Ships, Masters and Men* (Dundee, 2013).

Their involvement not only served to establish Dundee as the world's leading Arctic emporium, but also their activities aligned the city's wider maritime economy as a participant within other global phenomena of that time.

Sources

Research utilises an array of sources to consider who Dundee's whaling company managers and managing partners were, how they achieved this status and why that mattered. Nevertheless, investigating the scope and function of these individuals and their companies is not an easy or straightforward process since the most obvious primary materials – corporate whaling records – are, at present, almost entirely lost to historians. In certain known cases, 'extraordinary resolutions' during winding up procedures authorised 'books and papers…be destroyed on the expiration of three months from the dissolution of the Company'.[5] This seems to have been a ubiquitous phenomenon. Nevertheless, a digitized-from-microfilm copy of TWFCo's records provides an important but incomplete collection of minute books (1845-61, 1879-1920), some managerial notes and other miscellany.[6] No other known evidence exists for any of W.O. Taylor's records. Alexander Stephen and Son became a corporate giant in the shipbuilding sector, and the University of Glasgow Archive Services (UGAS) holds their immense collection of personal and syndicated records. Unfortunately, few of those holdings relate to its operations in Dundee from 1843 to 1894. Rather, the vast majority concerns the people and operations associated with Alexander Stephen and Son' later shipbuilding and marine engineering efforts on the Clyde.[7] As for all of the business and personal records kept by David Bruce, sadly a fire destroyed them during a bombing raid on London in the Second World War.[8]

Besides whaling company records, the chapter relies on other widely dispersed primary source materials, ranging from diaries and correspondence to personal and

[5] National Records of Scotland (NRS), BT 11549/18, 'Extraordinary Resolution of the Cumberland Gulf Trading Co., Ltd.'
[6] University of Dundee Archive Services (UDAS), MS 59, Tay Whale Fishing Company Records. UDAS also possesses MS 73, John P. Ingram Papers, as well as MS 254, David Henderson Collection.
[7] UGAS, UGD 004, Records of Alexander Stephen & Sons, Ltd., shipbuilders and engineers, Linthouse, Govan, Glasgow, Scotland.
[8] David De Rosa of David Bruce + Co. (Shipping) Ltd., personal email communication, 19 September 2017.

business ephemera that exist in public and private collections.[9] To develop context, improve analysis and construct a broader, connected narrative, I have relied on governmental documents for census, birth, death and probate information in the Board of Trade (BT) Dissolved Company files (BT 2 series) at the National Records of Scotland (NRS), merchant marine Crew Agreements (BT 99 and BT 100 series) held at the National Archives (TNA), National Maritime Museum (NMM) and Maritime History Archive (MHA), and Shipping Registers (CE 70/11 series) at the City of Dundee Archives (CDA). Important public sources of information include the annual-to-biennial *Dundee Directories (DD)* and issues of the *Dundee Yearbook* (*DYB*). Local, national and international newspapers provide reporting information and insight on events, public meetings and speeches, elections, customs reports, shipping intelligence and advertisements. These, of course, come with their own inconsistencies as reliable sources, but more often, they provide an important contextual framework from which to work. Online sources provide beneficial research aids as well. These include open-access databases, such as McManus168.org.uk, a community-based Dundee research project which features biographies of Victorian-era individual and corporate subscribers to the Albert Institute; immigrant passenger lists hosted by many of Australia's provincial archives; as well as paid subscriptions to Ancestry.co.uk and the British Library's *British Newspapers Online*. Using these sources makes it possible to delve into the lives of Dundee's Arctic company managers and understand their place within the trade and maritime Dundee.

Historiographical Assessment of Britain's and Dundee's Middle Class

Dundee's whaling managers lie at the confluence of several important discussions involving Victorian Britain's 'middling sort', British entrepreneurship and maritime business.[10] Scholars have debated how to define the Britain's nineteenth-century middle class. Peter Laslett and the wider Cambridge Group for the History of Population and Social Structure, as well as numerous others have approached the issue from a variety of perspectives centred on the household, family and kinship in all of their fluid

[9] Take for instance, NRS, GD 1/879/1, 'Diary of William Stephen, 1864-1872'; and LMA CLC/B/012, Anthony Gibbs and Sons (AGS) Papers.
[10] Works directly addressing the middle class include Lawrence James, *The Middle Class: A History* (London, 2006).

entities.[11] Still others have analysed wealth, occupation or other demographic criteria from primary sources like censuses, probate calendars and civil registers as well as datasets such as the Integrated Census Microdata.[12] Michael Anderson has established one of the most widely recognised occupational classification schemes.[13] Each brings its own set of complications.[14] Alternatively, Harold Perkin has argued that Britain's traditional professional class should not even be considered part of middling society.[15]

Few works cover the role of the shipping manager, and nothing to date examines whaling managers in detail. For most maritime historians, management posits a relationship between the managing owner and the master. Yrjö Kaukiainen contends, however, that the advent of the telegraph and quick communications actually reduced the dynamic decision-making role of the master in overseas ports, thus extending management's influence even more.[16] Helen Doe has examined the role of the managing owner by delineating sources of power in relationships and applying these to the master-managing owner.[17] While these articles also describe most aspects of the whaling managers roles and relationships, there are differences. First, the whaling manager not only managed vessels and tracked on the state of the shipping industry, but also had to understand the distinctly different business of resource extraction. This required another level of knowledge and understanding not only to meet the needs of

[11] Peter Laslett and R Wall (eds.), *Household and Family in Past Times: Comparative Studies in the Size and Structure of the Domestic Group Over the Last Three Centuries in England, France, Serbia, Japan, and Colonial America* (Cambridge, 1972); and Carol Beardmore, Cara Dobbing and Steven King, 'Introduction' in C. Beardmore, C. Dobbing and S. King (eds.), *Family Life in Britain, 1650-1910* (Cham, Switzerland, 2019), pp. 1-12.

[12] See Kim Price, 'Victorian Professions: The Galvanising (and Shaping) Force of Death on Families', in Beardmore et al, *Family Life*, pp. 47-70; A recent publication employing Integrated Census Microdata findings is K.S. Schürer, E.M. Garrett, H.J. Jaadla, and A.M. Reid, A.M., 'Household and Family Structure in England and Wales, 1851-1911: Continuities and Changes', *Continuity and Change* 33:3 (2018), pp. 365-411.Richard H. Trainor, 'Urban Elites in Victorian Britain', *Urban History Yearbook* (1985), pp. 1-17; and R. Britton, 'Wealthy Scots, 1867-1913', *Bulletin of the Institute of Historical Research* 58 (1985), pp. 78-94.

[13] Michael Anderson, *Family Structure in Nineteenth Century Lancashire* (Cambridge, 1977), pp. 22-29.

[14] Libby Scweber, *Disciplining Statistics: Demography and Vital Statistics in France and England, 1830-1885* (London, 2006).

[15] Harold Perkin, *The Rise of Professional Society: England Since 1880*, 2d ed. (London, 2002), pp. 1-26.

[16] Yrjö Kaukiainen, 'Owners and Masters: Management and Managerial Skills in the Finnish Ocean-Going Merchant Fleet, c. 1840-1880', in Simon Ville and David M. Williams, *Management, Finance and Industrial Relations in Maritime Industries: Essays in International Maritime and Business History* (St John's, 1994), pp. 51-66.

[17] Helen Doe, 'Power, Authority and Communications: The Role of the Master and the Managing Owner in Nineteenth-Century British Merchant Shipping', *IJMH,* 25, 1 (2013), pp. 103-25.

the vessel and seafarers, but also serve the specific logistical and practical demands required by an extractive resource industry. Second, while the telegraph extended the influence of the managing owner and hastened communications in the shipping world, Arctic whaling only partially benefitted from such technological developments. Once in the ice, communications and reports with home reverted to methods much like in the mid-century.

Intersecting with these social histories and population studies are economic approaches that tended to tell Great Britain's imperial and commercial story from the angle of its 'great men', the leading industrialists, 'informal empire' capitalists and other heads of sprawling family firms, around whom numerous theories on British imperial society and economic decline have derived.[18] The preponderance of these works have focused their efforts on England, and some scholars have acknowledged the lack of work on Scottish subjects.[19]

These aspects generally have held true in maritime fields too, with the majority of attention given to the persons and firms based out of Victorian Britain's most prominent ports: London, Liverpool and Glasgow.[20] With the rise of transnational approaches and increasing efforts to de-colonise Anglo-and Western-centric histories, more emphasis is concentrating on important figures and institutions perceived as historically peripheral.[21] This turn, however, should not regard Britain, or even Europe, as a monolithic entity that was always at the centre. Small and mid-sized port towns in Britain also worked on the peripheries of the London metropole and the leading ports, and many have received far less attention than supposed. Examining individuals from these other ports, such as Dundee's maritime middle class, offers insightful nuance, not

[18] Important works include Geoffrey Jones, *Merchants to Multinationals: British Trading Companies in the Nineteenth and Twentieth Centuries* (Oxford, 2000); the 'gentrified bourgeois' of Martin Weiner, *English Culture and Decline* (2nd ed., Cambridge, 2004); the 'gentlemanly capitalism' of Cain and Hopkins, *British Imperialism;* and Roy Church (ed.), *The Dynamics of Victorian Business* (London, 1980).
[19] See Iain Riddell, 'Family Beyond the Household: Constituting and Reconstituting as Kin' in Beardmore et al, *Family Life*, p. 204.
[20] Andrew Porter, *Victorian Shipping, Business and Imperial Policy: Donald Currie, the Castle Line and Southern Africa* (Woodbridge, 1986); and Anthony Slaven and Sydney Checkland (eds.), *Dictionary of Scottish Business Biography, 1860-1960,* Vol. 1 (Aberdeen, 1986), pp. 1-8, 201-47.
[21] For instance, Frances Steel, *Oceania Under Steam: Sea Transport and the Cultures of Colonialism, c. 1870-1914* (Manchester, 2011).

only to local and maritime scholarship, but also histories with transnational and global contexts.[22]

Dundee's (Lacking) Middle Class

Despite Dundee's long history as a seaport, jute and textile manufacturing defined Victorian and Edwardian Dundee's image, not the sea. Additionally, these eras were an era in which people associated the sea and maritime ventures as masculine. The imagined contrasts could hardly have been more distinct. Corresponding with the myth that masculinity and 'patriarchal power…were reduced to the status of "kettle-bilers"', Dundee increasingly became regarded as 'a woman's town' for its high concentration of females employed in the jute mills.[23] Yet as distinctive as these monikers were, Dundee still carried the stigma that its industrialised, overcrowded, working-class condition was something unique within Victorian Britain. Balanced against the fractious masses and teeming tenements was a small but wealthy cohort of textile manufacturing elite, often termed 'jute barons', who lived in Broughty Ferry mansions or other country estates outside Dundee's limits and away from its pollution.[24] Using various data measurements, published works repeatedly bolster this perception of Dundee as a place of industrial poverty and squalor. They perpetuate the notion that not only was Dundee inordinately poorer than other Scottish cities, but it also lacked a substantial middle class.

Morgan and Trainor have pointed out that the percentage of male Dundonians holding middle-class occupations between 1861 and 1911, continually fell far below Scotland's other large cities as well as the overall average in Scotland (Appendix 3.2).[25] Furthermore, they have cited records from 1881, indicating that only 1 per cent of deceased confirmees left estates in Dundee valued over £10,000, compared 5 per cent in Glasgow, and 6 per cent in Edinburgh. Overall, they claim that Scotland as a whole

[22] One example includes Angela McCarthy and T.M. Devine, *Tea and Empire: James Taylor in Victorian Ceylon* (Manchester, 2017).
[23] Christopher Whatley, David Swinfen and Annette Smith, *The Life and Times of Dundee* (Edinburgh, 1993), pp. 113-17. See also Graham R. Smith, 'The Making of a Woman's Town: Household and Gender in Dundee 1890-1940 (Unpublished PhD thesis, University of Stirling, 1996).
[24] E.M. Wainwright, 'Constructing Gendered Workplaces "Types": The Weaver-Millworker Distinction in Dundee's Jute Industry, c. 1880-1910', *Gender, Place & Culture* 14, 4 (2007), pp. 467-82.
[25] Nicholas Morgan and Richard Trainor, 'The Dominant Classes' in *People and Society in Scotland, 1830-1914,* vol. 2 (Edinburgh, 1990), pp. 105-11.

had 4 per cent.[26] Though not detailed in their methodology, the figures almost certainly apply to people residing within each town's limits according to 1881 census data. In a more recent demographic analysis of major Scottish urban centres in 1901, Michael Anderson comes to similar conclusions. If Edinburgh stood out 'as by far the most middle-class city' and Aberdeen had some similarities to it, then 'Dundee offers a major contrast…it was a markedly less middle-class city'.[27] In another recent case study on 'Victorian Professions', Kim Price has suggested that Dundee's socio-economic strength deteriorated with the town's 'switch as a diverse hub of trade and industry to a mono-manufacturing jute centre'. It subsequently faced 'declining fortunes', which 'offered few opportunities for young professionals'.[28] In other words, the jute industry's rapid expansion and profitability had drawn in many of Dundee's professionals, thereby destroying much of town's diversity in middle-class occupational opportunities. Yet, these findings sit strangely juxtaposed to Jim Tomlinson's assessment of Dundee's economic prowess during the same era. He has argued that because of the scale and intensity of its global connections, 'Dundee can plausibly be claimed as the most globalized city in the world by 1913, with a greater dependence for its prosperity on events outside its national boundaries than any other significant urban settlement'.[29] What accounts for the difference in these perspectives?

Arguing for a Maritime Difference

Though masked by 'jute, jam and journalism', Dundee's maritime sector, including the whaling trade, served as a type of catalyst that imparted a disproportionate influence on the city. Even a cursory examination of local broadsheet newspapers will likely turn up a cache of maritime-oriented news bits reporting disasters, shipping intelligence, harbour customs reports, first-person voyage accounts, other syndicated articles, and all manner of advertisements. During the late Victorian era, whaling captains became some of the city's most recognisable faces and names. Their trademark beards, poise and salty visages, hardened by years of sea service, routinely appeared for posterity in

[26] Morgan and Trainor, 'Dominant Classes', pp. 113-14.
[27] Michael Anderson, *Scotland's Populations from the 1850s to Today* (Oxford, 2018), pp. 99-104.
[28] Price, 'Victorian Professions', pp. 58-62.
[29] Jim Tomlinson, *Dundee and the Empire: 'Juteopolis' 1850-1939* (Edinburgh, 2014), p. 3.

newsprint sketches, photographs and even oil paintings (Appendices 3.1.1 and 3.1.2).[30] Regarding the maritime history of Dundee's waterfront, scholarship largely features Dundee's shipbuilders, its port, and to a lesser extent, shipping.[31] No other works exist which attempt to take in the extent of Dundee's wider maritime sector, so compared to their whaling captain counterparts, company managers largely remain an obscure collection of quotidian city merchants. This, however, is an omission which closes history's doors to many other peripheral stories. Therefore, a prosopographical study of these managers' lives and activities provides a unique and telling peek into late Victorian and Edwardian middle-class dynamics. Better understanding these managers of the middling sort can shed light on the connections and influence that small and mid-sized port towns wielded within Britain, the empire and global businesses.

Managers of the 'Middling Sort': A Prosopographical Analysis

Since whaling managers constituted a relatively small population, a more personalised and hybridised approach enables comparisons with larger assessments. In order to determine the social mobility of the whaling managers, a baseline is first established using census records, newspaper archives and postal directories to trace each individual and their father's occupation. Table 3.2 below briefly summarises each manager's life prior to whaling. From this, it is possible to infer the likely social status in which each manager was raised, and posit other observations as well. First, the cumulative tally of the fathers' occupations reflects surprising diversity. Two of the sixteen managers (25 per cent), George Gilroy and William Stephen, entered the trade as very prosperous and wealthy men from family firms. On the other hand, five managers (31 per cent) – W.O. Taylor, James Yeaman, David Bruce, Robert Kinnes and John Fraser Birrell – presumably came from families with labouring, artisanal or, at best, low middle-class backgrounds.

[30] There are numerous examples, most recently Hugh M. Begg and John Watson, 'Captain William Adams Senior: Whaling Master', *Polar Record,* 53:271 (2017), pp. 396-402.

[31] Louise Miskell and William Kenefick, '"A Flourishing Seaport": Dundee Harbour and the Making of an Industrial Town, c. 1815-1850', *Scottish Economic and Social History,* 20:2 (2000), pp. 176-98; W. Kenefick, 'The Growth and Development of the Port of Dundee in the Nineteenth and Early Twentieth Centuries', in Miskell et al, *Victorian Dundee,* pp. 38-50.

According to Price, 'the Victorian Professions project reframed "professionals" to include a broader ambit encompassing a more recognisably diverse range of sectors and occupations' including teachers, engineers, bankers and architects. Despite their

Table 3.2. Managers' Backgrounds and Occupations Prior to Whaling.

Manager	Years lived	Father's occupation	Place of upbringing	Earlier occupations
Adams, Willam, Sr.	1837-1890	Coaster master	Dundee	Master mariner
Baxter, Hugh	1849-1913	Ploughman	Longforgan	Clerk/agent – shipping
Birrell, John Fraser	1854-1906	Teacher	Dundee	Clerk/ship broker
Bruce, David	1837-1917	Mechanic	Dundee	Clerk/agent – whaling
Croudace, William S.	1821-1894	Accountant	Leeds	Master mariner/broker
Ferguson, Robert	1867-1941	Factory manager	Dundee	Ship broker
Gilroy, George	1815-1892	Heckle maker	Dundee	Spinner/shipping
Kinnes, Robert	1854-1937	Cowfeeder	Dundee	Clerk, whaling
Kinnes, Walter	1885-1955	Shipbroker	Dundee	Clerk, whaling
McIntosh, William F.	1827-1912	[Unknown]	Dundee	Shiprigger
Mitchell, James	1831-1911	Shipmaster	Dundee	Prospector/shipbroker
Mitchell, John M. H.	1868-1931	Shipbroker	Dundee	Shipbroker
Scroggie, Robert V.	1847-1904	Farmer	Kincardineshire	Clerk, whaling/insurance
Stephen, William	1826-1893	Shipbuilder	Arbroath	Shipbuilder/shipping
Taylor, William O.	1823-1884	Shoemaker	Dundee	Master mariner/broker
Welch, George	1814-1891	Pilot master	Tayport, Fife	Master mariner/broker
Yeaman, James	1816-1886	Carrier	Perthshire	Carrier/fish curer

designation as professionals, however, Price notes that 'these newer professional families…were relatively insecure, sometimes living in fragile financial circumstances'.[32] Perhaps even more surprising, ten managers (63 per cent) joined Dundee's maritime trades from households unaffiliated with seafaring or the maritime trades. The two individuals least connected to any maritime trade were David Bruce and Robert Kinnes, but at various points in the late nineteenth and early twentieth centuries, these two men would control more whalers than any other British interest. This suggests that Dundee's maritime sector offered opportunities for social advancement that the rest of Dundee's economy could not.

While nearly two-thirds of managers migrated into the whaling trade, every manager and managing owner (except O.C.F. Grant) entered their positions in the Arctic trade having built up their knowledge and proven themselves in other marine-oriented businesses. The most common pathways consisted of 1) an earlier career at sea, 2) prior experience as shipbrokers and marine insurance agents, or 3) something akin to a

[32] Price, 'Victorian Professions', p. 50. .

maritime business clerkship, often within a whaling company. In a bit of foreshadowing, a number of managers held multiple occupations prior to becoming managers. This foreshadows a common proclivity to engage in multiple business interests even when they became whaling managers.

Table 3.2 also shows that eleven of the sixteen managers (69 per cent) grew up in the Dundee area, so most of Dundee's future whaling management and leadership was homegrown. Of the other five, four moved to Dundee and its environs as young adults. At age 18, James Yeaman moved to Dundee from Rattray, Perthshire, as an apprentice carrier, but in due course, he worked as a fish curer, quickly progressing to become a partner in the business around age 25.[33] Around that same time in 1841, William Stephen, age 15, first moved to St Andrews, Fife, about ten miles and a ferry crossing from Dundee, attending Madras College while living as a boarding scholar in town. His father, Alexander, Sr., built ships in Arbroath, but in 1843, he moved his firm to Dundee. Upon completion of his studies, William joined his father working under his tutelage at their shipyard on Marine Parade.[34]

Little is known of William Storey Croudace's early life in Leeds. His father was an accountant and authored a 'valuable work, entitled "Tables of Interest at 4 per cent"'. He died suddenly when William S. Croudace was five years old.[35] This likely left William, his mother, Nancy Storey, and his four sisters in a strained financial position, which may explain why he went to sea as a teenager or possibly even as a child. Price notes that the death of a household head, especially a young professional, could be 'catastrophic across a spectrum of economic, emotional and social levels'. [36] At any rate, by age 21, William took command of his first merchant vessel, skippering the *Coquette* out of Dundee for the Baltic. Captain Croudace went on to master merchant vessels for Alexander Stephen before marrying his daughter, Elspeth Murray Stephen, in Dundee in 1850.[37] After a career as a shipmaster, Croudace transitioned to purchasing large

[33] For more information, see the McManus168 webpage, 'James Yeaman Esquire', https://mcmanus168.org.uk/mcmanus168entry/james-yeaman-esq-mp/ (Accessed 10 June 2019).
[34] Carvel, *Stephen of Linthouse,* pp. 26-31; and *DYB* 1893, 'Obituary Notices: William Stephen', pp. 79-80.
[35] *Leeds Intelligencer*, 'Deaths', 23 February 1826. See also John Croudace, *Tables of interest at 4 per cent per annum advancing progressively by pounds from one to £375 and by other useful sums to £20,000 for every day of the year; to which are added extensive tables of commission from 1/16 to 5 per cent* (Leeds, 1823).
[36] Kim Price, 'Victorian Professions', p. 49.
[37] *DYB*, 1894, 'William Storey Croudace', p. 89.

numbers of shares in several merchant vessels and whalers, which he managed as owner.[38]

Robert Vallentine (R.V.) Scroggie moved from Stonehaven to Fife around 1871, at age 23. He soon went to work in Dundee as a clerk before taking a position with W.O. Taylor in maritime insurance.[39] Upon W.O. Taylor's death in 1884, Scroggie took over at W.O. Taylor & Co., and on 11 June 1885, the Ship Registry notes that R.V Scroggie was duly appointed manager of DPFCo's whalers, *Jan Mayen* and *Nova Zembla*. In 1893, DPFCo dissolved, but Scroggie's agency managed *Nova Zembla* until it wrecked near Dexterity Island in 1902 (Appendix 3.2). Besides whalers, Scroggie also managed another of W.O. Taylor & Co.'s interests, the merchant shipping line, Dundee Shipowners' Co., and in 1886, his agency became the Lloyd's agent for Dundee.[40] From 1892 until shortly after 1900, Scroggie oversaw more ships and tonnage registered to Dundee than anyone other agent in the area, averaging almost 10 per cent of the city's overall registered (gross) tonnage. Scroggie managed W.O. Taylor & Co. until his death in 1904.[41] These examples signify that Dundee offered opportunity, especially within the maritime trades, not only to start a career, but also to advance within one.

Most men had years of experience working in the field before they took up their managerial positions. Of sixteen managers, only two entered the trade in their twenties. Five did so in their thirties, with the other nine joining after the age of forty (Table 3.3). Overall, the managers averaged 39 years of age upon taking their positions; the youngest being David Bruce at 24 years old. As for longevity within the whaling trade, only two managers stayed less than five years before transitioning to other work. In both cases, the Arctic claimed their lone vessels. In 1903, Robert Ferguson purchased the famed *Vega,* but it was lost in Melville Bay on its maiden whaling voyage the same year.[42] A further five managers worked the trade for 5-9 years, and another three lasted 10-19 years. Of these eight, two died while managing, three transitioned out of the trade due to losing their vessels in the Arctic, and another two transitioned out of whaling

[38] Philip Eagles, 'Captain William Storey Croudace: The Voyages of the "White Eagle" 1855 and the "Corona" 1866-69', http://home.iprimus.com.au/phillipeagles/white_eagle.html (Accessed 7 June 2019).
[39] 1871 Census; and *DD,* 1874, p. 239.
[40] *DC*, 'Appointment of Lloyd's Agent at Dundee', 8 December 1886.
[41] *DET,* 'Death of Dundee Shipowner', 27 June 1904.
[42] CDA, CE 70/11/20, pp. 281-82.

after selling off their craft. Significantly, however, all eight of these managers never managed more than three whalers a piece. Fewer whaling vessels meant it was difficult to absorb losses when the ice crushed vessels in the Arctic.

Table 3.3. Managers in the Dundee Arctic Trade, 1858-1918.

Manager	Year began	Age entered	Seasons in trade	*Whalers managed	Reason for leaving trade
William O. Taylor	1858	35	27	6	Died
George Welch	1859	45	27	8	Retired
James Yeaman	1860	44	12	5	Transitioned out
David Bruce	1861	24	38	9	Transitioned out
George Gilroy	1863	48	7	3	Lost all whalers
William Stephen	1867	41	27	5	Died
William S. Croudace	1878	57	7	3	Lost all whalers
Robert Kinnes	1881	30	37	16	Retired
John Fraser Birrell	1883	29	6	1	Bought out
William Adams, Sr.	1884	47	2	1	Transitioned out
Robert V. Scroggie	1884	37	18	2	Lost all whalers
James Mitchell	1886	55	23	2	Transitioned out
William F. McIntosh	1897	UA	4	1	Transitioned out
John M. H. Mitchell	1897	29	15	2	Transitioned out
Robert Ferguson	1904	36	1	1	Lost only whaler
Hugh Baxter	1905	56	6	2	Lost all whalers

*Some whalers were jointly managed.
UA: Data unavailable.

Six of Dundee's managers (38 per cent) controlled more than three whalers. Not surprisingly, five of these six men remained in the trade for more than twenty years, James Yeaman being the exception. Yeaman, however, had several reasons for transitioning. After holding numerous civic offices from 1859 to 1869, Yeaman, joint manager of DSWFCo, concurrently held the city's highest municipal office, Provost of Dundee, from 1869 until 1872. In 1873, he was elected as a Liberal M.P., which effectively ended his time as whaling manager. He remained in Parliament until 1880.[43] During this time, Yeaman made one last overture at remaining in the whaling trade, working with the Cox family to purchase *Spitzbergen* from European owners in 1876. Unfortunately, the whaler sank while transiting from Bremerhaven to Norway for a refit, marking the end of any direct interest by Yeaman in whaling.[44]

[43] For more information, see the McManus168, 'James Yeaman Esquire', https://mcmanus168.org.uk/mcmanus168entry/james-yeaman-esq-mp/ (Accessed 10 June 2019).
[44] Archibald, *Dundee Whaling Fleet,* p. 188.

Timing also had a lot to do with longevity. The years during which these six managers entered the trade represent the most profitable decades of Dundee whaling in the second half of the nineteenth century. W.O. Taylor and George Welch began managing in the 1850s; James Yeaman, David Bruce and William Stephen in the 1860s. The sixth individual, Robert Kinnes, became TWFCo manager in 1884. Averaging together the years these individuals left the trade – 1892 – also signifies the beginning of the Arctic's declining profitability.

The 1890s was a tough decade for Dundee whaling. In 1890, Captain William Adams, Sr. died days after disembarking severely ill in Thurso on *Maud*'s return from the Davis Straits. Captain Adams had been one of Dundee's most famous and recognisable whaling captains (Appendices 3.1.1 and 3.1.2). Before purchasing all 64 shares of the whaler *Maud*, he had mastered vessels for Alexander Stephen and Sons.[45] In 1892, Robert Kinnes launched the Dundee Antarctic Whaling Expedition (DAWE), sending the Dundee whalers, *Active, Balaena, Diana* and *Polar Star*, to the Southern Ocean in a gamble to locate and hunt the abundant Southern right whales which James Clark Ross had claimed to have seen in the early 1840s. It returned reporting seeing nothing but rorquals. These large whales were beyond the capability of Dundee's whalers to hunt.

Months after the DAWE's failed expedition, William Stephen died in 1893, ending not only Alexander Stephen and Son' whaling operations, but also its shipbuilding presence in Dundee. Five years later, David Bruce left for the London shipping business, ending the career of another of Dundee's most influential whaling managers. Countering these losses, five managers took up the trade after the 1880s, but their additions, lack of vessels and capital simply could not change the trajectory of the Arctic trade as a whole. James Mitchell took up the whaling manager's mantle in 1890 as well as his son, John M. Mitchell in 1897. With the turn of the century, three other managers ventured into the trade, but none of these proved economically successful.

Tracing the managers' residences and households through their career provides more social context for the status and progression of managers within Dundee's whaling and maritime sectors. Nineteenth-century Dundee was to a large degree, an itinerant city. The directories and censuses reflect this with people regularly moving house. Of

[45] Begg and Watson, 'Captain William Adams Senior: Whaling Master'.

course, highly successful persons had fewer reasons to do so, especially if they built or purchased their residences. Such was the case with George Gilroy, William Stephen, and James Yeaman, who moved only once during their time as whaling managers. George Gilroy moved from Fort Hill House in Broughty Ferry to his specially designed neo-Tudor mansion, 'Castleroy', where he lived until his death in 1892. Similarly, William Stephen moved from the highly respectable Airlie Lodge in Dundee to his 'Helenslea' mansion in Broughty Ferry, where he too would live out the rest of his life.[46] Unlike most, James Yeaman chose to remain in Dundee at his 'Craigie Cliff' residence on Ferry Road.

Other managers who entered whaling without such settled circumstances more clearly demonstrate upward social mobility through their residential moves and the neighbours who lived within their proximity. Robert Kinnes was born around 1854, in Dundee, to Margaret and William Kinnes, a cowfeeder, who spent most of their working lives residing on Strathmartine Road in the north Dundee residential district of Smithfield.[47] The 1871 census recorded Robert as living at home and working as a commercial clerk. Neighbours at that time included another cowfeeder, a grocer, draper, confectioner and two spirit dealers.[48] In 1878, when his father William passed away, Robert was 24 years old and working as a clerk at TWFCo under George Welch. He married Elizabeth Balharrie (1855-1932) of Airlie, and they lived at 37 Stirling Road in Dundee. There, some of the neighbours included two joiners, a seed cleaner, manager, a mill manager, and a warehouseman.[49] They remained at Stirling Road until around 1884, during which time they took in Robert's mother, had three children and hired a domestic help.

In 1884, TWFCo promoted Robert Kinnes to joint manager, working alongside the soon-to-retire George Welch. The same year, he moved his household to Fairlie Place on Clepington Road then three years later to 12 William Street in Dundee. By this time, Elizabeth had given birth to six sons. Nearby residents included a mechanic, flesher, druggist, merchant, a scrap iron merchant, two brothers who were grocers, and

[46] Webster and Muir, *What's in a Name,* pp. 76, 110-111.
[47] *DD,* 1840s-1850s; Private collection, personal papers; and interview with Robert Kinnes's great grandson, Barrie Kinnes, 2016. Family permission granted.
[48] *DD,* 1871, p. 306.
[49] *DD,* 1878, p. 401; *DD,* 1856, p. 166.

Miss A.F. Marshall, superintendent of the Convalescent Home.[50] After seven years managing TWFCo, Robert Kinnes and his family finally moved across the Tay to 'Kincraig' House in Wormit, near Newport (Appendix 3.5). The house was situated within a couple-minute walk of the train station, which would quickly take Robert back into Dundee, terminating at the North British Station near Earl Grey Dock and Dock Street. They remained there until Robert retired to Dunfillan in Crieff in 1920.[51] In 1891, their household consisted of six children and one house maid. By 1911, neighbouring residences consisted of an india rubber merchant, several spinsters and widows, an ironmonger, hatter, wine merchant, sack manufacturer and a carpet manufacturer.[52]

Robert and Elizabeth Kinnes's residences from Dundee to Wormit in Fife, show the longitudinal progression of one family's social status from a working-class situation to members of the upper middle-class. The occupations of neighbours listed within close proximity help demonstrate that change. Their children's occupations also confirm their family's and progenies' firm place within the middle class. From their Kincraig residence, the Kinnes's seven sons took up careers as a teacher at Harris Academy in Dundee; H.M. Inspector of Taxes; bank manager in Cape Town, Cape Colony; electrical engineer; and shipbroker. Walter, Robert and Elizabeth Kinnes's fifth son, eventually transitioned from the Arctic trade to his father's tannery business in Crieff, Scotland.[53] When Robert Kinnes died his estate was estimated at £40,504.[54] Likewise, other whaling managers' families demonstrated similar familial trajectories through their offspring.

Robert Kinnes's residential movements largely mirror the corporate living patterns of other whaling managers, which are summarised in Appendix 3.3. Tracing these shows that after 1876, whaling managers began to permanently prefer living outside Dundee rather than within it. By 1878, three of the five current managers lived in Broughty Ferry, 'an idyllic residential setting for the wealthy classes'.[55] Over the next few decades, the percentage of middle-class managers living in Dundee continually

[50] *DD,* 1887, p. 520.
[51] Private collection, Personal Papers, and Crieff Tannery Company ledger.
[52] Presently located at 10 Mount Stewart Road, Wormit; see William M. Owen, 'The Newport, Wormit & Forgan Archive', https://www.newportarchive.co.uk (Accessed 15 June 2019).
[53] Private collection, Crieff Tannery Ledger.
[54] *The Scotsman,* 'Wills and Bequests: Retired Dundee Shipowner', 8 September 1937.
[55] Callum Webster and Craig Muir, *What's in a Name? A Street History of Broughty Ferry*, 2d ed. (Dundee, 2015), p. 92.

dropped. The largest change in residence took place between 1881 and 1886, when only Robert Kinnes resided in Dundee.

Dundee's whaling company managers provide a small sample size, but their residential choices reflect a larger trend, especially within Dundee's general maritime sector. As an alternate source to the 1881 Scotland census, I chose to digitally mine data from the 1882 *Dundee Directory,* the nearest publication date available for listing the names and residential addresses of marine-oriented middle-class occupations. 1882 also lies within the span of time during which the Dundee's whaling managers transitioned out of Dundee. Whereas statistics presented from census data tend to reflect numbers specifically from Dundee proper, The *Dundee Directory* serves as a useful, contextualising tool since it includes street directories for Dundee, Lochee (which I treated as a district of Dundee here), Broughty Ferry, Newport and Tayport in Fife, as well as surrounding rural districts (including the Monifieth community among others). It should be noted that to prevent double counts, any redundant names were omitted that appeared under cross-listed occupations. Furthermore, directories were not published every year.[56] Searching for the word 'manager' produced 198 individual names and home addresses. People included in the list ranged from managers of coffee houses, banks and insurance agencies to sawmills, textile factories, foundries and shipyards. 161 of 198 listed managers (81 per cent) resided in Dundee, with at least 104 managers (53 per cent of the total) associated with the textile industry. Data also shows that 100 of the 161 managers living in Dundee were employed by the textile industry as factory and mill managers, power loom and calender managers.[57] These results appear to support both Morgan and Trainor's statistics and Price's assertion of a city swallowed by jute interests.

However, searching for middle-class maritime occupations produces another range of results, depicted in Appendix 3.4. These indicate that slightly less than half of what might be considered Dundee's middle-class maritime sector lived in Dundee. The other 51 per cent of the maritime sector's middle class resided in Broughty Ferry, various rural districts, and Newport, Tayport and other close by locations in Fife. Since data

[56] NLS, 'Scottish Post Office Directories', https://digital.nls.uk/directories/ (Accessed December 12, 2018).
[57] *Ibid.*

derived from census markers does not appear to account for Dundee's employed occupations that reside outside the town, Dundee's suburbanising trend after 1861, therefore, would naturally skew downwards all numerical representations of Dundee proper. In essence, less than half of Dundee's maritime demographics are being assessed. A more complete picture for Dundee's middle-class situation requires the surrounding communities in Forfarshire (now Angus) and Fife to be included. Applying the Merchant Shipping Act (MSA)'s (1854) seven-mile radius would include more middle-class occupations as well as wills/bequests over £10,000. This would likely even Dundee's numbers with other large centres in Scotland. Clearly, many of Robert Kinnes's neighbours in Wormit, were also professionals, but were not part of the maritime middle class. This suggests that more analysis on a wider scale needs to reassess Dundee's evolving demographics during the late Victorian era.

Taken together, the information presented in Chapter 3's appendices indicates that Dundee's maritime sector depended on a more egalitarian system of developed maritime expertise and leadership than a hereditary structure reliant on maritime households and kin networks. Dundee's whaling managers clearly exhibited the experience, intelligence and technical proficiencies, not to mention ambition, necessary to shoulder the responsibility of sending seafarers and expensively equipped vessels into some of the world's harshest and most remote environments. Significantly, James Yeaman, William O. Taylor, David Bruce, and Robert Kinnes came from both non-maritime and less privileged family backgrounds, yet they became three of Dundee's four largest and most influential whaling interests. Together with George Welch and William Stephen, they not only controlled most of Dundee's whaling vessels, but also the city's merchant fleet. All of this signifies that a management position in Arctic whaling served as a viable, albeit small, pathway towards upward social mobility, something the Victorians praised as 'self-improvement'.

Diversity in Business Interests

Despite Victorian laws broadening partnership possibilities in limited-liability and joint-stock companies, family firms remained the primary British corporate model throughout

the nineteenth century.[58] Whether large or small, most operated principally to perpetuate the family enterprise, and therefore, they relied on kith and kin networks to further their aims. While Laslett has generally argued against the British relying on extended family networks, more recent research has shown that for centuries, Scots had employed family-enterprise networks to much effect on a transnational scale.[59] According to Simon Gunn, these connections and relationships afforded a multitude of practical benefits, such as access to capital and credit, commercial information, employment positions for sons, potential marriage partners for children and financial maintenance for widows and unmarried dependents.[60] In Dundee, some family firms participated in whaling, but none dominated the trade to the degree that their family name became synonymous with the trade. For example, the Grays of Peterhead, who arguably constituted the greatest whaling family in British history, spanned four generations as captains and managing owners.[61] In fact, the Gilroy Brothers & Co. and Alexander Stephen and Son, the two most notable family firms that fully purchased and managed their own whalers, each operated them as a subsidiary to their main family businesses, jute spinning and shipbuilding, respectively.

Gilroy Brothers & Co. was a flax- and jute-manufacturing company founded in 1849, by brothers Robert, George and Alexander Gilroy. Scholars have regularly linked Dundee's whaling trade to the emergence of the jute industry, since textile manufacturers commonly 'batched' raw jute (as well as flax) in train oil.[62] In 1863, the Gilroys became directly involved in whaling operations when they purchased *Emma*, a whaler from Hull, 'to fish for the [whale] oil required for their mills'.[63] Fourteen months later, the company lost *Emma* during spring seal fishing near Greenland.[64] The following

[58] Mark Casson and Andrew Godley, 'Entrepreneurship in Britain, 1830-1900' in David S. Landes, Joel Mokyr and William J. Baumol (eds.), *The Invention of Enterprise: Entrepreneurship from Ancient Mesopotamia to Modern Times* (Oxford, 2010), p. 212; P.L. Payne, *British Entrepreneurship in the Nineteenth Century* (London, 1974), pp. 17-23.
[59] Peter Laslett, 'Mean Household Size in England Since the 16th Century' in Peter Laslett and R Wall (eds.), *Household and Family in Past Times: Comparative Studies in the Size and Structure of the Domestic Group Over the Last Three Centuries in England, France, Serbia, Japan, and Colonial America* (Cambridge, 1972), pp. 125-58.
[60] Gunn, '"Failure" of the Victorian Middle Class', p. 33.
[61] Gavin Sutherland, *The Whaling Years: Peterhead (1788-1893)* (Aberdeen, 1993), pp. 113-108-122.
[62] Tomlinson, *Dundee and Empire*, p. 11; and Lenman *et al.*, *Dundee and Its Textile Industry,* pp. 39, 45.
[63] *DA*, 'Another Whaler', 12 January 1863.
[64] CDA, CE 70/11/11, p. 58.

year, in 1865, Alexander Stephen and Son built the jute manufacturers another whaler, *Alexander*.[65] It was their most successful and longest-lasting whaler, but on 17 July 1869, ice floes crushed and sank the barque in Melville Bay.

The Gilroy family was well-known for constructing architecturally iconic edifices in Dundee, but this proved a costly misadventure when Mr. John Key of Kinghorn built Dundee's first and only iron-hulled whaler, *River Tay.*[66] It barely lasted six months, sinking on its first voyage to the Davis Straits and taking tens of thousands of invested pounds sterling with it.[67] All told, the Gilroys lost three whalers in five years. Thereafter, they continued to own and manage merchant vessels until 1890, but their gambit at directly owning and managing a whaling fleet had permanently ended. Instead, they settled for investing in the trade, leaving others to navigate the unforgiving complexities of managing whalers.

If the Gilroys were short-term owners and managers who struggled to maintain a whaling fleet, then the family shipbuilding firm of Alexander Stephen and Son proved to be one of Dundee whaling's most opportunistic catalysts. After the sudden death of William Stephen in 1893, contemporaries lauded the firm's importance to whaling, 'To Mr. William Stephen belongs in a very great measure the credit not only of assisting in the resuscitation of the whaling industry, but in the carrying on successfully of this important branch of Dundee trade'.[68]

Whaling, however, only comprised one of several commercial endeavours carried out by the family firm. William's father, Alexander Stephen, Sr., was a third-generation shipbuilder from northeast Scotland. At a young age, he had combined his extended family's struggling operations at Aberdeen and Arbroath, and during a shipbuilding slump in the early 1840s, he seized the opportunity to relocate his firm to Dundee, purchasing riverfront property on Marine Parade at discounted prices. Though Alexander Stephen and Son would go on to claim a hugely successful business and long-standing pedigree as one of the world's leading shipbuilders on the Clyde, the family's

[65] *Ibid.*, p. 61.
[66] Sanger, *Scottish Arctic Whaling*, p. 116; Lubbock, *Arctic Whalers,* p. 373.
[67] CDA, CE 70/11/11, p. 149.
[68] *DYB,* 1893, 'Obituary Notices', pp. 79-80.

move to Dundee came with sizable risk.[69] They had not yet experienced the tremendous success that would follow, both in Dundee and on the Clyde.

Alexander Stephen and Son's foray into constructing wooden-hulled auxiliary steam whaling barques dramatically changed the Dundee branch's commercial future. Alexander Stephen and Son built the whaler *Narwhal* in 1859, followed closely by *Camperdown* (1860) and *Polynia* (1861). After 'the spring of the *Polynia* and *Camperdown*' in 1862, the impetus for Newfoundlanders to invest in steam sealers most benefitted those with enough capital to make the necessary investments. John Munn of Conception Bay and the St. John's 'Water Street merchants', such as Walter Grieve and the Job Brothers, who were backed by family firms based in Greenock, Scotland, and Liverpool, respectively, placed orders with Alexander Stephen and Son for steam sealers for the seal fishery. Between 1863 and 1874, the shipbuilders built thirteen sealers for various Newfoundlander merchant houses, most of which were based in St. John's.[70] The St. John's merchants' ownership and subsequent success with the steam sealers supplied by Alexander Stephen and Son helped to shift and consolidate the centre of the sealing industry from Newfoundland's scattered outports to St John's on the far eastern end of the Avalon Peninsula.[71] The change altered nearly every aspect of Newfoundland's society from wage, labour and migration patterns to political power. Shannon Ryan, the foremost expert on the Newfoundland's salt fish and sealing fisheries, reinforces this argument. Sealing perfectly complemented Newfoundlanders' primary commercial concern: the cod fishery, but it was the seal industry which made Newfoundland a political entity.[72] Looking back, Prowse would remark that the introduction of 'steam completely changed the whole aspect of affairs' in the colony.[73]

During this same period, Alexander Stephen and Son built four whalers for the Dundee fleet, including the *Arctic* (I) in 1867, for the company's own direct whaling effort. They also built vessels and engaged in merchant shipping on their own behalf.

[69] For more on the Stephen family and their entire shipbuilding history, see Carvel, *Stephens of Linthouse,* and A. M. M. Stephen, *Stephen of Linthouse: A Shipbuilding Memoir, 1950-1983* (Glasgow, 2015).
[70] Carvel, *Stephens of Linthouse*, pp. 179-82.
[71] In Newfoundland, the outports consist of all communities outside of the capital, St John's.
[72] Shannon Ryan, *The Ice Hunters: A History of Newfoundland Sealing to 1914* (St John's, 1994), pp. 140-64.
[73] D.W. Prowse, *History of Newfoundland,* p. 491.

They secured contracts to ship convicts and later, migrants, to Australia.[74] From their local whaling connections, they also gained contracts and built five merchant vessels for David Bruce and the Dundee Clipper Line in the 1870s, as well as seven merchant vessels for W.O. Taylor's Dundee Shipowning Co. in the 1870s and 80s. By the late 1870s, William Stephen expanded his whaling and sealing interests into Newfoundland, where he purchased wharf and yard space on the southern shore of St John's harbour. Alexander Stephen and Sons investment in Newfoundland signalled William Stephen's entry into the leather tanning trade. He established the Arctic Tannery on his Marine Parade premises. In addition to building whalers for its own use, Alexander Stephen and Son also built a variety of merchant marine vessels.

Management's Responsibilities – Information Specialists

Whaling companies sought out managers who possessed the ability to multi-task, understand the unique requirements of maritime and Arctic operations, lead, communicate, and conduct the company's business. In short, managers had to have an eye for detail. The TWFCo's corporate records offer a rare glimpse of the variety of tasks and responsibilities expected of whaling managers. Though incomplete, there is enough extant material from the minute records of various corporate meetings and the notebook of George Welch, TWFCo manager, to provide a longitudinal examination of his activities in relation to the whaler *Intrepid.*[75]

Like W.O. Taylor and others, George Welch began his career as a seafarer who worked up through the ranks to become master mariner before owning and managing his own ships. He followed his father John into a career at sea, gaining his shipmaster's certification in 1851.[76] By the end of the decade, he had become the manager for TWFCo, following the retirement of John Hume (1792-1875), who had served the company in that capacity from at least 1822 to 1859.[77] He also worked other business interests. Beginning on 24 November 1865, 'a meeting of Gentlemen proposing to buy the [whaler] "Intrepid" of Peterhead' unanimously resolved to send George Welch to

[74] State Records of South Australia, GRG 35/48/1/74/1, Official Assisted Passenger Passage Lists; https://archives.sa.gov.au/passenger-lists-view/ (accessed 4 January 2020).

[75] Archibald, *Dundee Whaling Fleet,* pp. 159-60.
[76] Obituary in *DYB*, 1891, p. 95.
[77] *DD*, 1822, p. 88; *DD*, 1858, p. 17.

Peterhead, to attend the sale proceedings, purchase the whaler for no more than £5500, and 'make the necessary arrangements for having the vessel brought to Dundee'.[78]

Welch closed the deal for £5000, and four days later, met with the purchasers again. This time Welch put before them a letter he had received from Gourlay Brothers & Co., a marine engineering and shipbuilding firm in Dundee, offering to fit a boiler and steam engines into *Intrepid* for £2430. Following this proposal, the committee unanimously agreed to appoint Welch as manager of their whaler and pay him £40 per annum plus 1¼ per cent of the gross value of all produce brought home. He accepted their offer in addition to holding the same position with TWFCo. The owners authorised him to open and operate an account at the British Linen Company Bank, Dundee, to facilitate the transfer of funds and enable operations. He then deposited the money collected from the purchasers on a call of £125 per one-fortieth share owned.[79] By 16 December 1865, Welch had registered *Intrepid* (ON 18504) in Dundee with himself listed as managing owner of all 64 shares.[80] Shortly thereafter in early January 1866, another general meeting of owners of *Intrepid* recorded in the minutes that George Welch had called a 'Special General Meeting of the Partners of the Tay Whale Fishing Company', thus helping to reveal his role in conducting a merger between the owners of the *Intrepid* and TWFCo.[81]

Besides facilitating the acquisition of *Intrepid,* George Welch also handled every other aspect of TWFCo's vessels while they were in port. He coordinated all structural and mechanical repair work on the vessels, such as when he ordered a new crank shaft for *Intrepid* from Gourlay Brothers in 1879.[82] He tracked prices and secured contracts for outfitting the whalers *Intrepid, Queen* and *Victor* with all materials necessary for a voyage including hundreds of tons of coal, as well as other requisite materials like ropes, canvas, timber and bags of nails needed to go to sea. He recorded provisions for *Intrepid*'s voyage as 33 cwt of beef, 24 cwt of pork, 8¼ cwt of mutton, 32 cwt of bread, in addition to large quantities of oatmeal, flour, 'pease', rice, barley, one 3-cwt cask of

[78] This meeting consisted of interested purchasers independent of the TWFCo; UDAS, MS 59, 'Minute Book of the Ship "Intrepid"', 24 November 1865.
[79] *Ibid.,* 28 November 1865.
[80] CDA, CE 70/11/11, p. 108.
[81] UDAS, MS 59, Minutes, 3 January 1866.
[82] *Ibid.,* TWFCo Management Committee Meeting, 24 February 1879.

treacle, 30 gallons of lime juice, and of course, ample amounts of sugar, tea, coffee and tobacco. Additionally, Welch also arranged for his whalers to load quantities of salt and salt fish upon their arrival in Lerwick.[83] Sending vessels into the Arctic ice necessitated that they carry gear specifically for the climate. Among other things this included ice saws, dynamite, crampons and snow goggles. Preparations for the hunting phase of the trip led Welch to replenish everything from whaleboats and their accoutrements to rifles, ammunition, and iron implements. In November 1878, the blacksmith, John Lumsden of Pittenweem, Fife, quoted him prices for harpoons along with a wide assortment of whalers' knives, spades, lances and boat hooks. Furthermore, gun harpoons commanded a price of 25s each; 'togle' [sic] harpoons, 16s; and hand harpoons, 13s 6d. Steel-pointed lances cost 4s 6d each. With each whaleboat on a vessel carrying three harpoon guns, it was common for managers to order up to twenty harpoons before a voyage.[84]

Company managers also took care to load extra supplies for trading with the Inuit, and some of these items included glass beads, metal tools, tobacco, ammunition and old rifles.[85] Despite the fact that most whalers expected their journey to last no longer than eight months in the Davis Straits and Baffin Bay, managers often stocked vessels with two years of supplies in case the vessel should become trapped in the ice and forced to 'winter over'. This, therefore, meant that at the completion of every ship's voyage, Welch needed to inventory and store or dispose all surplus provisions.[86]

Administrative and legal functions in support of maritime operations and commercial transactions also demanded a large portion of a whaling manager's attention.[87] While captains held most of the responsibility for hiring crewmembers, company managers regularly corresponded with merchant-agents in places like Lerwick, Shetland, to coordinate their anticipated or specific labour requirements and provide these agents with funds for seamen's wages, allotment payments, and ships' provision purchases. Welch carried on extensive correspondence with Joseph Leask, a Lerwick

[83] *Ibid.,* SMA, D 1/375, 'Mercantile Wet-Copy Letterbook of Joseph Leask, Merchant, Lerwick, Correspondence to George Welch dated 20 January 1879.
[84] UDAS, MS 59,
[85] *Ibid.*, Purchase receipt; UDAS, MS 333/4.
[86] UDAS, MS 59, Notebook, 'Surplus Stores 1876'.
[87] Matthew Ylitalo and Sarah Easterby-Smith, 'Ships' in Riccardo Bavaj, Bernhard Struck and Konrad Lawson (eds.), *Doing Spatial History* (Abingdon, 2022), pp. pp. 347-68.

merchant and whaling agent, working through the recruitment and hiring of Shetland crewmembers. For instance, between 1878 and 1879, Leask wrote at least 31 different letters to Welch responding to requests and providing personnel updates.[88]

Whaling managers also drafted the legal contracts for each ship's voyage. These Crew Agreements (CAs) stipulated a crewmember's duties and pay, as well as representing desired policies specific to the shipowners. Before men could join a ship's crew, each had to 'sign on' to these 'Articles'. These government-mandated Board of Trade documents constituted a legally binding contract between the captain (representing the shipowners and manager) and each member of the hired crew. They also particularly reflected the manager and shipowners' collectively agreed upon Arctic strategies and moral predilections. This was the case in late 1879, when at a meeting of the Committee of Management, they,

> took into consideration the expediency of supplying the ships on the principle of total abstainance [sic] from all intoxicating Liquors and after mature deliberation unanimously resolved to adopt that principle and the Manager was instructed to supply no Spirits, Wines, or Beer except what is enacted by the Board of Trade.[89]

Intrepid's March 1880 Agreement and Account of Crew subsequently reflects George Welch's distinctively legible penmanship on its first page, when it stipulates that

> any member of the crew bringing or having onboard Spirituous Liquors or joining the ship incapable of duty through drunkeness…shall for every time each offence is committed forefeit to the ship one months pay.

Subsequent pages listing each seafarer's personal details, capacity and wages are also his work, thus indicating that the manager was present when every captain signed on his crew at the Merchant Marine Office (MMO).[90] Managers also directly paid the shipmasters' wages and 'Emoluments', as was the case when Welch paid Captain Burnett upon his return to Dundee in September 1881 after the whaler *Victor* was lost in July in Elwin Inlet at the north end of Baffin Island.[91]

[88] SMA, D 1/375.
[89] UDAS, MS 59, 'Minutes', 10 December 1879.
[90] Maritime History Archive (MHA), BT 99, *Intrepid (ON 18504),* 1880.
[91] UDAS, MS 59, Minutes, 22 September 1881.

One of a manager's most meticulous responsibilities was ensuring everything of value within the company carried insurance. Men may gamble with their lives for a big whaling payoff, but whaling companies rarely gambled with their insurance coverage. As risky as the whaling business was, no one in Dundee seemed ready to take on the risk of potentially losing everything. Page after page of George Welch's managing notebook listed insurance policies covering every vessel's hull, boiler and engines. In 1878, Welch purchased £12,000 of insurance coverage through fifteen different policies for *Intrepid* with £8000 of it for the hull and £4000 for 'machinery'. In this instance, many of TWFCo's insurance providers (73 per cent) also featured prominently within the whaling trade. Some whaling company managers also moonlighted as purveyors of marine insurance. Take, for instance, David Bruce, who managed DSWFCo. His shipping agency, David Bruce & Co., sold two policies to George Welch totalling £3100.[92] More often, however, whaling investors sold policies to their whaling interests. In George Welch's case with the *Intrepid* in 1878, those providing coverage policies included John Ewan, James Yeaman, James Luke, Joseph Gibson, Thomas Smith, James Smith, John Sharp and Andrew Douglas.[93]

The manager also arranged for additional insurance to cover all potential profits held as produce (blubber, whalebone and hide) in a ship's hold during a voyage. Collecting insurance on unseen produce that was lost with a ship required extensive documentation, and this partly explains why masters did their best to save the ship's papers. It also helps to account for why whalers, when they returned to Dundee, fastidiously reported to their managers the other whalers they had seen, when and where they had seen them, and what catch count each had made. On 21 July 1885, ice crushed *Intrepid* causing it to flounder off the coast of Greenland. At a 'Special Meeting of the [TWFCo] Partners' on 14 September 1885, the shareholders learned that the company had recovered £10,000 from its insurance policies.[94] The following May, Robert Kinnes, who had become TWFCo's sole manager upon Welch's retirement in

[92] UDAS, MS 59, 'Insurance 1877'.
[93] *Ibid*.
[94] UDAS, MS 59, Minutes, 14 September 1885.

January, reported that the company had received a payment a bit over £1545 from the insurance covering *Intrepid*'s lost cargo.[95]

Besides insurance on its vessels and cargo at sea, managers also maintained policies for the company's physical possessions at the whaling yard. Managers primarily concerned themselves with the produce stored in the yard, company buildings and the expensive array of copper pipes, cauldrons and tanks associated with the yard's boiling works.[96] Managers' notebooks inevitably became a bewildering mass of scribbled names and figures logging insurers and policy numbers, expiration dates, insurance costs, items insured and various amounts of coverage. Perhaps the greatest irony in these insurance efforts falls on the seafarers and their families, who rarely carried any form of life insurance. Wives and children often faced the threat of destitution if their loved one perished at sea. Crews typically auctioned the lost mariner's goods, and these funds, perhaps along with a small collection from his colleagues, were given to the family.

Beyond the work of supporting the vessels, completing required legal documents and ensuring insurance coverage, managers also took responsibility for all other commercial transactions for the company. They recorded transfers of company shares, issued new certificates, and paid out dividends, usually through warrants payable at the British Linen Company Bank.[97] They tracked current commodity prices, stayed abreast of other whaling efforts both in the Arctic and around the world, and frequently shared reports on other Scottish and Norwegian whalers as well as their American counterparts based out of New Bedford, Massachusetts, and San Francisco.[98] As businessmen, they placed advertisements, hosted potential customers and VIPs, accepted or declined purchase offers and moved produce.[99] Both George Welch and Robert Kinnes leased out company dock space and charged for boiling and storage services to other whaling outfits, which did not have facilities. This included offers to whaler *Polar* and merchant

[95] *Ibid.,* 7 May 1886.
[96] See, for example, *Ibid.,* Notebook, 'Insurance on Produce &c. in Yard [1873]'.
[97] *Ibid.,* Minutes, 21 May 1879, 21 October 1881 and 16 January 1884.
[98] *Ibid.,* Robert Kinnes's Notes, 'Norwegians [Whalers]' and 'Letter from the Pacific Steam Whaling Coy. San Francisco [dated 17 July 1897]'.
[99] *DC,* 'Sale of Whale Oil by Public Roup [Advertisement], 30 March 1869; UDAS, MS 59, Minutes, 11 March 1880, 2 August 1880, and Notebook, 1880. Among others in 1880, Welch appears to have met with Dr. Coff of Marischal College, Aberdeen (11 January), Evan Ross of the University of Edinburgh (8 October) and George Forbes, Marischal College (16 Oct).

brig *Star* in 1882, as well as the whalers *Earl of Mar & Kellie*, *Maud*, and *Chieftain*.[100] Finally, managers routinely leased portions of the whaling yard to other commercial tenants, as was the case with the blacksmiths, Messrs. D & J Christie in 1883, and Arbroath Sawmill Company in 1889.[101]

Whaling company managers' expansive responsibilities and authority as information specialists far exceeded the expected duties of managers in nearly any other commercial or industrial enterprise during the era. While business committees steered the financial direction of the outfit, company managers were located at the nexus of the business's information and decision-making processes. In essence, they held roles nearer to duties of modern-day Corporate Executive Officers (CEOs) or Corporate Operations Officers (COOs) than a factory, shop, yard or store manager. In the Arctic, whaling men could not be faint at heart in the ice, and to be successful as an extractive maritime business, neither could its managers.

Adaptability with the Trade

Dundee's most successful managers utilised information and keenly observed market realities to apply a remarkable degree of adaptability to the Arctic trade. For the Dundee whaling trade, the gambit to test the feasibility of sealing in Newfoundland's water is remarkable in several ways. First, the expedition shows in microcosm the exploratory tactics and ambition by which Dundee's managing owners conducted the trade. Their constant manoeuvrings, made in a bid to increase profits, ranged far beyond just hunting whales. Most of these commercial experiments proved to be fruitless, short-lived, and sometimes financially disastrous affairs. Nevertheless, looking beyond the financial bottom line, one can see that these enterprises frequently functioned as catalysts for longer-lasting social processes that reached other maritime societies throughout the North Atlantic and Arctic.

Conclusion

Whaling captains have long been the face of the whaling industry. Nevertheless, it was the managers and managing owners – *not* the whaling captains or company directors –

[100] UDAS, MS 59, Minutes, 2 August 1882, 30 October 1882, 5 August 1885, 17 January 1887, and 26 August 1889.
[101] *Ibid.,* 13 August 1883 and 26 August 1889.

who were situated at the heart of the Arctic trade. Scholars understand their presence and participation, but this has been acknowledged only cursorily. Managers constituted a distinct group of participants within Dundee whaling. They practiced a form of relational entrepreneurism which enabled them to influence the social and spatial boundaries for the trade. Their wide-ranging and detailed duties stretched from procuring foodstuffs and purchasing whaling implements to securing insurance for vessels and drafting legal documents mandated by the Board of Trade.

Managers' boundaries extended to an information space involving decision-making authority. Privileged access to all aspects of the business's information gave them asymmetrical leverage to exert their own direction over the company. Working at the nexus of communications, intelligence and commercial operations, managers and managing partners maintained the most extensive contacts with actual and potential businesses, investors, agents, labourers and sea captains. Human relations required them to navigate across different social spaces. This included communicating with whalers' kin, wives and widows as well as textile manufacturers and other wealthy individuals on the company's committees. Within the maritime scene, they also interacted with their middle-class professional peers involved in maritime businesses in Dundee. Navigating these social and informational spaces made whaling managers the ones who facilitated unique opportunities in which other individuals from different places and walks of life could engage and exchange all manners of goods, services and ideas under the commercial umbrella of the Arctic trade. By researching the roles, activities and networks of whaling managers, we therefore are better positioned to develop a more complete social history of the trade that extends beyond men in ships to include investors, labourers, seafarers and the panoply of others with whom they did business. Managers are the key to locating others in the peripheries of the trade. If more company and management papers come to light, these no doubt will afford the best opportunities for finding others about whom we know little.

Understanding how whaling managers shaped the industry and positioned themselves within a larger maritime context reveals that Dundee whaling never existed as a stand-alone entity. Its spaces shifted with the opportunities afford and seized by the managers. In this way, the managers exercised relational entrepreneurism, both commercially for their whaling interests and personally in their own business

engagements. Besides current portrayals of Arctic whaling as a remote and solitary maritime-based industry exclusively concerned with extracting and selling whale products, the Dundee Arctic trade must also be evaluated in relation to Dundee's wider maritime interests. Managers' commercial endeavours beyond the whaling industry, especially as shipping agents, exemplify the interconnectedness of the whaling trade, not only in Dundee's maritime scene but across the world. This chapter shows how Arctic whaling constituted a more entangled and further-reaching reality than previously considered.

Whaling managers were not only participants within the whaling industry, but they were facilitators for others as well. They bridged the finance sector and those who physically laboured within the trade. In this capacity, they more than any others extended the social and spatial boundaries of the trade. This included expanding operational activities to Newfoundland, Hudson Bay and the hinterland of Baffin Island. Subsequently, these operations engaged with the locals for labour, thereby further extending the Arctic trade's influence. Finally, managers extended the Arctic trade by selling produce throughout the world and leveraging their maritime experience and leadership to take other local-global endeavours.

Despite their integral place within this business, as individuals they were never social anchors. Nevertheless, their decisions and influence through their relational entrepreneurism did lead to the Arctic trade becoming a social anchor not only for communities but also investors and labourers. Managers' adaptability within the trade with regard to labour is evidenced by their interaction and employment of Inuit men and women in Chapter 4 and their engagement with Shetlanders and its maritime households in Chapter 5.

Chapter 4

From Baffin to Dundee: Presence, Labour and Translocality

From a rocky, windswept hill on the southern coast of Baffin Island, an Inuk woman scanned the horizon of the Hudson Strait.[1] It was September 1903, and she was looking for the tell-tale sails or plumes of exhaust which would signal the return of the Dundee steam whaler *Active.* Down the hill, several women cleaned and prepared seal skins for the Scottish station at Lake Harbour, each using an *ulu* knife for the task.[2] Further inland, another female working party clambered down slopes on their way from the mining sites to a seaside loading point. They carried Dundee-made jute bags filled with quarried mica. Anticipating the *Active*'s return from a summer of hunting and whale 'fishing' in Hudson Bay (see map in Appendix 4.1) fuelled this final flurry of activity. Freezing weather and growing sea ice soon would make the strait and its coastal fringes treacherous. Upon *Active*'s arrival, the *qallunaat* and Inuit alike would replenish the barque's water, offload extra winter supplies and then stow the animal products and quarried mica in the ship's hold.[3] Upon the vessel's departure for Dundee, the Inuit would shift to hunting caribou, and along with the few remaining Scots, continue preparing for winter and *Active*'s return next summer.

While Scots and Inuit laboured around the clock at Lake Harbour, 3600 km away on the other side of the Atlantic, fourteen-year-old Maria MacKenzie walked down Seagate towards the industrial yard of the Tay Whale Fishing Company (TWFCo) off East Whale Lane in Dundee, Scotland. There, in a poorly lit loft inside a warehouse, she worked alongside thirteen-year-old Augusta Urquhart and eight other young women. Using knives, they separated mica laminae from blocks of excavated rock then trimmed pieces of sufficient size and quality into squares with a cutting machine.[4] By October or

[1] 'Inuk' means 'person'; Inuit describes 'people' when there are three or more. These modern terms generally describe the eastern Arctic's indigenous peoples. Scottish whalers commonly referred to them as 'Esquimaux' or later, 'Eskimo'.
[2] Lake Harbour is now named Kimmirut, a community on southern Baffin in Nunavut Territory, Canada.
[3] Inuit referred to white Euro-Americans collectively as *qallunaat.* They also called Scots, *Siitkatsi.*
[4] NRS, CS 241/1952, Appendix for Pursuer in causa Robert Kinnes, Dundee Against Attwater & Sons, Preston, pp. 82-85.

November, the whaler *Active* would arrive from the Arctic with another shipment of quarried rock, and the process would continue.

The scenario above demonstrates the transitions in labour and operations taking place 'from below' at opposite ends of a transmaritime industry during the early twentieth century. It features women's translocal participation in the Arctic trade and speaks to an increasing reliance on temporal labour to keep the industry economically viable. Scholars employ a range of adjectival synonyms for this type of arrangement, referring to it as casual, seasonal, informal, irregular, temporal and disposable work. The very abundance of such terms suggests that such work is ubiquitous and operates on a massive scale. Industrial economies especially depend on these labour pools for timely and flexible work. However, the necessity for their toil juxtaposed to their ephemerality thrusts them into an opaque area at the margins of industry and history.

This situation imposed socio-economic consequences for these figures. Informal workers can be viewed as offering cheap, unskilled, dispensable and unremarkable services. These attributes reflect and compound constraints that already characterise and disadvantage many labourers' lives. Furthermore, the realities of their situations trickle down to present-day challenges for scholars seeking historical documentation about this workforce subgroup. The lack of written materials necessitates researchers to seek out alternative forms of evidence with which to construct historical interpretations. Thus, these realities prompt several sets of questions in support of this thesis's overall research questions concerning the Arctic trade. First, how do transnational and global historiographies address such issues, and what challenges do temporal labourers pose for these narratives? Second, what types of sources help identify seasonal labourers and the work they performed? Where can these materials be found? And finally, what does available information tell us about the spaces they occupied and the boundaries they faced? With its presence in these societies, (to what degree) did the Arctic trade become a dependable social anchor for helping people 'get ahead' or 'get by'?

This chapter confronts these questions. It examines the shifting roles of Inuit and Dundonian women and men employed as temporary labour and the unrecognised importance of their work to the Arctic trade from the late 1890s to 1922. The research presented here operates in conjunction with Chapter 5 to communicate the wider dynamics of labour, business and personal agency in this maritime industry. In the

following Historiography and Methods section, the chapter presents the approaches and priorities taken by other transnational and global histories for examining the lives of figures 'from below'. It engages these theoretical discussions by questioning how we 'do transnational history' regarding locally constrained temporal figures. Are they also transnational figures? If so, how? It then makes the case for using comparative translocal methods to locate these attenuated figures and contextualise their work and the spaces they inhabited. Second, in the Sources section, the chapter outlines the written documents, oral accounts, material culture and photographic collections which are used to interpret the historical presence of these people. Some of these sources have only recently come to light, and they serve to revise current scholarship. The final sections work in tandem to compare translocal aspects of casual labour between the Inuit and Dundonians in the Arctic trade. This redefines the era and the trade more broadly, and it fills a gap in Arctic historiography while confronting cross-cultural and gendered tropes about Inuit and women's labour in a maritime industry.

Before proceeding, this chapter warrants a disclaimer. As a researcher approaching an indigenous subject from a western point of view, I do not pretend to represent Inuit voices or claim authority over their heritage and history. Nevertheless, as a historian, I have examined historical and historiographical sources, oral accounts and physical evidence, which warrant historical interpretation in Inuit-*qallunaat* relations through the Arctic trade. It is my intent to present this interpretation accurately and conscientiously.

Historiography and Methods

Over the last several decades, scholarship has progressively sought more inclusive histories that interrogate, decentre and decolonise national and grand narratives. Recognising that many 'from below' have been left out of such histories, global historians have called for more 'embedded' approaches to develop representation.[5] Others challenge seemingly ubiquitous tropes, such as who belongs in

[5] European University Institute (Florence) Global History Seminar Group, 'For a Fair(er) Global History', *Cromohs-Cyber Review of Modern Historiography* (2021), pp. 1-9 and Jeremy Adelman, 'What is Global History Now?', *Aeon* (2017), https://aeon.co/essays/is-global-history-still-possible-or-has-it-had-its-moment (Accessed 16 June 2021).

maritime history.[6] Fiona Paisley and Pamela Sculley argue that such national and imperial-based histories operate as epistemologies of power originating with the construction and use of archives.[7] This chapter incorporates these concepts and concerns by approaching labour structures in the Arctic trade 'from below'. Building on the thesis's main research questions, it enquires as to whom the Arctic trade's seasonal labourers were, and what kinds of work they effectuated. It also explores how casual labourers fit into larger discussions of the changing North, especially regarding the Arctic trade's transitive status as a social anchor within Inuit society. Before investigating these aspects, the chapter first considers how these informal labourers raise questions about common assumptions within transnational and global histories and how we 'do' history.

Transnational lives are often associated with perceptions of extensive connections, mobility and agency.[8] Local Inuit and Dundonian women and men working within the gig economy of the Arctic trade appear to have lacked these attributes beyond the immediate social, cultural and physical domains of their lives. Their situation prompts theoretical questions about globalising perspectives. Should historians regard all figures who were distinctively circumscribed by local factors as transnational? Arguably, the answer for many is 'yes'. If this is the case, what makes the 'transnationality' label intrinsically distinctive for new historical narratives?

Some scholars have confronted the issues of locally bounded status, connections and interactions. Tonio Andrade presents a case study of a Chinese farmer in Taiwan during the seventeenth century who was pursued and killed by Dutch naval forces. While Andrade admits that the anecdote is not globally significant by itself, he contends that it offers 'a glimpse into another world'. He makes a pitch for global microhistory approaches arguing they bring 'balance' to historical research.[9] By contrast, Tariq Omar Ali peers into the lives of nineteenth and twentieth-century Bengali peasants and their

[6] See Hannah Hagmark-Cooper, 'Is There a Place for Women in Maritime History?', *History in Focus: The Sea*, 9 (Institute of Historical Research, 2005), https://archives.history.ac.uk/history-in-focus/Sea/articles/hagmark.html (Accessed 13 August 2021).
[7] Fiona Paisley and Pamela Scully, *Writing Transnational History* (London, 2019), pp. 3-5.
[8] For example, Tony Ballantyne, 'Mobility, Empire, Colonialism', *History Australia* 11:2 (2014), pp. 8-10, 19-28 and Desley Deacon, Penny Russell and Angela Woolacott, 'Introduction' in Desley Deacon, Penny Russell and Angela Woolacott (eds.), *Transnational Lives: Biographies of Global Modernity, 1700-Present* (Basingstoke, 2010), pp. 2-10.
[9] Tonio Andrade, 'A Chinese Farmer, Two African Boys, and a Warlord: Toward a Global Microhistory', *Journal of World History,* 21:4 (2010), pp. 573-77.

labour to cultivate jute within an imperial context. While Sven Beckert presents a globe-trotting analysis of cotton as a world commodity, Ali highlights that same aspect with jute, but remains focused on one region, Bengal, where the lives and connections of its small-landowning producers very much remained parochial.[10] Ali maintains that the British Empire's introduction and integration of these peasants into a world capitalist system bestows a global appellation on them.[11] These representations inform views about the Arctic trade's labourers, but differences complicate these considerations. The fleeting nature of seasonal work undermines occupational identities, connections and affiliations with a global product. This especially is applicable to the Inuit who are not labelled by anything but their ethnicity.

As for mobility, Sebastian Conrad makes clear that this type of boundary-crossing movement and interaction has become the defining core of global history. He problematises this 'fetishization of mobility' by delineating some of its 'historiographical baggage'. For instance, global labour histories focus on seasonal workers whose mobility follows their employment. However, Dundee's Arctic workers, especially women, remained in local spheres of employment. Additionally, Conrad claims transnational historians differentiate between the mobility of migrants and nomadic peoples. While groups from sedentary societies who cross borders are global actors, nomads who migrate according to seasonal patterns are not recognised as such, even if they do range across borders. This issue certainly applies to the Inuit who migrated to hunt and travelled with whalers but are seen as regional figures confined to the empty spaces of the Arctic. Conrad, therefore, urges historians not to 'lose sight of those historical actors who were not integrated into extensive networks, lest they fall victim to the current obsession with mobility'.[12]

The perceived constraints of status, connections and mobility apply to Dundee and Inuit workers. However, adding the dimension of temporal work to this combination further complicates the potential for recognition as a transnational figure. To this end, perhaps transnational and global associations are the wrong framework for

[10] Sven Beckert, *Empire of Cotton* (New York, 2014).
[11] Ali, Tariq Omar, *A Local History of Global Capital: Jute & Peasant Life in the Bengal Delta* (Princeton, 2018).
[12] Sebastian Conrad, *What is Global History?* (Oxford, 2016), pp. 3-16, 122, 190-93, 225.

understanding the situations of people such as these. In some instances, reframing temporal local/global subjects around concepts of 'translocality' may be more effective. The fact that Inuit and Dundonians were 'engaged' in local, informal employment at opposite ends of the Arctic trade imputes translocal characteristics. While the commodities involved in the industrial process have some affiliation with a wider capitalist supply and demand system, in their own lived realities, they were local and translocal figures.

Systems of temporal employment also touch discussions about agency. Peter Linebaugh and Marcus Rediker maintain that historians must first acknowledge the presence of the disregarded before identifying active or passive agency within imbalanced power relationships such as coercive labour or coloniser-colonised structures. Their research delves into multi-ethnic (pariah) communities, identifies various forms of working poor and contends for the importance of their place within eighteenth-century Atlantic maritime economies. Using a series of local/global examples by varying scales of analysis, they produce a series of prototype translocal case studies. Linebaugh and Rediker argue that the masses of these underclass labourers and ill-regarded persons, termed 'the many-headed hydra', provoked anxiety and fear for the established social classes and ruling authorities. Therefore, the class, racial and gendered distinctions imposed upon the stigmatised functionally dehumanised the masses as faceless and ephemeral 'beasts of burden'.[13] They assert that the lack of in-depth archival research into these underclasses propagates itself by subtly implying these people are inconsequential to their world and historical recognition.[14] Linebaugh and Rediker's emphasis intends to show that historically peripheral figures never existed so much as they were constructed within history and perception. The application of recognising 'presence' directly relates to case of the Dundonians and Inuit who worked in the Arctic trade. While informal workers in Dundee easily melt into a wider industrial workforce overwhelmingly linked with textiles, the Inuit experienced the same diminution due to cultural differences and geographical distance. This chapter seeks to

[13] Peter Linebaugh and Marcus Rediker, *The Many-Headed Hydra: Sailors, Slaves, Commoners, and the Hidden History of the Revolutionary Atlantic* (Boston, 2000), pp. 42, 61.
[14] Linebaugh and Rediker, *Many-Headed Hydra*, pp. 6-7, 43-49.

contribute to the definition of the Arctic trade and its historiography by identifying under examined people and activities within this industrial system.

Beyond connections, mobility, status and presence, histories also tend to concentrate on those exhibiting 'more' agency. Two principal contributors, W. Gillies Ross and Kenn Harper, have emphasised historical qallunaat-Inuit exchanges in the central and eastern Canadian Arctic. Many consider Ross, a historical geographer, to be Canada's most authoritative figure on Arctic history. His works inform nearly every historical publication on the Arctic. Ross's constructed narrative on whalers' employment of Inuit in Hudson Bay and Hudson Strait opens historiographical spaces for confirmation, revision and reinterpretation.[15] While his research predominantly studies nineteenth-century American whalers, research in this chapter features Scottish-Inuit labour interactions, mostly during the early twentieth century. Harper's writings and research add to the corpus of literature underscoring Inuit agency. His efforts largely centre on developing specific historical accounts that speak to Inuit audiences. Uniquely, he is a *qallunaaq* who resided in the Canadian Arctic for several decades, speaks and writes fluent Inuktitut, and possesses a one-of-a-kind collection of Arctic historical materials and photographs. He mainly disseminates his personal research in popular histories and a regular 'Taissumani' column printed in the *Nunatsiaq News.*[16]

The expansion of feminist studies and research into non-western histories has introduced historiographical debates about how to interpret agency. These discussions highlight the active agency of those working at the peripheries. From an Arctic point of view, social scientists have led the way in documenting Inuit experiences and agency in their cross-cultural relationships with Anglo-Scottish whalers, especially in the Cumberland Sound region of southeast Baffin.[17] As part of a Canadian government initiative in the 1970s, the anthropologist Dorothy Eber, with the assistance of Inuit translators, interviewed community elders in several places across the eastern Canadian Arctic to record their relatives' or their own personal memories about whaling and

[15] Ross, W. Gillies, *Whaling and Eskimos: Hudson Bay 1860-1915* (Ottawa, 1975), pp. 77-85.
[16] See Kenn Harper, *Give Me My Father's Body: The Life of Minik the New York Eskimo* (London, 2001).
[17] Marc G. Stevenson, *Inuit, Whalers, and Cultural Persistence: Structure in Cumberland Sound and Central Inuit Organization* (Oxford, 1997), pp. 72-93.

interactions with *qallunaat* from the early twentieth century.[18] She contextualises these recollections within a wider, accepted narrative shaped by Ross and historical accounts from the time. The panoply of personal anecdotes within Eber's research remains an irreplaceable contribution to preserving indigenous voices on Baffin's whaling past.

One striking aspect of Eber's interviews is the foregrounding of women's presence and agency in their contact with the *qallunaat*. In some cases, the Inuk she interviewed acknowledged being a progeny of a whaler and Inuit mother. Eber's book recalls one interpreter's comment, 'It is a rare Inuk who has no whaler ancestor'.[19] With more primary sources now available, historical research and methods offer new opportunities to place some of these interviews into a wider, revised narrative about Inuit labour.

Historians regularly consider how to interpret moments of interaction, exploitation and their effects between different historical groups of actors. These exchanges often take place during temporary arrangements. So, how does temporality affect human agency, especially since it is usually subsumed within some sort of imbalanced power relationship? Lynette Russell addresses some of these issues in her historical-anthropological work. *Roving Mariners* brings attention to the historically neglected and boundary-transgressing Aboriginal men and women who worked in Tasmania and southern Australia's heterogeneous transmaritime whaling and sealing communities. While indigenous men were controlled on land, they were 'free at sea' when engaged as mariners aboard whalers in the southwest Pacific.[20] Russell acknowledges colonialism's negative heritage of dispossession, disease, murder and missionization, but she describes the Aborigine's active agency through the entrepreneurial opportunities afforded them in whaling and sealing. As such, Russell disrupts the label of 'colonizer' by investigating the complex inter-relationships between Aborigines and 'newcomer' men. She herself comes from this mixed heritage, and in one instance, Russell relates an important encounter that changed her own academic

[18] Dorothy Eber, *When the Whalers Were Up North* (Boston, 1989).
[19] Eber, *When the Whalers*, p. xviii.
[20] Lynette Russell, *Roving Mariners: Australian Aboriginal Whalers and Sealers in the Southern Oceans, 1790-1870* (Albany, 2012), pp. 4-10.

outlook on 'binary definitions'. When speaking to a relative about the sexual slavery into which many Aboriginal women were pressed, her cousin replied that

> The characterization vilified his grandfather and, worse, reduced his grandmother to the status of victim. Furthermore, he emphasized that his family's oral history recorded both of them as sealers and not, as I previously regarded them, a sealer and his "woman" or "wife". In his opinion, my understanding…failed to take account of both her labor and autonomy.[21]

Thus, Russell pointedly insists that the relationships between many Aboriginal women and 'newcomer' men were mutually beneficial. Men depended on women's knowledge, strength, and ability to hunt and provide food for survival. She notes that, 'sealing in the southern oceans found women heavily involved'. They hunted, processed meat and treated seal skins for sale.[22] Russell's work resonates with many realities that existed in the Arctic trade concerning Inuit women and their active, personal agency as people and casual labourers. Though she admits that at times it is nearly impossible to recover historical voices of individuals, her methods inform this chapter's efforts to locate aids to reconstruct histories from the peripheral past.

Taken together, these scholarly works indicate that informal labourers and women's participation varied contextually between cultures. This is also true in Dundee where embedded historical notions of gendered spaces, both at home and at work, have neglected nuances. Eleanor Gordon's research on Scottish women's lives between 1830 and the Great War confronts the ways in which the period's conventions and expectations constrained them. She compares working- and middle-class actualities to borrowed English images of the 'angel in the house' and 'downtrodden factory worker' that so often stereotyped them.[23] Gordon finds that poverty drove women to work irrespective of social convention. Since many women engaged in casual or seasonal employment, especially among the working class, this shows that ideas of what

[21] *Ibid*., pp. 12-22.
[22] *Ibid*., pp. 6-14, 93.
[23] Eleanor Gordon, 'Women's Spheres' in W. Hamish Fraser and R. J. Morris (eds.), *People and Society in Scotland II: 1830-1914* (Edinburgh, 1990), pp. 206-09.

constituted women's work were not necessarily fixed.[24] Gordon's assessments touch upon issues regarding labour, space and poverty in the Arctic trade's sites at Dundee.

While sexual divisions of labour continued to exist, this chapter provides evidence that the enterprise did not wholly restrict women as labourers from workspaces at Dundee's waterfront. For decades the Arctic trade offered informal employment opportunities to both men and women. This defies the traditional archetype of industrial harbour spaces as hyper-masculine sites of marine labour by day, and places inhabited by a clutch of salacious stock characters, such as boarding-house keepers, crimps and prostitutes, preying on poor Jack Tar by night.[25] Increasingly coastal and port literature is identifying more inclusive narratives about these obscure interstices within littoral spaces, where 'the seafarer came ashore…[and] the maritime and urban worlds collided'.[26] At first glance for the Arctic trade, evidence appears to situate this historical inclusiveness positively as a social anchor bringing together persons from Dundee's wider community. However, Noel Whiteside's 2017 policy paper on flexible employment suggests a darker side to casual labour, which can be inferred to include the Arctic trade. Whiteside's argument essentially supports Gordon's viewpoint on poverty from a political economist's position. Examining the nineteenth century as a historical case study, he remarks that 'irregular and insecure work (termed "casual"), then as now, proved a fundamental cause of poverty and social dependency'.[27] This introduces doubts about the efficacy of the Arctic trade as a social anchor in Dundee during the early twentieth century. However, applied within a comparative translocal perspective, it reifies the understanding that the Arctic trade's

[24] Gordon, 'Women's Spheres', pp. 206-09. See also Clive H. Lee, 'Scotland, 1860-1939: Growth and Poverty', in R.C. Floed and P. Johnson (eds.), *The Cambridge Economic History of Britain since 1700* (Cambridge, 2003), pp. 428-55.
[25] Brad Beaven, 'The Resilience of Sailortown Culture in English Naval Ports, c.1820-1900', *Urban History*, 43:1 (2016), pp. 72-95 and Valerie Burton, 'Boundaries and Identities in the Nineteenth-Century English Port: Sailortown Narratives and Urban Space' in Simon Gunn and Robert J. Morris (eds.), *Identities in Space: Contested Terrains in the Western City since 1850* (Aldershot, 2001), pp. 137-51.
[26] See Graeme J. Milne, *People, Place and Power on the Nineteenth-Century Waterfront* (Cham, 2016) and Brad Beaven, Karl Bell and Robert James (eds.), *Port Towns and Urban Cultures: International Histories of the Waterfront, c. 1700-2000* (London, 2016).
[27] Noel Whiteside, 'Flexible Employment and Casual Labour: A Historical Perspective on Labour Market Policy', *History & Policy* (2017), https://www.historyandpolicy.org/policy-papers/papers/flexible-employment-and-casual-labour-a-historical-perspective-on-labour-ma (Accessed 11 June 2022).

inclusive utilisation of casual labour brought about different effects in different economic and cultural contexts.

Sources

Delving into the translocal lives of seasonal labourers proves a time-intensive undertaking. Beyond the past research published in secondary sources, written source materials found in archives are scarce and fragmented. Documents may never have existed or have been destroyed or lost. Searching for census, birth, marriage, death and testament/estate records in Scotland usually proves fruitless. While valuation rolls may contain a particular person's name, one must first know their associated address, otherwise the search becomes a time-demanding or impossible task. The majority of these rolls are not digitised. Moreover, an astonishing number of transitory figures in Dundee moved house on a frequent but irregular basis, adding to the difficulties in identifying them and establishing longitudinal histories. For a precious few, some financial details exist in scraps of evidence, contained in receipts, memos, brief annotations or wages entries.

Materials produced by whalers offer the first and most obvious pathway for finding cases of Inuit labour. Some Dundee whalers provide helpful glimpses. Diaries recording personal observations include voyages aboard *Esquimaux* (1899) and *Active* (1900).[28] Whaling logbooks from *Active* (1902), *Queen Bess* (1903-04), *St Hilda* (1908, 1909) and *Ernest William* (1912) also make contributions.[29] Other logbooks for the *Snowdrop* (1907-09) and *Seduisante* (1910) also exist, but limited time and funds prevented travel.[30] More recently, other records and logs have come to light. The 1901 logbook for Robert Kinnes's Hudson Bay whaling station near Repulse Bay, held at Local History Centre at the Dundee Central Library (LHC-DCL), and Walter Kinnes's voyage, mining and station records for Lake Harbour from 1904 to 1908 have offered valuable

[28] Andrew Barclay Walker, *The Cruise of the Esquimaux, Steam Whaler, to the Davis Straits and Baffin Bay, April–October 1899* (Liverpool, 1909); and Privately held collection, Voyage diary of Robert Kinnes to Hudson Bay aboard *Active*, 1900.
[29] UDAS, MS 333/1 (a), Log Book of S.S. *Active*, 1902, MS 333/1 (b), Winter Log of *Queen Bess*, 1903, MS 333/2, Log Book of Walter Kinnes, S.S. *Active* to Hudson Strait, 1904, MS 333/3, Log of Walter Kinnes, S.S. *Active* and Lake Harbour, 1906, MS 333/5, Log of Walter Kinnes, S.S. *Active* to Hudson Straits, 1908; and LHC-DCL, Log Book of S.S. *St Hilda*, 1908, 1909, and Log of *Ernest William*, 1912, respectively.
[30] Sauner Special Collections Library, Dartmouth University, NH, V. Stefansson Collection on Polar Exploration, Mss 32 and 123.

insights into Inuit labour and also serve to connect and reaffirm previously known pieces of information.[31]

Deposition testimonials for Court of Session cases held at the National Records of Scotland (NRS) detail rarely documented 'inside' information confirming the value of women's work both in Baffin and Dundee. During the summer of 1904, Robert and Walter Kinnes, in addition to several young men and women – all temporary labourers in the TWFCo's yards, answered questions in Kinnes's lawsuit against a Preston-based mica processing firm.[32] In 1907, Kinnes was back in court, representing an American firm and pursuing a case against the gentleman-whaling adventurer, Osbert Clare Forsyth Grant of Ecclesgreig in Kincardineshire over 'stolen' walrus hides.[33] Lengthy testimonials by the pursuer, defendant and other witnesses detail how and why Scots engaged Inuit labour.

Other historical sources come from ethnological studies, government expeditions and Anglican missionary accounts around Baffin. British and American scientific institutions and journals sought studies and descriptive accounts that highlighted the lives, social structures and cultural practices of 'native peoples'. In 1883, the German anthropologist Franz Boas and his 'servant' Wilhelm Weike went to the Arctic for such work. While in Baffin, Boas chronicled the presence of *qallunaat* and their influences among Baffin's different Inuit communities and lifestyles. His published report later became a classic within his field.[34] Boas leaned heavily on the American and Scottish whalers to procure more ethnological data and material collections. In one published piece, Captain James Mutch, a Scottish whaler, produced a rare contemporary narrative describing Inuit lives and encounters in Ponds Bay (now Pond Inlet) in northern Baffin.[35]

During the late nineteenth and early twentieth centuries, the Dominion of Canada sent government expeditions to the Arctic to collect natural resource and

[31] LHC-DCL, Journal from Hudson Bay Whaling Station, 1901; and UDAS, MS 333/1 (c), Log of *Queen Bess* and Lake Harbour Mines, 1904, and MS 333/4, Records of Mines at Kigmeron, 1904-08.
[32] NRS, CS 241/1952.
[33] NRS, CS 241/3980, Appendix to Reclaiming Note for Wrightington & Company…[and] Robert Kinnes…against Osbert Clare Forsyth Grant, 1907.
[34] Franz Boas, *The Central Eskimo,* in Government Printing Office, *Sixth Annual Report of the Bureau of Ethnology to the Secretary of the Smithsonian Institution, 1884-1885* (Washington, 1888), pp. 399-670.
[35] James Mutch, 'Whaling in Ponds Bay', in Laufer, Berthold (ed.), *Boas Anniversary Volume: Anthropological Papers Written in Honor of Franz Boas* (New York, 1906), pp. 485-500.

demographic information as well as exercise their sovereign authority over outsiders in the area. William Wakeham entered his impressions of the presence of Dundee's Arctic trade and their reliance on the Inuit during the 1897 Marine and Fisheries Canada expedition to Hudson Bay and Cumberland Sound.[36] Anglican missionaries to Baffin also supply a diverse range of source information. Archibald Fleming published his memoirs of experiences and evangelistic efforts in the Arctic from his base at Lake Harbour.[37], Reverend Greenshield answered questions during a deposition for a legal case in British Courts of Session, which provided descriptions of mixed settlements with whalers and Inuit.[38]

British newspaper articles and features also provide helpful materials for contextualisation. Journalists were not directly involved in the industry, and they could not critically challenge the numbers or accounts presented to them. Still, they served to confirm and elucidate details which otherwise were too common to include in whaling journals or not applicable for government reports. Newspapers imparted a distinctively Western opinion, orientation and interpretation of the people, activities, cross-cultural relationships and scope encompassed in the Arctic trade.

The Inuit's historical voices are much more difficult to capture. Material, visual culture, and anecdotes from oral histories offer crucial and illuminating viewpoints from First Nation peoples. The *ulu*, or 'woman's knife' is one of the most telling pieces of material culture for understanding the evolution of women's working roles among the *qallanuut*. Comparing samples of *uluit* from museums supports one of this chapter's critical claims about indigenous seasonal labour. Videos featuring modern-day Inuit women discussing the use of the *ulu* along with oral history accounts and published scholarship further contextualise this important key to women's past. Photographs, sketches and drawings also illuminate details and perspectives which cannot be captured in documents. Like written evidence, however, they have experienced their own diaspora, which can leave them without known provenance or context. Human identities usually elude the researcher too. Important samples for this chapter include

[36] William Wakeham, *Report of the Expedition to Hudson Bay and Cumberland Sound in the Steamship "Diana" under the Command of William Wakeham, Marine and Fisheries Canada in the Year 1897* (Ottawa, 1898).
[37] Archibald Lang Fleming, *Archibald the Arctic* (New York, 1956).
[38] NRS, CS 241/3980, pp. 36-55.

the ALB-111 whaling photograph album of the Dundee whaler *Diana* from 1900 at the University of St Andrews Special Collections (UStASC); the James Cantley photographic collection from the Hudson's Bay Company Archives (HBCA) in Winnipeg, Manitoba; the University of Dundee Archive Services (UDAS) and McManus Museum and Gallery (McMG).[39] Taken together, these sources problematise and revise the Arctic trade's participants, their activities and Scottish-Inuit interactions through a translocal lens focused on systems of production.

Free-traders or Whalers? Context and Implications for the Arctic Trade's Final Era

Scots in the Arctic pushed the boundaries of their own exploitative and unregulated, environmental empire. Between the 1850s and 1890s, whalers from Aberdeen and Peterhead 'wintered-over' and established land stations around Cumberland Sound to enable hunting whales in the spring and fall.[40] Of course, all British whaling voyages sought opportunities whenever possible to take bears, walrus, narwhal and even musk oxen and 'salmon' (Arctic char). Vessels whaling off the Baffin coast, routinely met, traded and socialised with Inuit groups. Photograph collections capture some of these moments in intimate detail.[41]

By the 1880s, Dundonians began to recognise clearly what they had feared – the bowhead population had virtually disappeared and whaling was in trouble.[42] With the future of the maritime industry in jeopardy, whaling interests began a shift towards targeting and harvesting other animals on an industrial scale. For instance, in 1882, Dundee managers received a copied report from Alfred H. Allen, 'a lecturer on chemistry at Sheffield School, Medicine, &'. The chemical results of which 'shew that the closest similarity exists between genuine Sperm Oil and the Oil from the [Northern] Bottle nosed whale'.[43] Between 1882 and 1886, Dundee whalers subsequently targeted these North Atlantic cetaceans and quickly diminished them until returns no longer justified the inputs to harvest them as Table 4.1 enumerates below. This began a progressive

[39] Malcolm Archibald, *Ancestors in the Arctic: A Photographic History of Dundee Whaling* (Edinburgh, 2013), pp. 115-29.
[40] Sanger, *Scottish Arctic Whaling,* pp.121-34.
[41] UStASC, ALB-111 contains photographs of the Inuit leader Olnick with one of his wives onboard *Diana.* During *Diana*'s visit he died, and more photos capture his burial.
[42] *DC,* 'The Royal Commission on the Depression of Trade', 25 September 1885.
[43] UDAS, MS 59, TWFCo Company Papers.

Table 4.1. Arctic Produce by Dundee Whalers, 1858-1911.

Arctic Produce by Dundee Whalers, 1858-1911												
	1858-61	1862-66	1867-71	1872-76	1877-81	1882-86	1887-91	1892-96	1897-1901	1902-06	1907-11	Total
Whale*	219	210	313	597	320	219	70	81	71	65	58	2,223
Seal[#]	8714	155,217	266,969	213,658	476,882	382,269	349,749	159,815	28,232	4,976	13,898	2,060,379
Bottlenose[%]					33	801	55					889
Beluga/narwhal					1,490	3,769	4,088	4,047	1,745	940	1,542	17,621
Walrus						424	1,299	250	2,593	875	4,190	9,631
Polar bear									485	806	1,044	2,335
Arctic fox										1,288	905	2,193

*Bowhead and North Atlantic right whales [#]Harp and hooded seals [%]Northern bottlenose whales Source: Private collection, 'Kinnes Lists', 1858-1911

trend of targeting 'scraps' which broadened in scope over the following decades. The 1890s reinforced these efforts when other ventures proved unfruitful. In 1892, Robert Kinnes sent four whalers (with a notional crew of scientists) to Antarctica in search of Southern right whales. The Dundee Antarctic Whaling Expedition (or DAWE) failed in this regard. The voyage was financially rescued by harvesting Southern Ocean seals.[44] By the mid-1890s, both Alexander Stephen and Sons and DSWFCo had ceased operations, and most of Dundee's whalers no longer participated in the spring Newfoundland seal hunts. This accounts for the massive drop in seal catches from 1892-96 and 1897-1901 (Table 4.1). Trying to mitigate the changes in profits and declining cetacean harvests, in the 1900s, some Dundee interests began acquiring land stations along Baffin's coast and northwest Hudson Bay. This served a two-fold intent. It buoyed efforts to exploit Arctic fauna at sea and on land hopefully on an industrial scale. It also reduced expenditures by reducing the size of wage-earning crews while engaging (employing) Inuit seasonal labour in the Arctic.

If any Scot from Dundee most imprinted the Arctic trade during this final era, it was Robert Kinnes.[45] He was the manager of TWFCo, an outfit that had not owned a whaler since the mid-1880s. Nevertheless, his own operation, Robert Kinnes and Son, functioned as managing owner for most of the whaling vessels sent to the Arctic during the twentieth century. In 1908, he testified in a Court of Session deposition that he was the 'managing owner of seven, out of the eleven British vessels, at present engaged in

[44] W.G. Burn Murdoch, *From Edinburgh to the Antarctic: An Artist's Notes and Sketches during the Dundee Antarctic Expedition of 1892-93* (London, 1894).
[45] For more on Robert Kinnes's operations in the Arctic, see Maritime History Archive (MHA), MF-208, Gavin Donald White fonds, Gavin Donald White, *The Far Shores of Baffin* (Unpublished typescript, c.1975), pp. 129-45.

fishing and trading in the Arctic'.[46] He used TWFCo's facilities in support of those operations. In 1900, Kinnes voyaged to the Arctic, and claiming to have discovered a valuable deposit of mica, he sought a grant of unsurveyed land 'in the Territory of Franklin' on Baffin from the Canadian Minister of the Interior.[47] He was granted the right to twelve claims in 1901, and the following year he sent his son, Walter, to construct a station and extend the mica mining operations at Lake Harbour.[48] Kinnes was the first to own a commercial mine in Baffin history. By 1904, his men had claimed six sites for mining mica and one for 'etoriktung', which was likely quartz or graphite.[49]In the Arctic, Kinnes and others relied on the Inuit for labour, produce and the processing of skins. In Dundee, Kinnes continued to use casual labour, but instead of processing blubber and whalebone, labourers processed mica to sell for industrial uses.

Besides Lake Harbour, Kinnes had a small outpost near Cape Fullerton west of Southampton Island in northwest Hudson Bay. By the mid-1900s, he had gained control over a former American station at Repulse Bay on the Arctic Circle, north of Southampton Island (see Appendix 4.1). During the first decade of the 1900s, Kinnes annually sent the whaler *Active* to drop supplies at Lake Harbour, take onboard about 80 Inuit including their families and depart for Hudson Bay. There, *Active* would drop anchor at Repulse Bay, restore supplies and take onboard goods procured over the winter. It would then spend the summer hunting and whaling before returning one last time to Repulse Bay and Lake Harbour and ultimately departing for Dundee.[50] Besides these operations, Kinnes also sent whaling vessels to fish more traditional whaling waters in Davis Strait and Baffin Bay. Later in the decade, he took over the Ponds Bay station in north Baffin and a former Peterhead whaling station known as Kekerten in Cumberland Sound. By 1914, however, Kinnes had abandoned the Lake Harbour station and sold its stock for £141 11s 1d to Hudson's Bay Company (HBC).[51]

[46] NRS, CS 241/3980, p. 73.
[47] UDAS, MS 59; and Private collection, 'Voyage Diary of Robert Kinnes to Hudson Bay Aboard *Active*, 1900'.
[48] LAC, RG2, Privy Council Office, Series A-1-a, Robert Kinnes of Dundee, Scotland granted to 1901/09/01 to stake out mining claims in Dist[rict] of Baffin Land and UDAS, MS 333/1.
[49] UDAS, MS 333/2.
[50] TNA, BT 100/269, CA and Official Log Book, *Active* (O.N. 19557), 1902-1910.
[51] HBCA, A.12/FT, Misc/248, 'Kinnes, Robert – Abandoned Trading Station, Lake Harbour'.

Two other smaller Dundee-based interests also maintained stations in Baffin. In 1902, John Miller Hunter (John M.H.) Mitchell, manager of Balaena Fishing Company (BFCo), joined with his father, James Mitchell, a long-term managing owner, to establish a small enterprise, known as Dundee Ponds Bay Company.[52] Their combined physical assets consisted of the whalers *Eclipse* and *Balaena*, the Ponds Bay station and the newly acquired ketch *Albert*, which had been purchased from Wilfred Grenfell's Royal National Mission to Deep Sea Fishermen.[53] While *Eclipse* and *Balaena* voyaged north on the Davis Strait-Baffin Bay run, their hunting emphasis increasingly focused on beluga, narwhal and walrus. The *Eclipse* spent more and more time on station pursuing prey in north Baffin and Lancaster Sound. On *Albert*'s initial voyage north in 1903, Capt James Mutch stopped at Cumberland Sound and took onboard Inuit and the German whaler, William Duval, for hunting and work at the station.[54] At Ponds Bay, Inuit carried on 'rock-nosing' missions and processed walrus, 'white whale' (beluga) and 'unicorn' (narwhal) hides at the station for return to Dundee.

Osbert Clare Forsyth (O.C.F.) Grant owned the other station, called 'Signia', near Cape Haven on Baffin's southeast coast (Appendix 4.2). Grant was a young gentleman-adventurer from Ecclesgreig, near Montrose, who first owned the small ketch *Snowdrop* outright in 1905. After it sank on its second voyage in 1906, Grant lost the Court of Session case pursued by an American firm and Robert Kinnes, and he was ordered to purchase the Signia station. He then acquired a second vessel, *Seduisante*, and established his base of operations out his new station engaging the numerous Inuit who had settled nearby. In 1911, the *Seduisante* struggled in a storm, and after Grant managed to land the Inuit ashore, the vessel was lost with all hands onboard (Appendix 4.1).[55]

Noting the steep drop in bowhead and right production, whaling histories minimise the focus on this last period, generally summarising it as one of inevitable economic decline then failure.[56] Others have noticed these transitions as well,

[52] Harper, *In Those Days*, pp. 116-20.
[53] City of Dundee Archives (CDA), CE 70/11/14.
[54] White, *Far Shores of Baffin*, pp. 146-57; and Harper, *In Those Days*, pp. 116-20, 169-74.
[55] Robert J. Fraser and William F. Rannie, *Arctic Adventurer: Grant and the Seduisante* (Lincoln, Ontario, 1972), pp. 157-69.
[56] Gordon Jackson, *The British Whaling Trade* (1978); reprinted in the *Research in Maritime History* Series, No. 29 (St John's, 2005), pp. 129-38.

emphasising the Scots' hunt for Arctic animals other than the bowhead, and their increased dependence on the Inuit. These scholars use the term 'free-traders' to distinguish this era from its whaling past. Historical and anthropological works have outlined the general history, trajectory and select moments of this 'free-trader' era. Reverend Gavin Donald White is generally regarded as one of its most authoritative scholars. However, his 290-page typescript revealing an impressive amount of archival research never made it to publication. The work lacks citations and a bibliography. White's history focuses almost exclusively on the Scots and their 'free-trader' enterprises in Baffin from the 1890s to the 1920s.[57]

The word 'free-trader' is problematic for describing Dundee's final era in the Arctic trade. It intends to speak to the unaffiliated nature of the *qallunaat* living and carrying out commercial activities in the eastern Arctic. Dorothy Eber modifies the word to 'hunter-traders' because they hunted and traded for 'furs' as much as for oil and baleen.[58] While both of these terms acknowledge different aspects of the people and era ('free-' and 'hunter-'), the emphasis inevitably comes back to the common denominator, 'traders'. Some historical sources, such as the Reverend Greenfield's deposition at the Court of Session case in 1907 against Osbert Clare Forsyth Grant, even reference Euro-Americans in the area as 'traders'.[59] This, however, was not a particular expression used by those in the industry, though obviously they did it alongside fishing as one of their enterprises.[60] At the 1904 deposition for Robert Kinnes's pursuing case against Attwater and Sons of Preston, Robert Kinnes referred to himself as he had for over twenty years, a 'shipping agent'.[61]

The name 'traders' connotes associations with the long-standing history of fur-trapping and HBC operations in the Canadian wilderness to the 'South' and west of Baffin. Within Arctic contexts, 'free-traders' appeared before and after 1870, in the areas of Rupert's Land and North-West Territories (also called 'Indian Territory'), after

[57] White, *Far Shores of Baffin.* His subsequent published articles help to mitigate this lack of citations; see for example, G. White, 'Missionaries and traders in Baffin Island, 1894-1913', *Journal of the Canadian Church Historical Society* 17:1 (1975), pp. 2-10.
[58] Eber, *When the Whalers,* pp. 70-71.
[59] NRS, CS 241/3980, pp. 36-51.
[60] *Ibid.*, p. 73.
[61] NRS, CS 241/1952, p. 48.

HBC sold them to Canada.[62] By the 1900s, scientists and others referred to 'free-traders' when observing the growing number of 'newcomers' in the northwest regions of Canada and the western Arctic, but these were an altogether different sort than Dundee's SME operations.[63]

Used today, 'free-trader' reinforces a historical interpretation emphasising traditional Western perceptions of this commercial era. One way it does so is by presupposing a limiting paradigm on certain people involved in the industry. The terms 'trader' and 'trading' brands the era as one full of transactive moments. For example, Inuit have skins, and they trade them to the *qallunaat* for items, such as metal tools, wood, beads, pipes, tobacco and the like. Such point-in-time dealings in Scottish-Inuit interactions prioritise the most easily recognisable figures conducting the trade – men. What is more, 'free-trader' specifically identifies the presence and influence of the *qallunaaq* in the trade, and not the Inuit with whom he is engaging. He is the one who demonstrates obvious personal agency. The emphasis of this phrase diverts attention away from the Inuit, and it glosses over all the 'others' – including the women and children – who contributed from the peripheries.

The idea of 'trading' also places an emphasis on business transactions, not processes of manufacture. While trade certainly happened, its strictest sense most often applied to those 'outside' Inuit who were not engaged by the Scots.[64] They typically travelled to the station for that purpose, but these trades usually rendered small quantities of materials. Logistical, geographical and environmental challenges limited the capacity for trips, especially when hauling materials like walrus hides by dog-sled or *umiak*.[65]

The notion of the 'fur-trapper' in the Arctic also only speaks to a few terrestrial Arctic species – the polar bear, Arctic fox and wolves. Scots recognised the Inuit's dependence on caribou, referred to as 'deer', for their year-round survival, and they did not seek to harvest them for export. For Scots, besides polar bears and Arctic foxes, their

[62] Stephen Royle, *Company, Crown and Colony: The Hudson's Bay Company and Territorial Endeavour in Western Canada* (New York, 2011), pp. 5-10.
[63] See J. Patterson, 'A Meteorological Trip to the Arctic Circle, *The Journal of the Royal Astronomical Society of Canada,* 9:3 (1915), pp. 101-20.
[64] Ross, *Whaling and Eskimos*, p. 77.
[65] NRS, CS 241/3980, pp. 76, 86; An *umiak* is a large skin-covered boat for carrying multiple people or goods; for an excellent photographic example, see UStASC, ALB-111.

operations during the twentieth century centred on obtaining walrus blubber and hides, seal blubber and skins, white whale and narwhal hides and narwhal 'ivory'. According to John Gibson Withinshaw, manager of the Penketh Tannery Company in Warrington, Lancashire,

> Walrus hides are used for burnishing steel parts, such as gun fittings, and all small arms, and kitchen ranges. They are cut into discs and used with emery as a wheel. They are used as part of machinery, but not for domestic use.[66]

This distinction between skins and hides and 'furs' is an important one. Furs were for fashion. Walrus hides supported industry. This was the Arctic trade's primary purpose – to furnish materials for the inexhaustible demand of industry. The rest of the animals' carcases was given to the Inuit.[67]

Contrary to the 'trader' supposition, the *Siikatsi* continued to place a premium effort on hunting whales during the spring and fall seasons. Examinations of Kinnes's Hudson Bay whale station and the logs from the whalers *Active*, *Nova Zembla, Diana* and numerous others, make it clear that this was a priority, no matter how fruitless it could be. The engaged Inuit whalemen operating from these stations used whaleboats and harpoons, waiting for whales to appear at the edges of the ice floe, a practice referred to as 'rock-nosing'.[68] Other activities, such as mica mining, also do not fit with the 'hunter-trader' tag.

For these reasons, the term 'Arctic trade' presents a more inclusive framework for defining the industry, the work and all of its participants. A translocal approach further pushes the spatial concept of the industry by connecting people and places, whether they are men hunting the animals in the Arctic, women cleaning the skins or Dundonians engaged with processing mica shipments from the Arctic. These seasonal labourers were translocal actors because they exhibited personal agency from opposite ends of the Atlantic by engaging in systems of production in support of the trade. As the material culture of knives helps to demonstrate, this includes women, who cleaned whalebone in the yards, prepared skins in the Arctic, and split mica for use.

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[66] NRS, CS 241/3980, p. 33.
[67] *Ibid.*, pp. 36-51.
[68] Jeff W. Higson, 'Commercial and Subsistent Harvest of Bowhead Whale (*Balaena mysticetus*) in Eastern Canada and West Greenland', *Journal of Cetacean Research and Management,* 11:2 (2010), p 148, and LHC-DCL, Hudson Bay Whaling station.

Inuit Labour in the Arctic Trade

Arctic scholars note that hunting is a bedrock element within Inuit cultural identity.[69] Scottish whalers understood men's preferred work was to hunt. They also recognised the speed and proficiency with which the Inuit learned to use *qallunaat* hunting tools and adapt to their maritime and whaling methods. William Wakeham observed this too remarking, '[they] are first-class boatmen and…as expert as white men in the use of modern whaling tools'.[70] The 1901 'logbook' for Robert Kinnes's Hudson Bay whaling and trading station at Cape Fullerton provides further insight into the activities and priorities for whaling operations there. Above all, the few Scots maintaining the station over the winter were tasked with enabling the Inuit to hunt whales during the spring and fall hunts. The station furnished six fully equipped whaleboats, each manned by five oarsmen and a harpooner. The station also kept a store of wood and iron so that the Scottish carpenter/blacksmith could repair the boats and equipment for Inuit use.[71]

Despite the whaling efforts and the boon even one whale could offer, real production came pursuing other animals. Inuit men increasingly took more animals due to rifles, ammunition and wooden-handled metal hunting equipment as opposed to bows and arrows and harpoons and spears fashioned from bone, ivory or antler. The *qallunaat* supplied them these things in exchange for skins, hides and blubber. The introduction of rifles (typically Henry Martinis) and cartridges proved a mixed blessing and curse. Even while employed to the *qallunaat,* Inuit continued following traditional hunting patterns dictated by the seasons.[72] Using rifles, men were able to kill prey, especially caribou, with greater efficiency, thus supplying more meat and skins for clothing. As Henry Munn, another Scottish whaler in Baffin, once wrote for an anthropological publication, rifles had a boomerang effect.

[69] Richard G. Condon, Peter Collings and George Wenzel, 'The Best Part of Life: Subsistence Hunting, Ethnicity, and Economic Adaptation Among Young Adult Inuit Males', *Arctic*, 48:1 (1995), pp. 31-46.
[70] Wakeham, *Expedition…in the Steamship "Diana",* pp. 74-75.
[71] LHC-DCL, Hudson Bay Whaling Station, 1901.
[72] UDAS, MS 333/3.

> [The natives] agree that a regular supply of ammunition explains the absence of starvation and consequent increase in births…Against this they agree that rifles and ammunition also explain the depletion of the cariboo herds.[73]

Besides depleting caribou herds, Philip Goldring states that by the First World War, the Inuit had lost the capacity to hunt caribou with bows and arrow, and they frequently faced starvation during the winters.[74] Inuit in Baffin, especially southeast Baffin, had become dependent on their Scottish contacts for ammunition, not just for trade but also for community survival. In 1916, Robert Kinnes finally managed to send the relief vessel, *Tilly*, but it wrecked in Cumberland Sound, and its 73-year old skipper, Captain William Stephen, drowned.[75]

The Inuit's enhanced ability to kill prey affected more than just caribou herds. It extended to other targeted animal populations since Scots had incentivised hunters to bring as many animals as they could acquire. For example, a station manager urged hunters to catch foxes, promising bones as a reward to the one who caught the most. Bones were coveted as a food source for dog teams.[76] One particularly dramatic effort by an Inuk in September 1906, so impressed a station hand at Lake Harbour that he recorded it on a back page of the mining log. The story relates an episode when Poodler came across two polar bear dens which he determined were in use.

> As it was beginning to get dark Poodler went into the Bears [sic] house & lay in wait. After an hour or two waiting, when it was pitch dark, he heard the deep breathing of [a] bear as it drew near. To make sure it was quite close he stired [sic] up snow at [the] entrance with a stick until [the] Bear became furious at finding his lair occupied & tried to scramble in.[77]

In the end Poodler dispatched the *nanuq*, and then he did the same with the second bear the next day. Written historical accounts like these provide extremely rare insights into Inuit activities in the employ of *qallunaat*. Most histories are passed down through oral retellings among households and communities. Of course, it is possible that such an

[73] Henry Toke Munn, 'The Economic Life of the Baffin Island Eskimo', *The Geographical Journal,* 59:4 (1922), p. 272.
[74] Philip Goldring, 'Inuit Economic Responses to Euro-American Contacts: Southeast Baffin Island, 1824-1940', *Historical Papers/Communications historiques,* 21:1 (1986), pp. 165.
[75] *Dundee Evening Telegraph (DET),* 'Loss of Dundee Whaling Boat', 31 Oct 1916; and White, *Far Shore of Baffin*, p. 138.
[76] LHC-DCL, Hudson Bay Whaling Station, 1901.
[77] UDAS, MS 333/4.

elaborate story was told to impress the recorder and/or perhaps, extract a higher exchange rate for his daring deeds. Even if elaborated, it still gives some indication as to the extreme efforts Inuit hunters were willing to make to bring more animals to the Scots. And there is at least a hint of truth to the anecdote. Scots did not 'pay' those engaged after each kill. The men's accounts were settled at the end of summer before the *Active* and Walter Kinnes left to return to Dundee.[78]

The Lake Harbour logbooks are not neat and orderly ledgers. They were work journals. Nevertheless, the documentation was meticulous when involving quantities of produce, mica, trading goods, equipment and station supplies. Entries also listed names of hunters, annotating the types and quantities of animals they procured. Still other pages track the types and quantities of material gifts dispersed to each man for the year. In the Arctic, these items functioned as currency, not money. For example, in 1906, Simona brought in ten seal skins, more than any of the other 22 recorded hunters. For this and other animals, he received a wood pipe, pocketknife, cartridges, caps, lead and powder, a sealing knife and 'steel' [file], snow knife, tobacco, matches and paper, clay pipes, a saw and an axe. Another hunter, Amalisha, received similar items but had the choice of a 'gun or spyglass', and instead of an axe, he received a hammer.

More than just being payments, these entries begin to express the degree to which this translocal relationship existed. Comparing lists to lists shows that whalers did not pay the same amount or types of tools for the same number of skins received. What does start to become clear is that Scots took a paternalizing approach. Not only did they ensure everyone received something, but they dispersed payments so that in total, the entire community possessed all the tools needed for the next year. While on the face of things, these appear as momentary, one-to-one transactions, in actuality, the whalers were paying the community in general for its efforts. In this way, the *qallunaat* relationship may have resonated with similar Inuit practices, such as the sharing out of *muktaaq* and flesh when a whale is landed.

Other types of log entries reiterate this point from another angle. The purpose of keeping these records was to help project the amount and types of materiel to bring the next year. In 1904, Walter Kinnes ran short on ammunition, forcing him to ration out

[78] UDAS, MS 333/2, 1904.

resources while paying his labourers before departing.[79] Thus, this information was so important that Walter Kinnes and Dundee station managers eventually began including a census of the people in their records. Sometimes these counted only those men and their families who were engaged by the station.[80] In other years, it enumerated the entire indigenous population around Lake Harbour.[81] These censuses are truly unique as historical evidence today. As far as is known, they comprise the only detailed accounting of Inuit populations in southern Baffin beyond Cumberland Sound during this era.

The census reports also highlight implications resulting from this relationship. In 1906, Walter Kinnes scripted a 'List of Natives engaged 1906'. The 22 hunters with their households equalled 88 persons. Another twelve 'old women & youngsters who have to be kept' raises the Lake Harbour figure to 100.[82] Among the households, the modal and mean averages both come to four persons. In 1908, Walter Kinnes titled his list, 'Kigmeron [Lake Harbour] 1908 Population'. This time, individuals divided into 37 households summing to 150 persons. The modal average among the 37 households was three people with 11 households counted in that category. This average appears more consistent with historical anthropological descriptions that noted the small size of households. However, the mean average for 1908 was again four persons per household. The total number of people living in 1-person, 2-person and 3-person households equalled 50 individuals. That means the households with four members or more (40 per cent of all Inuit households in 1908) totalled 100 people or a ratio of 2 to 1. Those hunters, who were recorded as most successful, also had some of the largest households. Poodler, who took on the polar bears, had six in his household. So too did Shadie. Jesusi and Bee had eight apiece, and Amalisha had five. Successful hunters often had more wives and children, but the numbers also underscore the level of dependency that had developed between the Inuit and *qallunaat*. The census numbers appear to frame Lake Harbour as an anomaly among Baffin Inuit groups. Not only did the indigenous community appear to have stability in its numbers, but the presence of the

[79] *Ibid.*
[80] UDAS, MS 333/3, 1906.
[81] UDAS, MS 333/4, 1908.
[82] UDAS, MS 333/3, 1906.

Dundee Arctic trade also had created a societal safety net. This came at the cost of labour.

W. Gillies Ross brings together the most authoritative accounting of Inuit-*qallunaat* work-employment relations that has been published. His research, however, has two issues. First, it is now decades old and needs revision since more sources have come to light. Second, Ross almost entirely frames the subject around men's work.[83] Women receive little mention, and when they do, it is a succinct restatement of the same duties. One quote from Ross captures the sentiment of both aspects mentioned above.

> The [whaling] captains therefore employed Eskimo men mainly as hunters, Eskimo women mainly as seamstresses (again a traditional role), and left the menial tasks to their [ship's] own sailors.[84]

Ross presents Inuit men and women as specialists within the Arctic trade, and indeed that was the case. But Dundee records also clearly affirm the Arctic trade's reliance on male and female physical labour, especially since crew sizes had been drastically reduced. Robert Kinnes's whaler *Ernest William* provides one example. On the 1913 voyage from Dundee to Kekerten station in Cumberland Sound, the vessel listed six crew as the ship's company. Once in the Davis Strait, sea ice damaged the *Ernest William* as it arduously made its way to Cumberland Sound. By early August, the crew had 'unshiped [sic] the rudder & put it on the deck' and began continuously manning the pumps for the next ten days. However, upon arrival at Blacklead Island, they employed the Inuit to come 'onboard to keep [the] pumps going night and day'.[85] Ultimately the vessel was lost, but records like these regularly indicate the physical tasks placed upon men and women. This shows that Scots did employ Inuit for 'menial tasks', and they took no regard to gender divisions when it came to physical labour. Women were frequently 'drafted' into physical tasks in support of the stations.

Walter Kinnes's mining and station logs from Lake Harbour particularly draw out this aspect of seasonal labour. During the summers at Lake Harbour, he kept brief day-by-day summaries of tasks meted out at the station and mines. Though women are

[83] Gillies, *Whaling and Eskimos,* pp. 77-85.
[84] Ross, *Whaling and Eskimos*, pp. 81.
[85] *Ibid*.

never mentioned by name, Kinnes does document their assignments, addressing them as 'coonas'.[86] On Friday, 5 August 1904, Kinnes noted that he 'had coonas carrying [mica down from the mines] in afternoon & we got down 23 bags'. The next day he, 'sent up some coonas to [the mica] workings'.[87] Besides women's domestic duties, the whalers clearly put them to work at the mines, likely filling and carrying bags of mica. In May 1904, Walter Kinnes was called to answer questions for the Court of Session in his father's legal case, Robert Kinnes v. Attwater and Sons. In his deposition, he spoke about the 'natives' work at the mines in conjunction with the 'quarrymen' brought from Dundee. He testified, 'the quarry is about two hour's walk from the place of shipment, and the natives carry mica in bags on their backs from the quarry to the ship'.[88] These accounts show that Scots depended on the Inuit, especially women, to fulfil physically demanding tasks.

Qallunaat recognised women for their boat handling skills.[89] Two documents help to illustrate the point. On 26 July 1908, the whaler *Active* arrived at Lake Harbour and dropped off Walter Kinnes and a small team of 'quarrymen' to spend another summer carrying out mining and trading activities at the station. After watering and bringing onboard a contingent of Inuit, Captain Alexander Murray went about 'laying to' in the outer anchorage in preparation for another voyage to Hudson Bay and Southampton Island to hunt walrus and whales. But on Tuesday, 28 July, a boat party from the ship returned to the station, and 'the 2nd mate came up to [the] house [looking] for a coona to make up [a] boats [sic] crew'.[90] Despite Inuit serving on boat crews, shipmasters never entered the presence of Inuit aboard ship in official BT Crew Agreements and Official Log Books, whether in the Arctic or even when bringing them back to Dundee.[91]

Nevertheless, this instance of the *Active* seeking out and bringing aboard a woman to augment a boat crew was not in itself a peculiar event. Indeed, it seemed so

[86] Harper, *In Those Days*, pp. 76-78. Kinnes typical references for females were 'coonas', wives, old women and the ubiquitous 'natives'
[87] UDAS, MS 333/2, 1904.
[88] NRS, CS 241/1952, p. 6.
[89] For one example from an American, see the story of 'Nikujar the Pilot', in Charles Francis Hall, *Life with the Esquimaux: The Narrative of Captain Charles Francis Hall…*, vol. 1 (London, 1864), p. 159.
[90] UDAS, MS 333/5.
[91] Matthew Ylitalo and Sarah Easterby-Smith, 'Ships' in Bavaj, Riccardo, Struck, Bernhard and Lawson, Konrad (eds.), *Doing Spatial History* (Abingdon, 2022), pp. 134-35.

matter of fact that Walter Kinnes wrote nothing more of it. But this moment does indicate that by the early twentieth century, Scots were recognizing the economic utility of employing women for specific tasks. If, as Gillies has argued, Scots hired Inuit men to do what they do best – hunt, then why would they not attempt to financially exploit Inuit women's specific skill sets as well? As a matter of fact, they did. Animal exploitation meant more women were needed to clean and prepare of skins.

Other Dundee-based whaling interests were prepared to employ women in this capacity as well. During a 1908 Court of Session trial, the gentleman and adventure whaler, Osbert Clare Forsyth Grant of Ecclesgreig, testified about his voyage's changed intentions after the ship's master, Captain Walter J. Jackson, and most of the crew 'deserted ship':

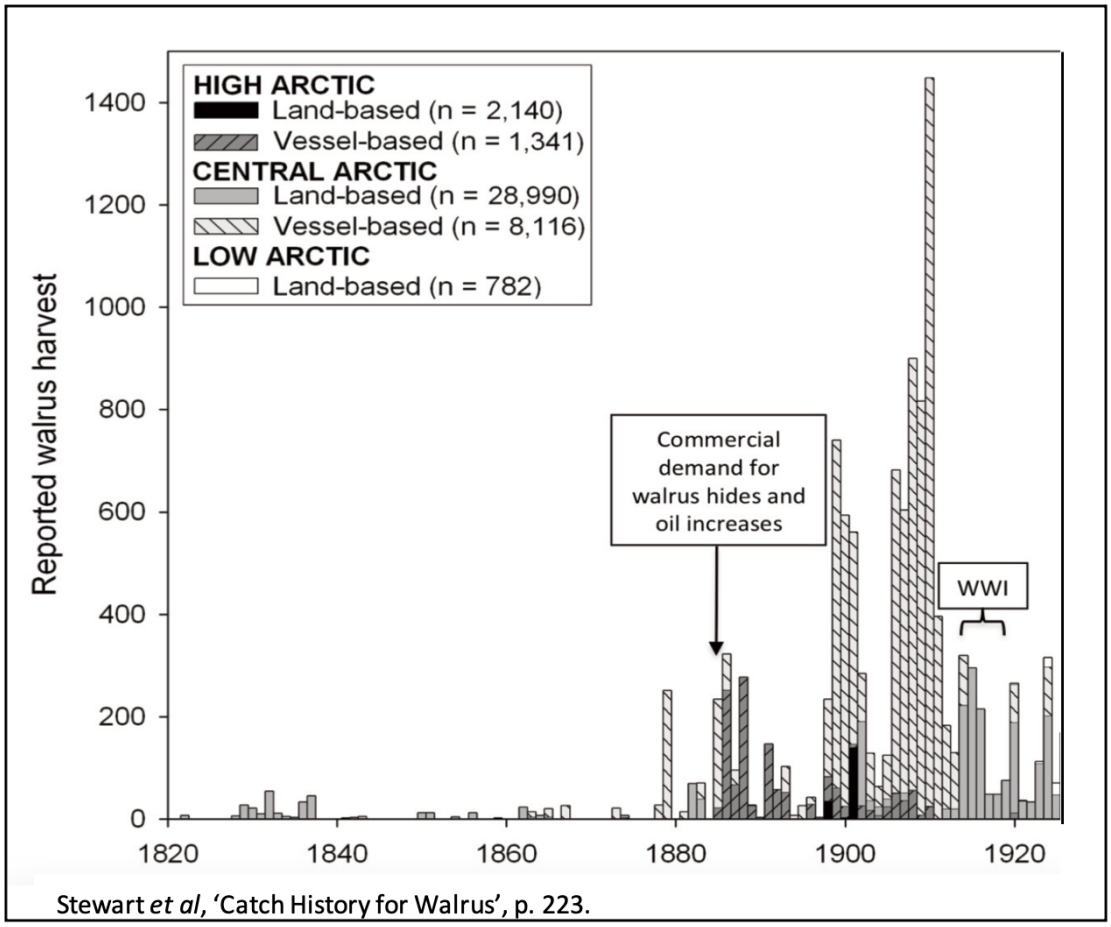
> With the three men left to me, I did not entertain any idea of proceeding up as far as Cape York. I proposed going to Cumberland Gulf, and getting Eskimo women, who suited me equally well, to man my boat [the ketch *Snowdrop*]. I was going to occupy myself white whaling, with the women at Blacklead, or wherever the men were left. The women do all the work, unless the men are hunting, or in pursuit of anything. Then the men will condescend to pull [oars]. We could not haul a walrus on to the ice, unless we had a winch, that is why I went to Cumberland Gulf white whaling, where we could get all the women to help.[92]

As indicated by the court trial, women often were doing all the labour. This testimony confirms again the Scots' willingness to employ women as boat crew in two different situations around the same time suggests that this may have been a more common practice than previously understood. Nevertheless, women's primary purpose for employment aboard whalers and at stations would not have been to fill boat crews, mend boots or even help to prepare food. Scots particularly valued the speed and skill by which women could clean and prepare large numbers of animal skins. Prior to the 1880s, whalers still concentrated on hunting whales, which left women in largely supporting domestic roles. Frequently when men were away on seal hunts, women made up the numbers for working parties sent to the station's numerous mining locations. While they did this, others took turns ascending 'Hillhead' to spot the *Active*. In the following decades, however, whaling's increasing reliance on exploiting

[92] NRS, CS 241/3980, p. 133.

alternative resources meant more women were needed to clean and prepare increasingly larger industrial-sized numbers of skins ranging from walrus, beluga, narwhal and seal to polar bear, Arctic fox, wolf and hare (Appendix 4.3). During the period from the mid-1880s until the start of the First Word War, Dundee whalers increasingly harvested more and more walruses, and they did so more than anyone else. This can be seen in the catch numbers of various Arctic animals as shown in Table 4.1. Open access research from the North Atlantic Marine Mammal Commission (NAMMCO) published in 2013 charts the dramatic increase in world walrus catches roughly between 1885 and 1912. The numbers correspond with Dundee's efforts in the Arctic trade (Figure 4.2).[93]

Figure 4.2. Total Walrus Catch in Eastern Canadian Arctic, 1820-1925.



Stewart *et al*, 'Catch History for Walrus', p. 223.

[93] D. Bruce Stewart, Jeff Higdon, Randall R. Reeves, and Robert E.A. Stewart, 'A Catch History for Walrus (*Odobensus rosmarus rosmarus*) in the Eastern Canadian Arctic' in Stewart, Robert E.A., Kovacs, Kit, Acquarone, Mario (eds.), *NAMMCO Scientific Publication: Walrus of the North Atlantic*, Vol. 9 (2013), https://septentrio.uit.no/index.php/NAMMCOSP/issue/view/235 (Accessed 14 June 2022), pp. 219-313.

Historical accounts and modern scholarship have emphasised the gendered division of labour among the Inuit. With regard to women, they are defined by their 'domestic roles'. This perception, however, needs revision and critical contextualisation. Written primary sources reveal that women and often the entire family unit went everywhere that men went. This included summer whaling voyages to Hudson Bay, hunting expeditions, winter migrations and personal trips to other Inuit communities or *qallunaat* stations for trade, provisions and communication. Therefore, if women completed 'domestic duties', then men did so as well. Furthermore, there are numerous accounts of older men sewing skins alongside the women.

Divisions of labour were not nearly as fixed as imagined by westerners. All children worked, travelled and experienced day-to-day events alongside men and women, whether it was fashioning tools, preparing meals, hunting, sewing skins or building and furnishing shelters. These were matters of survival, and *everyone* learned how to do them. Ultimately, divisions of labour did not reflect capability as much as it enabled specialisation. In this light, just as hunting contributed to the community's survival, so too did the preparation of skins and sinew for making and mending boots, summer and winter clothes, *tupik* (tent) covers and bedding.

Understanding this aspect of 'domestic roles' therefore, changes how we should view women's labour within the Arctic trade. Over time, as Scottish whalers became increasingly dependent on Inuit men to supply more and more Arctic animals other than whales, so too did the whalers proportionally come to rely on women's specialised skills to process them. Inuit women were the ones who specialised in cleaning hides. This is particularly seen in the *ulu* or 'woman's knife' (Appendix 4.4). This tool still remains the material embodiment of gendered identity and labour among the Inuit.[94] As Archibald Fleming had observed at Lake Harbour, this crescent shaped knife had a 'thousand uses'.[95] To help accomplish this increased task, whalers increasingly brought metal tools such as steel needles and thimbles.[96] Whalers also fused Inuit technology with western technology to enhance women's work. The material collection of *uluit* held at the

[94] Emily Button Kambic, 'The Changing Lives of Women's Knives: *Ulus*, Travel and Transformation', *Historical Archaeology,* 49:3 (2015), pp. 35-53.
[95] Fleming, *Archibald the Arctic,* p. 145.
[96] UDAS, MS 59.

National Museum of Scotland (NMS) provides physical proof of the transnationality of women's labour in the Arctic trade (Appendix 4.4). Besides the assortment of prehistoric *uluit* made of bone, antler and stone, the NMS also possesses an inconspicuous *ulu* from Pond's Bay (now Pond Inlet) in northern Baffin featuring an iron blade with a wooden handle.[97] While the *ulu* clearly represents Inuit heritage, a wooden-handled, metal-bladed *ulu* materially demonstrates a link to the Scottish whalers' presence in Ponds Bay. Bone and ivory *uluit* could not endure the quantity of skins the Scots were obtaining and also took far more time to make. Like the steel glovers and sewing needles, whalers supplied women with wooden-handled, metal-bladed *uluit*. Like steel-tipped harpoons and other equipment, Scottish blacksmiths would have been able to quickly put a sharpened edge on the women's *uluit.* According to Inuit elders, *uluit* used for cleaning skins would have been sharpened on only one side and kept extremely sharp.[98] The Ponds Bay *ulu*, therefore, represents a blending of Inuit tradition tools with Scottish-sourced wood, metal and the blacksmith's artisanal craft.

Evidence of this is also found in Inuit oral histories collected and published by Dorothy Eber. Ikidluak of Lake Harbour, at the time a small child, recalled one particular memory.

> I remember the women taking the blubber off the walrus. They [the Scots] had a long board for the women to work at and a long line of women there taking the blubber off the skins…there were lots of women scraping…After the blubber was off, they would salt the hides and put the blubber in the blubber barrels.[99]

Wooden boards, salt and barrels would all have been materials supplied by the Scots at the Lake Harbour station to facilitate the women's work. Yet as we see through oral histories, this shows the actual labour of the women. Local labour. Cheap, contractual labour but using transnational instruments, which enabled the industry to continue for another decade. Going back to Osbert Clare Forsyth Grant's court case, he described

[97] NMS, A.805.45, [Inuit] Woman's Knife.
[98] Bernadette Dean, Katarina Soukoup and Zacharias Kunuk (film producers), *Inuit Piqutingit (What Belongs to Inuit)*, (Igloolik Isuma Productions, Kivalliq Inuit Association, 2009), http://www.isuma.tv/isuma-productions/inuit-piqutingit (Accessed 6 July 2021).
[99] Eber, *When the Whalers*, pp. 86-87.

for the Court of Session what women under his employment aboard the *Snowdrop* did to prepare walrus skins while hunting in Cumberland Sound:

> [The skins] were cleaned by the Eskimo women that I had on board. They clean the hides with a round knife like the shoemaker's knife, placing the skin out flat. They take a small wooden board, or a hatch when they can get it, and put it under the hide. Four or five women, or as many as can get round the hide comfortably, set to work and shove the knife in front of them taking off the blubber, as if with a plane. They make a much better job than we can slashing with an ordinary knife. They are very expert at the cleaning. They can split a skin or do almost anything with these knives.[100]

Writing an account on whaling in Ponds Bay in 1906, James Mutch recalled the Dundee ketch (?) *Albert* stopped at Cape Hooper, or Qivitung, along the coast of Baffin to trade with the Inuit there. After asking them how many bear skins they had to trade, 'they left to go on shore to see their wives about the bear-skins'.[101] This further suggests that not only did the women prepare the skins, but they also kept oversight of them.

Inuit women and their contracted labour constituted an important element in sustaining Dundee's activities in the region. Their skilled and affordable labour enabled Scots to maintain a prolonged presence in the Arctic region for longer than is commonly understood or appreciated.

Contextualising Gender, Labour and the Working Class in Dundee

Scholars have dubbed late nineteenth- and early-twentieth century Dundee a 'woman's town' for several reasons. Female employment rates within the textile mills and factories were high.[102] Graham R. Smith has pointed out Dundee's large population imbalance based on census reports. From at least 1891 through 1901, adult females aged from 15 to 44 outnumbered similarly aged males by a 3:2 ratio.[103] Smith also suggests the label correlates with Dundee's high percentage of female-led households.[104] As a corollary to this, those examining Scotland's demographics describe late nineteenth- and early twentieth-century Dundee as an overwhelmingly 'working-

[100] NRS, CS 241/3980, p. 129.
[101] Mutch, 'Whaling in Ponds Bay', p.486.
[102] Gordon, 'Women's Spheres', pp. 208-11.
[103] Graham R. Smith, 'The Making of a Woman's Town: Household and Gender in Dundee 1890-1940' (Unpublished PhD thesis, University of Stirling, 1996), p. 52.
[104] *Ibid.*, pp. 110-35.

class' city with the highest rates of poverty in Scotland and one of the highest in Great Britain.[105] These socio-economic characteristics existed around gendered segregation and spaces of labour, and they frequently took on disparaging connotations.[106] While Ordinary and Able-bodied seamen worked for low wages and fit squarely into the 'working class', they generally were not associated with 'the working poor'. That association, however, extended to the tens of thousands of females who worked in the town's textile mills and factories.

Temporal labourers – the ephemeral figures on the periphery of industrial workforces – were persons who bridged these gendered domains. They represent an important translocal link between the world of the textile factory, the docklands where Dundee accessed the sea and the Arctic. This section begins the process of identifying and analysing two peripheral groups of labourers in the Arctic trade who worked ashore in Dundee, the casual labourers in the whaling yards and the subaltern figures more permanently employed at the Arctic Tannery. These individuals resist historical analysis. Unlike their translocal Inuit counterparts, casual labourer's ephemerality, quotidian tasks, low social status and Scottish identity resulted in little scholarly interest or documentary evidence.[107] Neither oral history or material culture are known to exist, and only a few documents, newspaper articles and photographs scattered over nearly eight decades are available for research. The Arctic trade's labourers in Dundee constitute the most marginalised figures within this maritime industry. The research presented here, therefore, interpolates these fragments in combination with patterns already understood about the Arctic trade.

Labour in Dundee's Yards

Whaling company yards near Dundee's docks were important spaces for maritime labour, production and commerce. Ships returning home every whaling season, usually between September to November, unloaded the cargo hold which could have stored whalebone, blubber in tanks and casks, and other materials for months. The products

[105] Nicholas Morgan and Richard Trainor, 'The Dominant Classes' in W. Hamish Fraser and R.J. Morris (eds.), *People and Society in Scotland, 1830-1914,* vol. 2 (Edinburgh, 1990), pp. 105-11.
[106] Gordon, 'Women's Spheres', p. 209; Christopher A. Whatley, 'Altering Images of the Industrial City', in Christopher A. Whatley, Bob Harris, and Louise Miskell (eds.), *Victorian Dundee: Image and Realities* (Edinburgh, 2011), pp. 70-71.
[107] Gordon, 'Women's Spheres', p. 208.

then were transported from the docks to the whaling yards for processing. Little is known about these sites, but W.G. Burn Murdoch briefly recalled his visit to the TWFCo yard in 1892. Once he arrived in Dundee, he had little difficulty finding the place.

> [East Whale Lane] was a very narrow lane running up from the docks between two high walls, and there was no mistake about its being Whale Lane, the very air was greasy, and the kerbstones were black and oily…[Entering a large doorway, I] found myself in a yard littered with casks and whale-boats and ship's gear, and beyond this impedimenta was the office.[108]

Men and women worked seasonal jobs in these whaling yards. Once the whaler had returned, the crew was discharged and received their wages at the Customs House, in lieu of bonus pay for the whalebone and oil. Some seamen and dockside carters then were employed to move all materials from the dock to the yards. A few experienced whalers also stayed to oversee the boiling of blubber into oil, but it is likely other local hands were hired to help lift and move these huge, heavy segments. Women also came to the yards to clean the whalebone with knives, and coopers finished treating the materials before constructing casks to store and transport whalebone or oil.

In 1830, Burntisland merchants distributed a tract with the intention of dissuading the town from entering the whaling trade. Its grimly colourful descriptions amply sum the scene.

> The cargo of a whale-ship generally consists of whalebone, blubber, and large bones, called the jaw-bones of the whale…[Upon arrival at port] the whole of these materials being in a rancid and putrid state, generally swarming with maggots, the stench they occasion may be better imagined than described…The process of landing [the whale materials], however, goes on accompanied with much bawling and noise, and may be accomplished in the course of a few weeks, if a proper allowance of whisky has been administered, that being deemed necessary to overcome the squeamishness even of those best seasoned to the work, though the excess of that stimulant not unfrequently occasions disruptions. The sickening fumes all the while are widely diffused, even to the distance of miles…At Dundee, there are now no genteel houses in the vicinity of such works.
>
> The nuisance does not cease with the act of boiling, which may terminate in six or eight weeks…Not only are the ships themselves in a disgusting state, but the empty blubber casks, and whalebone, or gills, which are stored up in

[108] Murdoch, *From Edinburgh to the Antarctic*, pp. 5-6.

> great quantity, and often kept in that state many months, become extremely rancid and offensive…after the process of boiling and extracting the oil is finished, the cleaning of the whalebone commences, which is a tedious and disgusting process. Even the mere casks, which are taken to pieces, become a mass of corruption...in short, the accumulation of filth on such premises is so great, that the nuisance continues the whole year, corrupting the surrounding atmosphere to a great distance.[109]

The essence of the tract's argument maintains that processing whale parts made Dundee's harbour and adjacent districts a grim place to live, work or visit. Although propagandist in its intent, the description of whale processing's dire assault on a community's olfactory senses is repeatedly confirmed in the local newspapers, usually under the topic, 'Dundee's whale oil nuisance'.[110]

Fragmentary archival evidence reveals that as early as the 1820s, women worked as seasonal labourers in whaling yards for the purpose of cleaning whalebone. This was a particularly gruesome task since it involved a large degree of contact with the offal of putrid organisms trapped in the hairy portions of a right or black whale's baleen. In September 1828, the whaler *Dorothy* returned to Dundee having caught 37 whales which would render 274 tons of whale oil and nearly 18 tons of baleen.[111] A handwritten scrap of paper from the Dorothy Whale Fishing Company records, dated October 1828, refers to the purchase of eighteen knives and nine and half dozen 'reanses' ostensibly to be 'Given the Women for cleaning Whale Bone'.[112] 'Reanses' were likely water and cleansing solutions that could help wash away organic filth.

The following year, a receipt dated 16 December 1829, shows a payment to Elizabeth Hunter for £9 6s 9d, 'for cleaning Friendships Bone say 4 Tons 3 Cwt @ 45/- per ton'.[113] An 'X' for her mark indicates that she personally signed the paper and collected the payment. Six weeks later another receipt from 29 January 1830, paid Elizabeth Hunter £27, 'for cleaning Dorothy's cargo of Bone say 12 Tons @ 45/-'.[114] Another pay slip from 1833, directs payment to 'Elizabeth Hunter & Others'.[115] Several

[109] 'Statement Concerning the Whale-Fishing Trade at Dundee in Reference to its Proposed Introduction into Burntisland', reprinted (London, 1903), pp. 1-4.
[110] *DC*, 'Letters to the Editor – Whale Oil Nuisance', 28 September 1871.
[111] UDAS, MS 57/3/3, 'Dorothy Whale Fishing Company Papers, 1820s-1830s'.
[112] *Ibid*.
[113] UDAS, MS 57/3/2.
[114] *Ibid*.
[115] UDAS, MS 57/3/5.

months after Hunter received her January 1830 wages, Mrs. Helen Whitton, a widowed brewer's wife, charged the Dorothy Whale Fishing Company the amount, £2 8s 8 1/2d, for payment in an invoice covering from 14 August 1829 to 6 April 1830. The bill contained entries detailing at least six different orders for a total of three mutchkens, one gill of whisky and half a dozen bottles of beer were delivered to the yard in November. In January, another 9 gills of whisky were delivered to 'Mr. Low's yard' [for the whaler *Friendship*] for 3s.[116] These whisky deliveries to the whaling yards appears to support the Burntisland petition which asserted that workers needed some alcoholic lubricating before approaching their work.

Besides Elizabeth Hunter, no other women were identified by name. The amount paid to her indicates that she worked as a type of forewoman, who in turn, disbursed payments to the other women. Working from earlier estimates, if eighteen women cleaned 18 tons of whalebone at 45 shillings/ton, then each woman would have taken home 45 shillings. If it took four weeks to clean a ton of bone, then each woman would have made a little more than 11s per week. After the whalebone was cleaned, teams of women turned and dry rubbed the bone. A payment receipt from 12 June 1830, records the Dorothy Company paid the cooper Alexander Sinclair for '4 Women turning over and dry rubbing Whale Bone say 2 Women 17 days & 2 [Women] 15 days 64 [days total] @ 1/3 [1s 3d per day equaling] £4 0s 0d'. It took twenty woman-work days to complete this task for *Friendship* and forty-four more woman-work days were needed to care for *Dorothy*'s bone.[117] If the two women were paid 1s 3d per day, after fifteen days of labour, they each took home 18s 9d for an average of 9s 4.5d per week. While these wages were not high, they do seem quite competitive for unskilled labour at the time. In comparison, another local civic document reported Mary Eadie, the widowed mother of a delinquent son sent to the *Mars* Industrial Training Ship, as earning 10 shillings per week in 1885.[118]

So, who was Elizabeth Hunter? That question immediately begins to highlight the difficulty of tracing the lives of temporary workers in the nineteenth century. The 1829-30 *Dundee Directory* does not record her name, but this is not surprising since local

[116] UDAS, MS 57/3/3.
[117] UDAS, MS 57/3/2.
[118] NLHC, *Mars Training Ship Admissions & Discharges Ledger, 1894-1897*.

publications were mostly reliable to list merchants, artisans, businesses and institutions.[119] Was she and the others related to mariners aboard *Dorothy* or *Friendship*? This may be, but it is only possible to piece together *Dorothy*'s crew, and no one with the surname 'Hunter' appears. Other possible complications may compound the difficulties of this search. Scottish married women, or the clerk penning her name, often interchangeably used their married and maiden surnames. Without more information – an age, marriage status or physical address – the task of identifying and tracing Elizabeth Hunter becomes guesswork in trying to chase all the possible matches in the Old Parish registers.

Taken together, these documents show that groups of women were hired to work in Dundee's whaling yards on a seasonal basis. The demand for their labours likely continued for at least the next fifty years. Though documentation is mostly missing, a detailed examination of the TWFCo manager's reports in its monthly committee meeting minutes from the 1860s to 1870s demonstrates an almost banal sequencing of work and preparatory routines every year.[120] Details from these meetings mostly focused on fiscal issues, such as selling products, buying insurance and requesting bids for food provisions for the next season. Routine rudimentary details, like the hiring of timely short-term labour, would have fallen under the company and yard managers' duties, something they would prefer to keep as simple and standardised as possible. That said, research has found only two instances in which whaling companies advertised for women to clean whalebone. Both occurred in the 1870s. In November 1872, the DSWFCo placed the following.

> WANTED, a number of WOMEN to Clean
> WHALEBONE. Apply, Dundee Seal and Whale
> Fishing Company, East Dock Street.[121]

TWFCo followed this with its own advertisement in September 1874.[122] Why would this have been the case? Did two whaling companies decide to hire women for the first time in forty years? It may be that in most years, seasonal employment was first offered to

[119] Gareth Shaw, 'Directories as Sources in Urban History: A Review of British and Canadian Material', *Urban History*, 11 (1984), pp. 36-44.
[120] UDAS, MS 59, TWFCo Company Meeting Minutes.
[121] *DC,* 'Advertisement – Number of Women to Clean Whalebone', 13 November 1872.
[122] *DC,* 'Advertisement – Several Women to Clean Whale Bone', 18 September 1874.

women with connections to the trade, either through their kin folk aboard ship or through connections with the managers. The chances of women *not* working, however, would be far less. Knowing that over the long run, more whales were harvested per year between the 1830s and 1880, than after it, the advertisements would suggest a need for yard employment after the whaling seasons.

Evidence from court records in 1904 indicate that female youths also worked as labourers in a number of capacities within the whaling yard. While Inuit women back in Baffin laboured in the quarries mining, bagging and transporting mica, young women back in Dundee sorted and cut slabs of mica for future sale. The work was often tedious and reasonably dangerous too. At one point the women's employer, Robert Kinnes, the shipping agent, whaling manager and owner of the Lake Harbour station, lost his right thumb in a machine-cutting accident, leaving him to write all future correspondence with his left hand.[123] No company records document these efforts, but in 1904, depositions from a Supreme Court case in Edinburgh featured several women who worked in the TWFCo yards for Robert Kinnes and Sons.

At one point, women's numbers included Maria MacKenzie (14 years old) and Augusta Urquhart (13) – the adolescents mentioned in the chapter introduction, Augusta's older sister, Helen (16), a 'Miss Finlay', and the twenty-one-year-old forewoman, Margaret Stewart.[124] This gendered division of industrial labour also manifested itself in lived mobilities. Like most working women in Dundee, Maria MacKenzie and Augusta Urquhart and the others were born and raised in Dundee, and most with few exceptions could expect to remain there for the rest of their lives. With fewer available jobs, many men left Dundee seeking employment opportunities through emigration, the Army, merchant marine or the mines. The maritime and mobile nature of the Arctic trade, therefore, represented one of the most exclusively male bastions of industry in all of Dundee. Indeed, histories have traditionally presented the trade as men going down to the sea in ships to kill whales and render their bodies into oil. In Dundee, 'train oil' enabled women's textile work since the jute and flax batching processes immersed bales of fibres in vats of oil to soften them for processing. Whaling's

[123] Interview with Robert Kinnes's late grandson, Dundee, Day-Month-2017. Retold with family permission.
[124] NRS CS 241/1952, pp. 82-85.

other primary cash product – whalebone – also served women as the primary material used in corsets. Yet, as the examples of Maria MacKenzie and Augusta Urquhart suggests, the perceived barriers of these industrial spheres were permeable.
Grouping this evidence with the young women cutting mica in 1903, therefore, suggests a long-term trend within the whaling industry in Dundee to employ local women as seasonal labourers in the tedious and repetitive business of processing raw materials. But does the seasonal hiring of local women in any way constitute a transnational history of female labour?

Considered individually, or even as a local group of workers, the personal lives of Maria MacKenzie, Augusta Urquhart or even Elizabeth Hunter do not appear so. Court testimony indicates that Augusta Urquhart only worked for three weeks under Robert Kinnes's employment. She next appears in the historical records with the 1911 census, when she is twenty-one and listed as a typist at a 'Motor Agency'. In 1921, Augusta married William Spence, and together they lived out the rest of their lives in Dundee. Augusta passed away at age 87 in 1977.[125] As for Maria MacKenzie, in 1911 at age twenty-two, she married James Fulton and continued working as a picture frame shop assistant. After that, the documentary evidence goes cold and little is known.

Conclusion

Scholarship has branded the late nineteenth and early twentieth century as an era of decline and failure for Scottish Arctic whaling. While this remains true by many economic measures, Chapter 4 reconfirms that the nature of the Arctic trade extended well beyond seafaring men and hunting whales to translocal sites of Arctic production. Local Inuit communities made up a strong aspect to the history of Arctic whaling. Some of this, especially with regard to Inuit men, has been detailed by prominent scholars. Nevertheless, the degree to which Inuit and Dundee women laboured in support of the Arctic trade needs development. They too were active participants within the Arctic trade.

Examining women's presence and their changing and expanding roles over time across Scottish and Inuit societies illuminates the highly transitive nature of these wide-

[125] NRS, D 350/98 (Dundee, 1977), Statutory Death Register.

ranging enterprises. As localised, temporary and less mobile labourers, these women represent larger questions of relevance and belonging within transnational narratives and historiography. At the same time, their participation blends with those from the financial and managerial sectors to reveal a larger picture of the Arctic Trade with regard to its participants, spatial and social boundaries and influences on maritime societies.

This chapter has highlighted the ways in which identifying women's local, seasonal labour in support of Arctic whaling adds value to the historical record. The Inuit and Dundonian women featured in this chapter break up the imagined social boundaries that existed within translocal communities and the Arctic trade. Women were present, and they participated at nearly every level, from investors as seen in chapter 2 to businesswomen and labourers. Despite their unconventional status, the Inuit, women and others casually engaged by the Arctic trade lived and worked as translocal, self-determining agents in their own right. Just as Scots necessarily relied on men's labour, they also necessarily needed women's work. Inuit men hunted, and Scots enabled them to do it on an increasingly industrial scale. Yet, for every animal taken, women were needed to clean, cure and prepare the skins for trade and export.

Inuit and Dundee women's labour highlights the social and spatial boundaries present at the time. The managers and shipmasters within the trade recognised and tested the boundaries. Documentation shows that the Arctic trade spatially influenced Inuit communities as well. They increasingly located themselves near whaling stations as early as 1850s. Inuit men sought to use their hunting skills as a means by which they could trade for western goods. While it appears that women mostly supported their communities and the Scots' commercial efforts through their traditional domestic skills, over time their involvement extended to a wide range of necessary tasks. They were employed for physical labour, such as hauling quarried mica to the waterfront for transport or augmenting boat crews. Most importantly, however, the Scots sought to exploit their specialised skills for preparing animal skins on an industrial scale.

In Dundee, unassuming women crossed culturally imagined gender boundaries between the 'woman's town' associated with textile production and the supposed hyper-masculine world of the waterfront district. Transgressing these gendered barriers reveals the porousness of these spaces. It also demonstrates just how integrated the Arctic trade and maritime industries were within the town at large. As these translocal

examples have shown, the Arctic trade functioned as a social anchor within each community but in culturally different ways.

Over time, as the industry continued to contract and decline, the Arctic trade's role as a social anchor diminished too. The *qallunaats'* reliance on Inuit men's roles as hunters and women's roles as skin and fur preparing specialists paved the way for the corporate trading era under the Hudson's Bay Company. While the whalers integrated the Inuit's skills and natural proclivities towards all manner of Arctic fauna, the HBC took the next step in colonial exploitation by leveraging the Inuit into trapping and preparing Arctic fox skins for commercial use (see the photo in Appendix 4.5). Archibald Lang sadly noted this transformation, observing,

> Now that the powerful Hudson's Bay Company had come, there was an immediate change in the entire method of trading. The whole effort of the H.B.C. was to redirect the thinking of the native. They were not interested in securing whalebone and made little or no attempt to hunt the large whales. Instead they began at once to train the Eskimo to think in terms of foxskins and instituted a very carefully worked out system to encourage this. Among other things they substantially advanced the price of fur, carefully explaining to each native that they were now working on a definite business basis; i.e., so many foxskins would bring so much return and no foxskins would bring no return. The Eskimo now became a trapper more than a hunter.[126]

The era of the *qallunaat* had begun. The Arctic trade was an important local-global link to this process. The quest to commercially benefit from Arctic produce inevitably introduced the transition from an 'Inuit Arctic' to a Western, commoditised one. Soon enough, an increasing mixed *qallunaat* presence with different aims than the whalers, forever changed *qallunaat*-Inuit relations. Western ideas and governance led to the expansion of centralised government authority and intervention. By the mid-twentieth century the government carried out forced resettlements.[127] The aftermath of these histories of exploitation and their delayed reconciliation are still major issues today.[128]

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[126] Fleming, *Archibald the Arctic*, p. 204.
[127] Frank Tester and Peter Kulchyski, *Tammarniit (Mistakes): Inuit Relocations in the Eastern Arctic, 1939-63* (Vancouver, 2011).
[128] *Nunatsiaq News,* 'Have the "Hard Conversations" about Indigenous History: [Governor General Mary] Simon', 21 June 2022.

Chapter 5

Maritime Labour and Economic Opportunity in Shetland[1]

Beyond the translocal labour that took place in Baffin and Dundee, other transmaritime societies engaged in the Arctic trade. Of these, two places, Newfoundland and Shetland, developed intimate, mutual relationships with Dundee and its northern endeavours. Shetland is situated in the North Atlantic, roughly 350 km equidistant from Aberdeen, Scotland and Bergen, Norway (see map in Appendix 5.1). The Northern Isles, as Shetland is sometimes called, provided a regular port of call for British whaling vessels heading to the 'Greenland whaling' from at least the 1780s until the end of the nineteenth century.[2] Besides finding logistical support in Lerwick, Shetland's capital and main harbour, whalers also augmented their crews with seasoned Shetland seafarers looking to earn a monetary wage.

Local historians and Shetlanders readily acknowledge Shetland's role in supplying seafaring labour for Arctic voyages during whaling's early nineteenth-century heydays.[3] Scholarly works have done much less. In 1992, Richard Smith published an article to 'indicate the importance of Shetland for the northern whaling'.[4] His research relied on a cache of corporate documents, known as the 'Greenland books', generated by Shetland's leading mercantile establishment at the time, Hay & Company of Lerwick. The collection of their whaling business ledgers contains the most comprehensive list of Shetland individuals who voyaged north in Arctic whaling vessels prior to 1863. Smith's work examined this source from the end of the eighteenth century to 1872, the year Hay & Company terminated its operations as a whaling agent.[5] Thereafter, local sources documenting Shetlanders going to the Greenland whaling on Dundee vessels become much scarcer. The dearth of scholarship resulting from this gives the impression that

[1] A portion of this chapter has been published as a journal article; see Matt Ylitalo, 'Maritime Labour and Economic Opportunity: Shetlanders and the Dundee Arctic Whaling Trade during the Late Nineteenth Century', *IJMH*, 31:2 (2019), pp. 347-68.
[2] Shetlanders and others commonly referred to Arctic whaling as 'Greenland whaling', another term synonymous with the Northern Whale Fishery.
[3] See for instance, Adrian Duncan, *Shetland and the Greenland Whaling* (Lerwick, 2019).
[4] Richard J. Smith, 'Shetland and the Greenland Whaling Industry: 1780-1872', *Northern Scotland*, 12:1 (1992), p. 67.
[5] SMA, D 31/6/1-35, Hay & Company Greenland Account Books, 1808-1877.

Shetland's ties to the Arctic trade had virtually dissolved shortly after 1872. This, however, was not the case.

Published works covering Shetland's general history recognise the 1870s and 1880s as two of the most transformative decades in its history. These were the years when the Atlantic herring boom centred on Shetland, and the island's medieval financial system of laird-tenant, debt-labour relationships gave way to a money-wage economy. For Shetland, the bondage of the 'Zetland method' and its subsequent overthrow forms the bedrock of its nineteenth-century grand narrative, and the Arctic trade does not figure into it. Maritime historians have noted this mental divergence between work at sea and affairs at home to be the case on a wide scale. As Valerie Burton has put it,

> A residual notion of the estranging character of seafaring has long inhibited work on the landward context of seafarers' lives…[and] the social processes at work in seafaring communities.[6]

Even with the recent rise of port and coastal histories, lacunas in archival evidence have enabled the notion that whaling was a narrow and entirely separate undertaking from life and toil at home. In Shetland's case, social processes of maritime labour affected both local society and transoceanic commerce. Pierre-Yves Saunier contends that when people go abroad, they challenge the conventional boundaries of their local space.[7] This is what happened with Shetlanders returning from Arctic sealing and whaling voyages.

The chapter approaches the thesis's main research questions by identifying and investigating the groups of Shetlanders involved in the Arctic trade, the ways in which they did so, and the industry's relevance to wider society. It examines the dynamic social, economic and environmental contingencies that shaped Shetland's shifting relationship with the Arctic trade during the decades of the nineteenth century. The chapter also contextualises Shetland seafarers' roles and importance to the Arctic trade at sea. Nevertheless, it contends that the agent of change by which whaling influenced Shetland society was not the seafaring individual himself, but rather the joint maritime household to which he belonged. Empirical analyses from collected data contest certain

[6] Valerie Burton, 'Roundtable: Reviews of Eric W. Sager, *Seafaring Labour: The Merchant Marine of Atlantic Canada, 1820-1914*', *IJMH*, 2:1 (1990), p. 235.
[7] Pierre-Yves Saunier, 'Circulations, Connexions et Espaces Transnationaux', *Genèses*, 4:57 (2004), p. 114, with thanks to Clémentine Anne for translation assistance.

widely held conceptions about who went to sea, and when and why they did. To accomplish this, the chapter explores some sources long overlooked in whaling historiography, demonstrating that maritime-specific documents, namely the British Imperial Crew Agreements for merchant marine vessels (hereafter Agreements or CAs), hold potential for developing social and economic histories. Furthermore, it combines findings with other Shetland sources to offer a new interpretation for how the Arctic trade contributed to transformations within Shetland society. In this way, the whaling industry became a subtle but effective social anchor in Shetland. Not only did it offer cash wages and opportunities for individuals and joint maritime households to 'get ahead', but it also empowered some to become the vanguard for societal change.

Sources, Methods, Context

CAs provide remarkably complete documentation of individual sea-going Shetlanders' involvement in the Arctic trade from 1865 until the last whaler called at Lerwick in 1911. These documents are held at the Maritime History Archive (MHA) in St John's, Newfoundland; the National Archives (TNA) at Kew; and the National Maritime Museum (NMM) in Greenwich. Agreements were Board of Trade-mandated labour contracts between merchant shipowners and a vessel's hired crew with the master and whaling manager acting on behalf of the owners' interests. Sometimes referred to as 'Crew Lists', CAs are the primary source for identifying individuals who went to sea in merchant marine vessels throughout the British Empire. The utilisation of CAs here draws its impetus from archival work and the *More Than a List of Crew* (*MTLC*) website.[8]

Through quantitative analyses of CA samples from whaling vessels based out of Dundee, Scotland, this chapter creates prosopographical profiles of Shetlanders who went to the Greenland whaling. In seeking statistically important correlations in the data, it identifies shifts in local and transoceanic relationships, which are to be explained by a combination of social, economic and environmental factors. This study then references government reports and registrations, corporate ledger entries and local genealogical reference databases to identify individuals as case studies. These

[8] See Valerie Burton, *MTLC*, https://www.mun.ca/mha/mlc/ (accessed 31 August 2018). Valuable features include a 'Crew Agreement Toolkit' with the interactive and instructional 'Anatomy of an Agreement' as well as an 'Introduction to Merchant Seafaring'.

biographical sketches illustrate how individual Shetlanders adapted within evolving local and transoceanic contexts as well as how Dundee's Arctic trade integrated itself into Shetlanders' lives.

Beyond the written contract and list of crew members agreeing to a vessel's regulations, Agreements often contained additional documents. Official Log Books kept by the ship's master detailed all activities that affected the vessel or crew during the voyage. Other corollary documents include forms for Release at Termination of Voyage, Transmission of Seaman's Wage(s), Account of Wages, and occasionally personal notes to a port's superintendent of the Mercantile Marine Office (Merchant Marine Office (MMO)). From time to time, British whaling vessels also submitted 'Greenland store books' which tallied Shetlanders' purchases of supplies from the ship's store. These mostly recorded purchases of sailors' four vices – tobacco, tea, coffee and sugar.[9] Upon termination of a voyage, the ship's master delivered all of these documents to the MMO, which then forwarded them to the Board of Trade's Registrar General of Shipping and Seamen (RGSS) located in London for safekeeping and possible analysis.[10] These documents provide numerous possibilities for analysing maritime labour, social dynamics aboard vessels at sea, the whaling trade in general and individual crew members. They also provide information which can be used in conjunction with local and land-based sources to further enable contextualisation, analysis and new hypotheses for social and economic histories.

Since obtaining, transcribing and examining Agreement data for every Dundee whaler from 1865 to 1911 is beyond the current means of this thesis, the chapter applies different methods and levels of empirical analysis to sample representative data. To calculate overall crew numbers and Shetlanders' crew participation from 1865 to 1911, it samples all available Agreements for twenty Dundee whalers equalling 352 ship-years out of a known total of 520 ship-years.[11] This constitutes a sample size covering 68 per

[9] Known samples are held at Maritime History Archive (MHA), TNA and NMM. No published research exists for these books.

[10] See Valerie Burton, 'A History of the Agreements', *MTLC, https://www.mun.ca/mha/mlc/toolkit/history/* (accessed 31 August 2018). For a brief history of the Board of Trade, see Susan Foreman, *Shoes and Ships and Sealing Wax: An Illustrated History of the Board of Trade 1786-1986* (London, 1986).

[11] One ship-year incorporates the sum of each vessel's voyage data by category for that year. If a vessel makes multiple voyages, its data are summed by category for that year.

cent of all Dundee whaling ships per year. Appendix 5.2 provides a full list of Dundee whaling vessels and their sources used in the data sample. The sample also sums the total number of crew per voyage from each Agreement.

Using the 'Place of birth' column within the Agreement, research categorises each seafarer's origins to an assigned region. For Scotland, these are (from north to south): Shetland, Peterhead and its environs, the East Coast (ranging from Aberdeen to Carnoustie and including most of the hinterland to Kirriemuir, Scotland), Dundee and its environs (including Monifieth, Broughty Ferry and Longforgan), Fife (containing all the lands north of the Firth of Forth and south of the River Tay including Newport and Tayport, towns directly across from Dundee), and the Lothians (which incorporates Edinburgh, Leith, and Dunbar). All other Scottish locations and unverified places are grouped as 'Other' (including Orkney, all of the northern coast from Wick to Fraserburgh, the Highlands and Western Isles, Glasgow, Perth, Stirling, and The Borders). Demarcated categories outside of Scotland include England, Wales, the island of Ireland and Newfoundland. An international category draws in all other persons, whether British citizens or otherwise, who were born (or reside) outside all previous listed categories. The shipmasters, regardless of their place of birth, are counted as residing in Dundee.

The association of birthplace with a person's place of residence or the place which a person regards as 'home' poses potential problems, especially for itinerant sailors. Alston Kennerly, however, maintains that British merchant seamen in general kept their place of birth as their association with home during the late nineteenth century.[12] Unlike other merchant maritime activities, whaling voyages followed regular seasonal and geographical voyaging patterns in an A-B-A (point of origin-destination-termination) type sequence, and this served to further strengthen seafarers' affiliations with birthplace. Of course, this pattern for whaling voyages does not necessarily apply to the sailing lives of individual crew members, but there is precedent for using this classification. The regularity of this pattern does represent large enough cohorts of men who conformed to it to distinguish the composition of whaling crews from other

[12] Alston Kennerley, 'British Merchant Seafarers and Their Homes, 1895-1970', *IJMH,* 24:1 (2012), pp. 115-46. Kennerley argues this phenomenon dramatically changed in the twentieth century.

merchant marine crews.[13] From this an informal rule emerges. The closer a person's listed birthplace is located to the whaling port of engagement, the more likely the birthplace accurately reflects an individual's place of residence.

In the case of Shetlanders, using birthplace as a marker for Shetlanders' residence still renders accurate results. Agreements show that with few exceptions, only Shetlanders engaged and joined whalers in Lerwick. In most of these Agreements, the individual Shetlander's parish is recorded. From the 1890s and thereafter, Dundee whaler CAs began just listing a generic 'Shetland' as the place of birth. For reasons which will be explained later in the chapter, Shetlanders lived under a land tenure system, making a household's mobility very limited. As one Shetlander stated for Sheriff William Guthrie's deposition in the 1872 Shetland Truck Commission, on the British mainland

> A man can shift from town to town and get employment; but here, if he leaves his house and farm, he has no place to go except Lerwick, and there is no room to be got there, either for love or money.[14]

Based on this, it is reasonable to assume that Shetland crew members who were born in Shetland and engaged a whaler there, can be counted as being residents in Shetland. In this way, research uses the place of origin column in the CAs to collect year-by-year data and trace the trajectories of the overall crew and Shetlander employment. It then applies this data to Pearson's Correlation Coefficient calculations to establish the type and strength of relationship that existed between Shetlanders going to the whaling and Shetlanders going to the herring fishing.

Longitudinal studies examine mariners' data, such as the breakdown of engaged capacities (assigned occupations) aboard ship, over the operating lives of four Dundee whalers: *Arctic* [*II*], *Camperdown*, *Esquimaux, and Intrepid.* These vessels represent three of the four key firms directing most of Dundee's whaling efforts – Alexander Stephen and Son, the Dundee Seal and Whale Fishing Company (DSWFCo), and the Tay Whale Fishing Company (TWFCo). The vessels provide several types of data for analysis.

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[13] See Anthony Barrow, 'The North-east Coast Whale Fishery 1750-1850' (Unpublished PhD thesis, Newcastle-upon-Tyne Polytechnic, 1989), p. 203; and Rosemary Ommer, '"Composed of All Nationalities": The Crews of Windsor Vessels, 1862-1899' in Rosemary Ommer and Gerald Panting (eds.), *Working Men Who Got Wet* (St John's, 1980), pp. 193-223.

[14] *British Parliamentary Papers (BPP)*, *Second Report of the Commissioners Appointed to Inquire into the Truck System (Shetland)*, C 555, vol. 2 (Edinburgh, 1872), p. 334.

CAs first indicate the distribution of job capacities for the Shetlanders aboard ship from year to year. Second, research also uses the CAs from every voyage of the whaler *Esquimaux* as the base vessel from which to develop statistics on each Shetlander's 'Previous Ship Engaged'. Doing this enables research to measure Shetlanders' commitment to join the sealing or whaling voyages every year. It also sheds some light on how consistently Shetlanders engaged the same vessel and captain from year to year.

Finally, the project conducts cross-sectional analyses on certain vessels during select years. These analyses vary from measuring the distribution of capacities among Shetlanders and other crew for comparative purposes to tracing individual Shetland crewmembers from *Camperdown*'s two 1870 voyages. Data identifying individual crew members is used to expand prosopographical profiles by integrating it with genealogical information and other corporate, governmental and newspaper data. This affords opportunities to quantify data across a range of personal factors, such as the number and ages of married Shetland crewmembers, family emigration patterns, household sizes, parish distribution, and fishing boat ownership. Furthermore, it helps to develop brief biographical sketches for case studies. Thus, the information gathered from the 1870 *Camperdown* voyages forms an important narrative and empirical thread of continuity that connects other levels of analysis.

Intelligence gleaned from CAs does contain inherent empirical difficulties, and scholars have identified these issues. Those entering names into the Agreements often spelled names phonetically or listed personal details uncritically as they heard it. Poor penmanship or a difficult hand can frustrate the ablest palaeographer. Crew members were required to sign their own names in the Agreement before the master, whaling manager and MMO superintendent when joining the vessel. The range of these signatures range from clearly penned names to illegible scribbles, or in some instances, the use of an X.[15] Age and place of birth categories in the CAs are the most common places for entry errors or confusion. As mentioned earlier, seafarers sometimes conflated place of birth with place of residence. In an interesting and ubiquitous reinterpretation for requested information, whaling CAs across all years recorded

[15] For a study on sailor literacy partially derived from CA quantitative analysis, see Cynthia Power, 'Signing On: A Reconsideration of Newfoundland Seafarer's "Illiteracy", 1860-1930', *IJMH*, 31:2 (2019), pp. 369-88.

mariners' ages in the 'year of birth' column. Whether intentionally or not, men commonly supplied the wrong age for the Agreement, which like the place of birth entry can only be ascertained by comparing entries from year to year. These small errors add a degree of difficulty for longitudinal studies of seafarers' lives, but they also tell us something about the quality and expectations of the administrative processes involved. To better appreciate how the Shetland-Dundee whaling connection came about, one first needs to understand the historical context of Shetland's economy and how it transformed during the late nineteenth century.

Shetland and the Sea

Philip Hayward has coined the concept 'aquapelagic' as a socio-environmental expansion to the geographical term 'archipelago'. His purpose is to 're-emphasise the significance of waters between and waters encircling and connecting islands'.[16] This relates well to Shetland's own maritime experience, since its livelihood and distinctive culture is inextricably linked to both the land *and* sea. For most of the nineteenth century, island life continued in a pre-industrial fashion. People's livelihoods conformed to the annual rhythms bound up with fishing and subsistence farming, which took place on small parcels of rented land known as crofts. Published memoirs reminisce about the paired occupations of the Shetlander as both crofter and fisherman.[17] Folk sayings depict the physical reality of life in Shetland's geography – marginal soils and rich seas – with phrases, such as, 'Da laand cries "Hadd dee hand!" but da sea says "Come again!"'[18] Scholars have examined this duality in various forms as central to the islands' economy, society and culture. Island histories often focus on fishing, debt and land tenure, and craft and musical traditions.[19] Other scholarly works consider Shetland's cultural and economic links to the rest of the world, but outside of Richard Smith's research, Arctic

[16] Philip Hayward, 'Aquapelagos and Aquapelagic Assemblages: Towards an integrated study of island societies and marine environments', *Shima: The International Journal of Research into Island Cultures* 6:1 (2012), pp. 3-6.
[17] Charles Sandison, *Unst: My Island Home and Its Story* (Lerwick, 1968) and Thomas Manson, *Lerwick During the Last Half Century (1867-1917)* (Lerwick, 1923).
[18] Bertie Deyell (ed.), *Shetland Proverbs and Sayings* (Lerwick, 1993), p. 53.
[19] Important works include Charles Goodlad, *Shetland Fishing Saga* (Lerwick, 1971); Hance Smith, *Shetland Life and Trade, 1550-1914* (Edinburgh, 1984); Brian Smith, *Toons and Tenants, Settlement and Society in Shetland, 1299-1899* (Lerwick, 2000); and Peter Cooke, *The Fiddle Tradition of the Shetland Isles* (Cambridge, 1986).

whaling and sealing does not figure into many accounts or analyses.[20] More recently, scholarly emphasis has shifted to women's roles, autonomy and identity through material culture traditions like knitting.[21]

Throughout this thesis, research works to identify in various ways the marginalised figures who worked at the peripheries of the Arctic trade. Shetland's women also took on participatory roles although these differed from women's involvement in Dundee and Baffin. The search for Shetland women's involvement in whaling, combined with the limited nature of primary and secondary sources, again necessitates alternative forms of investigation to draw out evidence. The same phenomenon affects women in the Scottish fishing industries. As James Coull relates, many of the maritime stereotypes and lack of primary sources applies to them too.

> Fishing has for long been very much a male occupation…and until very recently women in such a role were unknown. At first sight therefore it may seem that women in fishing communities had little to do with fishing, and that their roles would be in the background, [however,…women] played essential fishing-related roles; but these roles are poorly recorded in documents – especially in official documents.[22]

While fishing and whaling are different maritime trades, a comparative examination suggests that women in whaling, like women in fishing communities completed tasks often 'without economic or statistical measure'.[23] In Shetland, women worked within both circumstances, so the place to investigate first which offers the most potential is the joint maritime household.

Women's presence and roles are important in Shetland's history, and this extends to Shetland's engagement with the whaling trade. There are several reasons for this. First, the sex ratio on the islands was heavily skewed toward women. Lynn Abrams has remarked, 'If Dundee was a woman's town, Shetland was even more a

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[20] For example, see Richard Smith, 'Shetland in the World Economy: a sociological history of the 18th and 19th centuries' (Unpublished PhD thesis, University of Edinburgh, 1986); and Donald Withrington (ed.), *Shetland and the Outside World 1469-1969* (Oxford, 1983).

[21] See Lynn Abrams, *Myth and Materiality in a Woman's World, Shetland 1800-2000* (Manchester, 2005); and L. Abrams, 'Knitting, Autonomy and Identity: The Role of Hand-Knitting in the Construction of Women's Sense of Self in an Island Community, Shetland, c. 1850-2000' in *Textile History* 37, 2 (2006), pp. 149-165.

[22] James R. Coull, 'Women in Fishing Communities' in James R. Coull, Alexander Fenton and Kenneth Veitch (eds.), *Boats, Fishing and the Sea*, vol. 4 of the *Scottish Life and Society: A Compendium of Scottish Ethnology* (Edinburgh, 2008), p. 277.

[23] Coull, 'Women in Fishing', p. 278.

woman's island'. Between the 1861 and 1871 censuses, the imbalanced ratio between the genders was about 143 females to 100 males, the highest anywhere in Scotland.[24] This largely resulted from men's higher migration rates, long maritime labour absences and the alarmingly high rate of fatalities at sea. Nevertheless, Abrams contends that these numbers *underestimate* the imbalance because the census was usually taken in early April before men left for the summer fishing.[25] This, however, needs further analysis because it overlooks the dynamics of the Arctic trade. As the chapter will show, even before the census would have been taken in the spring, hundreds of Shetland's fishermen were already gone with the whalers for the spring seal hunts.

Second, Shetland's environmental contingencies combined with men's absence led to Shetland's own rendition of northern Europe's 'joint maritime household'.[26] Reginald Byron describes a joint maritime household as an entity which extends beyond the boundary of a biological family to incorporate other persons and families into a 'composite household defined by the nature of their collaborative activities and the source of their common livelihood'. Byron clearly draws a distinction between the maritime household and peasant farming household.[27] Finally, in practice these collaborative activities constituted gendered and makeshift economic strategies along the lines of Olwen Hufton's 'economy of makeshifts'.[28] Lynn Abrams has taken this further by showing women's various activities within an economy of makeshifts needed to be independent and complementary, and these roles necessarily extended beyond the domestic sphere into the public domain.[29] The hybridized nature of combining a joint maritime household with an economy of makeshifts means that everyone of ability was expected to contribute a form of labour for the general good and survival of the

[24] Abrams, *Myth and Materiality*, pp. 65-66.
[25] Abrams, *Myth and Materiality*, pp. 67f.
[26] For more on joint maritime households, see Reginald Byron, 'The Maritime Household in Northern Europe', *Comparative Studies in Society and History*, 36 (1994), pp. 271-92.
[27] *Ibid.*, p. 271.
[28] The concept of 'an economy of makeshifts' was introduced in Olwen Hufton, *The Poor of Eighteenth-Century France, 1750-1789* (Oxford, 1974), pp. 69-127. Since then, scholars have extended this concept to regions of England in the eighteenth and nineteenth centuries; see Stephen King and Alannah Tomkins (eds.), *The Poor in England, 1700-1850: An Economy of Makeshifts* (Manchester, 2003); and Samantha Williams, 'Earnings, Poor Relief and the Economy of Makeshifts: Bedfordshire in the Early Years of the Poor Law', *Rural History*, 16:1 (2005), pp. 21-52.
[29] Abrams, 'Knitting, Autonomy and Identity', pp. 153-55.

household. For women, children and older men, that meant tending the croft and producing wares by hand. For men of suitable age, that meant going to sea.

Arctic whalers prized Shetlanders for their expert small boat-handling and line management skills. Besides using small boats for transportation, the demands and vicissitudes of Shetland's open-boat fishery, known locally as the *haaf*, necessitated that boat crews learned to master their craft and handle fishing lines in every sea condition. Communal life and labour were organised around the *haaf* season, during which fishermen caught 'white fish' such as ling, tusk and cod. The season commenced annually around 20 May and concluded on Lammas, 12 August. During the *haaf*, usually six fishermen and a boy would row and sail open-decked, six-oared 'sixern' (or 'sixareen') boats for up to twelve hours at a time to reach the fishing grounds 30-40 miles offshore.[30] Trips lasted up to three days, and boat crews could make this trip over a dozen times per season.[31] Once on the fishing grounds, the fishermen had to manage the deployment of four nearly 100-fathom long buoy ropes as well as the 'great lines' fixed with 1200 hooks baited with haddock.[32]

These experiences at the *haaf* translated well to boat crew duties on traditional whaling vessels. Most Dundee vessels carried at least six whale boats for pursuing prey. Upon spotting quarry, a whaler would lower its boats, each filled with six crewmen. Three members of the boat teams – harpooners, boatsteerers and line managers – were assigned particular duties. The harpooner is the boat commander. His tasks involved rowing the bow oar, then upon nearing the whale, fastening a line to it by throwing a harpoon or firing one from the harpoon gun. Once the whale was exhausted from towing the boat(s), the harpooner would kill it with a lance. The boatsteerer (B.S.) was second to the harpooner, and he read the whale's movements while in pursuit and steered the boat with an oar at the best angle to catch up to the prey. He also pushed 'the crew to exertion by encouraging exclamations'. The line manager (L.M.) pulled oars

[30] The smaller 'fourerns' (or 'fourareens') were used for fishing closer to shore.
[31] See James R. Coull, 'The Haaf Fishery of the Shetland Islands: An Inevitable Method of Organising Fishing in the Eighteenth and Nineteenth Centuries?', *Northern Scotland* 24 (2004), pp. 53-73; and Arthur Edmondston, *A View of the Ancient and Present State of the Zetland Islands* (Edinburgh, 1809), pp. 232-59; this is one of the best contemporary descriptions of the *haaf* fishing effort. For a systematic analysis of *haaf* fishing, see Goodlad, *Shetland Fishing Saga,* pp. 90-128.
[32] Goodlad, *Shetland Fishing Saga*, 107-09. For an introduction to North Atlantic fishing, see David Starkey, 'Fish and Fisheries in the Atlantic World' in D'Maris Coffman, Adrian Leonard and William O'Reilly (eds.), *The Atlantic World* (London, 2015), pp. 55-75.

until the boat engaged the whale, whereupon he attended the running out of lines to prevent them from becoming entangled and endangering the boat and crew. Able-bodied (A.B.) and ordinary seamen (O.S.) comprised the rest of the oarsmen who completed the team.[33] While British whaling ports could supply seafaring labour, hiring Shetlanders provided vessels with sea-hardened crew who possessed a skill set that increased whaling vessels' chances for catching prey and, therefore, securing profits.

For their part, Shetlanders sought employment with whaling ships to earn cash wages since most people in the islands were otherwise tied to a barter economy, known as 'truck'. At the heart of the truck economy was a tenurial system which bound many Shetlanders in debt-bondage through the organisation of labour for prosecuting the *haaf* fishing.[34] Under the 'Shetland Method' in the late eighteenth century, lairds required tenants to fish for them in exchange for rent, food subsistence and the payment of debts.[35] During the nineteenth century, merchants in Lerwick increasingly took over Shetland's truck economy and absorbed its tenurial system. They used their near monopoly of the islands' monetary capital to purchase land holdings, invest heavily in the *haaf* and Faroe cod fisheries, control the import of most goods and fish exports, and even manage labour procurement for the whaling companies in Dundee.[36] As a result, there were people in Shetland whose economic fate was to perpetually face the threat of eviction, impoverishment and even starvation.[37] In 1872, Sheriff William Guthrie issued a report on his government-appointed investigation into abuses within Shetland's truck system.[38] While that shook the merchants, the system persisted until Shetland's herring fishing boom commenced in 1880. Described as 'the most spectacular episode in the story of [Shetland's] growth', the herring fishing boom opened Shetland to outside money and forced the transition to a cash-based

[33] William Scoresby, Jr., *An Account of the Arctic Regions with a History and Description of the Northern Whale-Fishery*, vol. 2 (Edinburgh, 1820), pp. 230-40.
[34] Coull, 'The Haaf Fishery', pp. 53-73; B. Smith, 'Shetland Archives and Sources of Shetland History', *History Workshop*, 4 (1977), p. 211.
[35] See Jonathan W.G. Wills, 'The Zetland Method' in Barbara E. Crawford (ed.), *Essays in Shetland History* (Lerwick, 1984), pp. 161-78.
[36] Jonathan Goodlad, 'The Shetland Cod Fishery from 1811 to 1909. A Study in Historical Geography' (Unpublished PhD thesis, University of Aberdeen, 2014), pp. 210-25.
[37] Smith, 'Sources of Shetland History', pp. 208-14.
[38] *BPP, Second Report into Shetland Truck*.

economy.[39] Whereas landowners and merchants previously had dominated fishing interests and the economy, the herring boom democratised fishing boat ownership, so that 'fishermen could aspire to become boat owners in their own right…Shetland fishermen themselves were becoming enterprising capitalists as well as skilled fishermen'.[40]

Yet, Shetlanders going to the whaling demonstrated this propensity long before the herring boom. During the 1820s and 1830s, Shetlanders with cash from whaling voyages helped expand and diversify Shetland's economy by purchasing fishing boats. These efforts, however, could not overcome the pernicious Shetland Method when the herring fishing failed in the late 1830s.[41] Even so, many Shetlanders 'bound to fish by the nature of [their] tenancy, and bound to farm by the need for food', regularly signed articles with vessels going to the whaling and sealing during the second half of the nineteenth century. In doing so, they were demonstrating a modicum of independence from Shetland's traditional system, and also gaining the means by which they contributed to its end.[42] So what do CAs tell us about these seafaring whalers?

Empirical Analysis of the Late Nineteenth-Century Shetland Whaleman

On Sunday evening, 5 June 1870, tragedy struck the S.S. *Camperdown* for the second time in a week. The whaling barque was traversing the North Atlantic on its way to the Davis Straits and Baffin Bay, west of Greenland, when 'George Gifford, Seaman, a native of Shetland accidentally fell from the jib boom into the sea…and was drowned'.[43] Six days earlier, one of the vessel's harpooners had been lost being 'under the influence of liquor [when he] jumped overboard'. Captain William Bruce filled that crucial position by promoting another Shetlander, Hercules Hunter, to 'loose harpooner'.[44] Selecting a Shetlander was a sensible and mathematical choice. At the moment of the harpooner's death, 23 of the vessel's 52 crewmembers (44 per cent) had signed articles in Lerwick,

[39] J. Coull, 'The Boom in the Herring Fishery in the Shetland Islands, 1880-1914', *Northern Scotland*, 8:1 (1988), p. 25.
[40] J. Goodlad, 'Shetland Cod Fishery', pp. 244-45.
[41] R. Smith, 'Shetland and the Greenland Whaling', pp. 67-68, 81. For a more detailed examination, see R. Smith, 'Shetland in the World Economy', pp. 249-64.
[42] Goodlad, Shetland *Fishing Saga*, p. 149.
[43] Whalers referred to the Davis Strait as 'Davis Straits'.
[44] MHA, BT 99, *Camperdown* (ON 27496), 1870. A 'loose harpooner' was simply a harpooner on a trial basis.

and four of the vessel's eight boatsteerers (the next rank from which a harpooner would have been promoted) were Shetlanders. Earlier that February, Shetlanders had made up 36 of the *Camperdown*'s 70 hands (over 50 per cent) when it left Lerwick for the spring seal hunt in the Greenland Sea.[45] Over the course of its two voyages in 1870, 46 different Shetlanders steamed with the ship.

Empirical evidence derived from Agreements builds and refines our prosopographical knowledge of the Shetlanders going to the sealing and whaling. Scholars previously have suggested that there was a division of labour within the Shetland family with younger, unmarried sons going to the whaling while older, married men remained at home and fished.[46] Far from being a domain of impetuous youth, the average ages of the Shetlanders point out that Dundee's Arctic whalers commonly hired older and more established men. On the *Camperdown*'s sealing voyage in 1870, all 36 Shetlanders previously had gone on a sealing or whaling cruise; most already had been on multiple voyages. These men averaged nearly 32 years of age with ten Shetlanders over 35, and 34 men aged 25 or more. Only two in the sealing were under 25 years.[47] As for marital status, by matching Shetlander's names, years and places of birth from the Agreements to information on Shetland's premier genealogical website, 26 of the *Camperdown*'s 36 sealers were positively identified as married (>72 per cent) with another four cases unknown. For his part, Hercules Hunter (1839-1918), the 30-year-old loose harpooner on *Camperdown*'s 1870 whaling cruise to the Davis Straits, had married Isabella Moffat (1837-1893) in 1864. They had seven children, three of whom had been born before 1870.[48]

Age alone can be a misleading indicator for measuring experience and seafaring ability. Young men frequently accompanied their fathers, brothers or cousins on voyages. Adam Fraser from Walls reputedly joined his first whaler at age 14.[49] In 1864, Fraser, by then 23, and Hercules Hunter, 24, were both boatsteerers on the *Camperdown* (as they would remain until 1870, when Captain Bruce promoted Hunter)

[45] MHA, BT 99, *Camperdown* (ON 27496), 1870.
[46] R. Smith, 'Shetland and the Greenland Whaling', p. 77.
[47] MHA, BT 99, *Camperdown* (ON 27496), 1870.
[48] Gott, *Northern Isles Family History*, (accessed 2 August 2018).
[49] Laureen Johnson, *Shetland's Whaling Tradition from Willafjord to Enderby Land* (Lerwick, 2015), p. 4.

while John Laurenson of Lerwick, 51, served as an able seaman.[50] Another Shetlander, Robert Peterson of Lunnasting, a line manager on the *Esquimaux* in 1890, falsely reported his age as 59 (he did this regularly). That year he died two months before his 70th birthday when he fell into an icy pool and drowned while seal hunting north of Newfoundland.[51] In this way, Dundee's whalers employed a veritable kaleidoscope of maritime labour from Shetland's seafaring communities.

Analysis of *Camperdown*'s 1870 Agreement also connotes geographical variations among Shetland's parishes represented by those participating in the Arctic voyages. Understandably, Lerwick and its environs supplied a regular number of seafarers. Parishes more geographically distant from the best *haaf* and cod-fishing grounds also furnished a regular supply of labour for the whale fishery. Since the best bases for the *haaf* were located in the south, southwestern, north and north-eastern parts of Shetland, comparatively few individuals joined whaling vessels from southernmost Dunrossness, Burra in the southwest, Northmavine, and the northern island of Unst.[52] On the other hand, men from parishes in central and western Mainland, such as Sandness, Walls, Aithsting, Nesting and Delting, regularly joined the whaling ships. For the *Camperdown*'s two voyages in 1870, twelve men were from the Lerwick area. Walls and Sandness each sent five, and Yell sent four men. In all these places, fathers and sons, brothers, cousins and community friends frequently engaged vessels together. Of Hercules Hunter's eight siblings, all five brothers joined whalers at various times. In 1870, Magnus joined his brother Hercules Hunter for the cruise to the Davis Straits, giving Weisdale parish two representatives.[53]

Households from the Isle of Bressay, which lies across the sound, east of Lerwick, also had a strong tradition of joining the seal and whale fishing. Its 13 men of the *Camperdown*'s 46 total individuals were the most from any parish. The Bressay men included George Gifford, who died at sea in 1870. George left behind his wife Christina, one-year old daughter Margaret, and his future namesake, Georgina, who was born that October.[54] Agreements from the whalers *Erik, Esquimaux, Narwhal* and *Polynia,* all from

[50] MHA, BT 99, *Camperdown* (ON 27496), 1864.
[51] MHA, BT 99, *Esquimaux* (ON 52562), 1890.
[52] H. Smith, *Shetland Life and Trade,* pp. 46-55.
[53] MHA, BT 99, *Camperdown* (ON 27496), 1870.
[54] Gott, *Northern Isles Family History*, https://www.bayanne.info/Shetland/ (Accessed 2 August 2018).

Dundee, list thirty additional men who went to the whaling from Bressay in 1870.[55] With a population of 800-900 residents, it is entirely possible that 50-60 men, or roughly one in seven, would have gone either sealing or whaling that year.[56] Based on an examination of the *Camperdown*'s 1870 Agreement, Shetlanders joining the sealing and whaling voyages represented a range of ages, places, and household situations.

A cross-sectional analysis of Shetlanders' employed positions in the whalers *Intrepid, Esquimaux* and *Arctic* from 1876, highlights three notable patterns that frame Shetlanders' maritime labour in the Arctic whaling industry (see Appendix 5.3).[57] First, shipmasters and whaling company managers recognised Shetlanders' skills in small, open craft, and they directed them almost entirely into positions as boat crew officers and 'sailors' (ordinary and able-bodied seamen). Shetlanders rarely took positions involving authority, technical knowledge or artisanal craftsmanship, such as mate, engineer (or even fireman), carpenter, cooper, blacksmith, or sailmaker. Almost invariably, Scottish seafarers, usually from Dundee and the Scottish east coast, filled these positions before the vessel left Dundee. Yet, even when Shetlanders signed on in Dundee, which they routinely did, they were still assigned their usual capacities.[58]

Second, capacities such as harpooner, boatsteerer, line manager and able-bodied seaman reinforce the example from the 1870 *Camperdown*, which shows that Shetlanders were experienced and important members of the crew. Across the four voyages represented by the three vessels in Appendix 5.3, Shetlanders filled 103 of the 187 total positions (55 per cent) within these four experienced capacities. With the exception of one cook's mate from the *Esquimaux*, all other Shetlanders (24 per cent) signed on as ordinary seamen, the lowest working position on a whaler.

A longitudinal examination of Shetlanders aboard the *Esquimaux* from 1868 to 1877 shows that for almost 75 per cent of Shetlanders, the previous vessel upon which

[55] Quantified data represents a 50 per cent sample for Dundee vessels and less than a 30 per cent sample for all known Scottish whaling and sealing vessels sailing in 1870.
[56] J. Coull (ed.), *The Third Statistical Account of Scotland: The County of Shetland* (Edinburgh, 1985), p. 4. Though women far outnumbered men, this calculation is conservative assuming half of Bressay's 850 persons as male and dividing that by the 60 Shetlanders who went to the whaling.
[57] The three vessels listed here represent Dundee's three largest whaling companies: TWFCo, DSWFCo and Alexander Stephen and Son, respectively.
[58] R. Ommer, 'Crews of Windsor Vessels', p. 221. Ommer and others, like David Alexander, have noted that in the nineteenth-century merchant marine, few made the transition from forecastle to quarterdeck, and positions of authority often involved personal connections.

they served had also been a whaler (see the centre column for the green and blue sections in Table 5.1 below). The number of Shetlanders actually returning to *Esquimaux* itself from the previous year, however, was far less, 38 per cent for sealing voyages and 27 per cent for whaling.[59] This data reveals how experienced the Shetlanders were at

Table 5.1. Shetlanders on *Esquimaux*, 1865-1900 (where previous ship was a whaler).

	Greenland Sealing			Greenland/Davis Straits Whaling			Newfoundland Sealing/Whaling		
Years	Total Shetland crew	Percentage of Shetlanders with previous ship a whaler	Total ship's crew	Total Shetland crew	Percentage of Shetlanders with previous ship a whaler	Total ship's crew	Total Shetland crew	Percentage of Shetlanders with previous ship a whaler	Total ship's crew
1867							0	0.0%	62
1868	30	60.0%	71	18	55.0%	59			
1869	20	80.0%	69	0	0.0%	56			
1870	27	81.5%	70	1	100.0%	52			
1871	30	70.0%	71	0	0.0%	49			
1872	18	100.0%	69	0	0.0%	50			
1873	27	81.5%	72	9	100.0%	51			
1874	36	61.1%	80	3	100.0%	55			
1875	31	64.5%	81	3	66.7%	56			
1876	31	64.5%	85	24	78.3%	58			
1877	23	100.0%	84	1	100.0%	55			
1878							5	80.0%	56
1879							0	0.0%	54
1880							0	0.0%	58
1881							10	50.0%	55
1882							13	61.5%	56
1883							12	41.7%	57
1884							10	80.0%	54
1885							0	0.0%	56
1886							6	33.3%	57
1887							2	100.0%	57
1888							15	80.0%	55
1889							4	100.0%	25
1890							11	54.5%	52
1891							0	0.0%	54
1892							0	0.0%	50
1893							0	0.0%	56
1894							0	0.0%	62
1895							12	33.3%	47
1896							NO RECORD		
1897							19	57.9%	60
1898							NO RECORD		
1899							16	37.5%	55
1900*							11	54.5%	34
Total:	**273**	**74.0%**	**752**	**59**	**74.6%**	**541**	**146**	**56.8%**	**1172**

Source: MHA, BT 99, *Esquimaux* (ON 52562), 1865-1900.
*Vessel sold in 1901.

[59] MHA, BT 99, *Esquimaux* (ON 52562), 1868-1877.

going to the Greenland seal and whale fishing. According to these numbers, only one in four was *possibly* a 'greenman', someone who was on their first voyage in a whaling vessel.

The percentage of greenman onboard is likely lower if all vessels from each Shetlander's past voyages are considered. Here, only the previous vessel is sampled. Still, Table 5.1 underscores that Shetlanders were not impulsive, adventure-seeking or rootless youths going to sea. Most were veterans of the Arctic. Unlike Dundee seafarers, who had a proclivity for desertion, Shetlanders not only exhibited dependable service while onboard, but they also showed a willingness to return the next year.

Third and perhaps most telling, the longitudinal study in Table 5.1 shows that Shetlanders' preferred joining the shorter Greenland Sea sealing voyages over the longer cruises to the Davis Straits or later Newfoundland voyages.[60] Between 1868 and 1877, Shetlanders comprised over one-third of the total crew on Greenland Sea voyages. They made up a little more than a tenth of the Davis Straits whaling crews. Similarly, Shetlanders from 1878 to 1900, averaged 12 per cent of the crew for Newfoundland voyages, but their participation from year to year was much more erratic. Knowing from the earlier profile that Shetlanders on the sealing voyages were, on average, older, this suggests that many of Shetland's older and experienced whalers who chose not to go to the Davis Straits or Newfoundland were engaged in other activities at home.

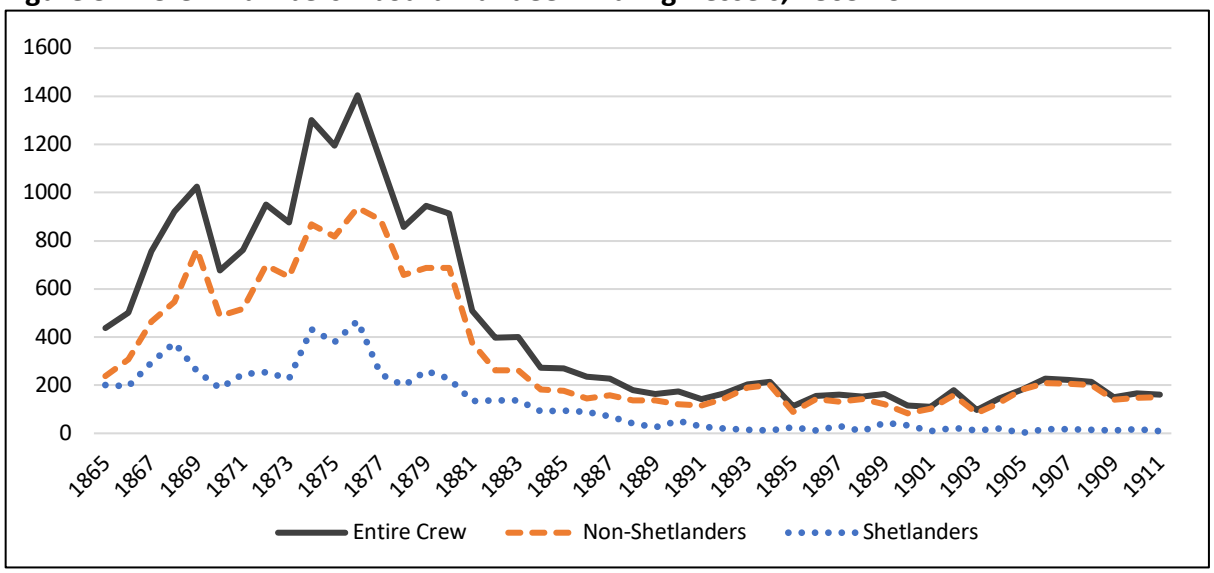
Though often less profitable due to the diminishing number of seals available, the sealing voyages still offered these Shetlanders an opportunity to earn cash wages, which provided enough supplemental purchasing power to meet their needs within Shetland's truck economy. When larger earnings were needed, these older Shetlanders readily found positions on the longer whaling voyages alongside the younger men. Even though Shetlanders lived in a pre-industrial society, they had quickly learned how to seize the most advantageous economic opportunities that an industrial society made available to them.

[60] In Ommer's 1980 study of the Windsor, Nova Scotia merchant sailing fleet, she found a 'large presence of Shetlanders' employed as seafarers in the 1860s. She surmised that for a Shetlander, seafaring in the merchant marine in the North Atlantic 'within the major trading orbit of his home area' served as an effective alternative to emigration. See R. Ommer, 'Crews of Windsor Vessels', pp. 198 201-04, 207.

The advent and shift to steam whalers in the 1860s gave rise to the two-voyage formula exhibited in the first two columns of Table 5.1. Prior to steam, most British whalers made one combined sealing and whaling voyage to the Greenland Sea or to the Greenland Sea and Davis Straits. Dundee's early enthusiasm and commitment to placing auxiliary steam engines in wooden whalers made it the world's leading Arctic whaling port by the 1870s. The new whalers were larger, faster, more manoeuvrable, powerful, and far more expensive. Steam engines reduced transit times when sea and wind conditions were unfavourable for sailing.

Steam also enabled whalers to navigate through leads in ice packs, allowing them to reach known fishing grounds and search for new ones. To offset the cost of these vessels, Dundee whalers, like the *Camperdown* and *Esquimaux*, began making two voyages a year: one to the sealing in the Greenland Sea for six to eight weeks from March to April and another cruise for whaling in the Davis Straits from May to late fall (see the map in Appendix G.1). As shown in Figure 5.2, Shetlanders' participating numbers on Dundee's whalers surged with the implementation of the two-voyage formula. This mostly echoed Dundee's own rise in crew numbers with the implementation of the two-voyage formula. Then came the precipitous drop in Shetland and non-Shetland numbers. What happened to cause this?

Figure 5.2. Crew numbers Aboard Dundee Whaling Vessels, 1865-1911.



Source: See Appendix 5.2.

Scholars write of a marked downturn in Shetlanders' overall participation in whaling during the mid-1880s. They attribute this reason for Arctic whaling's declining harvests of whales due to overfishing.[61] Declining harvests, caused by earlier overhunting, therefore, ultimately diminished whaling's own numbers. Research on whale harvests clearly indicates that this indisputably happened.[62]

Figure 5.2, however, hints at an altogether different phenomenon impacting numbers, which just happens to occur around the same time. Regarding the 1880s, it shows a steady decline, but not a precipitous one. That happened before the 1880s. Appendix 5.4 shows a steeper drop in Shetlanders' going to the Arctic between the 1875-79 interval and the 1880-84 interval. Despite the drop in average numbers, however, it also indicates that the average percentage of Shetlanders among the crew over these five-year intervals largely remained the same, hovering above 28 per cent from 1870 to 1889. Only from 1890-1895, does this average percentage significantly decrease.

Instead of Shetlanders numbers dropping in the 1880s due to declining whaling numbers, Figure 5.2 and Appendix 5.4 signal that Shetlanders' sharpest permanent drop in participation occurred between 1876 and 1881, immediately following its apex in 1876. Narrowing the inspection to these years, the data shows that the number of Shetlanders going to the sealing and whaling fell precipitously by over 74 per cent from 519 in 1876 to 134 in 1881. Was this sudden collapse simply the result of the longer-term problem of overfishing whales? It is not likely.

A comparison with total Dundee crew numbers (minus the Shetlanders) shows that while Dundee crew numbers also declined sharply from 886 in 1876 to 375 in 1881 (58 per cent), the vast proportion of this decrease occurred after 1880. So why does the decline of Shetlanders' crew numbers precede the decline of Dundee crew numbers by four years? The data here suggest that the Newfoundland sealing voyages and Shetland's herring fishing boom, both having commenced during this time, were contemporaneously challenging important aspects of the Shetlander whalers' prosopographical profile. For the first time, Shetlanders had the option to earn cash

[61] H. Smith, *Shetland Life and Trade,* p. 158.
[62] See Chesley Sanger, *Scottish Arctic Whaling* (Edinburgh, 2016), pp. 110-121.

wages near home instead of voyaging far north, and data indicate that they took their opportunity.

Problems with Newfoundland sealing

In 1876, with whaling down and seal harvests in the Greenland Sea in steep decline, the newly christened whaler, S.S. *Arctic*, called at Lerwick before embarking for Newfoundland to participate in the spring seal hunt there.[63] When Captain William Adams, Sr. returned to Dundee in early May, he told the press, '[I] found it impossible to get a larger or a better [crew] at Lerwick, because the men were generally unwilling to go on such a long passage, which was out of their usual course'. He described Shetlanders who did go as 'entirely eclipsed by the Newfoundland men for activity and expertness in killing the seals'. In his opinion, the Newfoundland sealing 'should be more extensively prosecuted by Dundee vessels'.[64] Though his words expressed irritation with the Shetlanders, Captain Adams's remark highlighted several truths. Newfoundlanders had a long and expert history of 'swiling' on pack ice, while Shetlanders were more associated with boat crew work.[65] Even so, Shetlanders preferred the convenient Greenland Sea sealing voyages over the longer whaling voyages, and this third and longest of voyages to the Newfoundland/Labrador sealing grounds followed by a summer and fall in the Davis Straits, was not ideal for many older Shetlanders. Table 5.1 breaks down the Shetlanders' participation in these various voyages, reaffirming that Greenland sealing attracted the most Shetlanders by wide margins. Unfortunately for Shetlanders, the Greenland sealing voyages from Dundee halted in 1884, and Dundee whaling companies not involved in the Newfoundland seal fishery reverted to making one annual voyage to the Greenland Sea and/or Davis Straits. By that time, however, Dundee whaling figures were down in every way. As the data from Appendix 5.4 demonstrates, from the mid-1880s thereafter, Shetlanders only participated in the Greenland and Davis Straits voyages in minimal and diminishing numbers. The voyage

[63] Unfortunately, the *Arctic* CA for this voyage is missing.
[64] *DC*, 'The Newfoundland Seal Fishing. Arrival of the Arctic', 3 May 1876. Incidentally, in 1887, the next time Captain Adams returned to Shetland, he met with an audience at the town hall. The *Shetland Times,* 19 March 1887, reports, he 'spoke in very high and flattering terms of the abilities of the Shetland seamen, who, he said, were better than either the Dundee or Peterhead men. He paid a particular compliment to Mr. Hercules Hunter…with whom he would be happy to be shipmates again'.
[65] See Shannon Ryan, *The Ice Hunters: A History of Newfoundland Sealing to 1914* (St John's, 1994). 'Swiling' and 'swilers' are Newfoundlander terms for 'sealing' and 'sealers'.

to Newfoundland proved disruptive to Shetlanders' interests in continuing with the Arctic whaling trade. In 1876, Hercules Hunter joined Captain Adams as a harpooner on the *Arctic* along with 51 other Shetlanders (see *Arctic* in Appendix 5.3).[66] Once on the Newfoundland sealing grounds, the Dundee whalers were outsiders who quickly ran into hostile confrontations with the Newfoundland sealers. The Dundee whaling master, Captain James Fairweather, later explained,

> The Newfoundland [sealing] masters were all more or less chieftains in their way, and drew their crews from the districts they came from themselves. The [Newfoundland] men were also to a great extent dependent on their Masters for their summer's work at the cod fishing, so that they viewed the advent of Dundee Masters as a breaking-up of old customs.[67]

For the Dundee companies sinking large amounts of capital into Newfoundland to establish a committed presence, the remedy required adopting new practices, such as hiring Newfoundland sealing masters to command Dundee's vessels during the seal hunt. Dundee whalers, starting with the *Arctic* and *Aurora* in 1877 (see Appendix 5.6), began hiring hundreds of Newfoundland swilers who accompanied their sealing master. Furthermore, they adopted Newfoundland's existing compensation structure, which allowed them to keep two-thirds of the profit. Through these actions, the Dundonians gained Newfoundlanders' acceptance, provided them with employment and leadership, increased their harvests of harp seals, and cut their labour expenses. Consequently, the employment of large numbers of Shetlanders became redundant. That year, Hercules Hunter voyaged to Newfoundland with Captain James Bannerman in the newly built S.S. *Aurora*.[68] While the *Arctic*'s agreement for 1877 no longer survives, the *Aurora*'s does, and after these two voyages, Hercules Hunter ended his time in the Arctic whaling trade and turned to fishing. Whether Shetlanders were pushed out or preferred to leave Arctic whaling's evolving trade, their numbers immediately dwindled. This is clearly evident in Appendix 5.5 as well as the comparison of Appendix 5.3 and Appendix 5.6,

[66] MHA, BT 99, *Arctic* (ON 72543), 1876.
[67] Fairweather, James, *With the Scottish Whalers: The Study of a Shipmaster's Fifty-Two Years at Sea* (Dundee, 1928) as quoted in C. Sanger, 'The Dundee-St. John's Connection: Nineteenth Century Interlinkages Between Scottish Arctic Whaling and the Newfoundland Seal Fishery', *Newfoundland Studies*, 4:1 (1988), p. 19.
[68] TNA, BT 100/289, *Aurora* (ON 75196), 1877.

where *Arctic* (1876) represents Dundee's traditional scheme for procuring labour versus *Aurora* (1877) in which Dundee's adapted Newfoundland-hiring model exists.

Some Shetlanders verbalized their employment preferences in business conversations and correspondence. A letter from the prominent Shetland merchant and whaling agent, Joseph Leask, dated 27 January 1879, to Captain Charles Yule, master of the Dundee Arctic whaler *Esquimaux,* informed the skipper that his highly-valued Shetland spectioneer, Andrew Blance from the island of Yell, would not likely be joining his next voyage leaving Dundee in nine days.[69] 'He does not like the Newfoundland sealing…there being no more certainty with it than there is with the Greenland sealing, and it has the disadvantage of being too far from home'.[70] That year, no Shetlanders signed on with Captain Yule's *Esquimaux* for the spring seal hunt in Newfoundland.[71] Andrew Blance instead chose to join the S.S. *Mazinthien* as 'First Harpooneer'. The *Mazinthien* stopped in Lerwick in March to engage 24 Shetlanders for the seal hunt in the Greenland Sea. By the end of April, Blance was home again for a short break before leaving in May with ten other Shetlanders for a summer and autumn of whaling in the Davis Straits and Baffin Bay.[72]

The Attractiveness of the Herring Fishing

Between the time Shetlanders' numbers dwindled in the Newfoundland voyages (1876-78), and the cessation of the short six- to eight-week Greenland sealing voyages in 1884, another environmental event commenced in Shetland's own waters, the herring fishing boom. As mentioned earlier, the herring fishing boom was *the* event that changed Shetland's economy and society, and many Shetlander whalers participated in this burgeoning enterprise. Herring fishing offered advantages to Shetlanders which Dundee's whalers struggled to contest. First, it allowed fishermen to accumulate capital at home because herring fishing attracted hundreds of fishing vessels from Scotland, England, Ireland, and Isle of Man. The infusion of the cash they brought for purchasing

[69] In earlier times, the spectioneer, or spektioneer, served as the lead harpooner. By the late nineteenth century, a spectioneer was chiefly regarded for his other responsibility – overseeing the flensing of blubber from the whale.
[70] SMA, D 1/375, Mercantile wet-copy letter-book of Joseph Leask, 1878-79.
[71] MHA, BT 99, *Esquimaux* (ON 52562), 1879.
[72] MHA, BT 99, *Mazinthien* (ON 19534), 1879.

goods, services and labour hire effectively disrupted Shetland's truck system.[73] Second, herring fishing used nets instead of lines, and the drift net grounds virtually surrounded Shetland in every direction lying just off its coast. Unlike the far *haaf,* fishermen could fish all day and still sleep in their own beds at night. Third, since the herring season started around May and lasted until August, it was still possible for Shetlanders to go to the Greenland sealing in March and April and return for the herring fishing in the summer.

Shetland fishing experts, Hance Smith and Charles Goodlad, rightly observe that there was some transference of labour between fishing, whaling, and the merchant marine, especially when fishing was down, as it was in 1888-89.[74] Yet, this does not fully explain the precipitous drop in Shetland whalers' numbers between the 1875-79 and 1880-1884 quinquennia during the sharp rise in herring fishing. Economic and environmental factors were affecting Shetlanders' labour decisions in a push-pull manner. Pearson's Product-Moment Correlation supports the argument that during this time, the herring fishing boom more than the overfishing of whales affected Shetland's numbers in whaling. The correlation coefficient between the annual number of Shetlanders sailing with Dundee whalers and the number of bowhead whales caught by Scottish vessels between 1865 and 1900, shows a fairly strong relationship between the two (where $r = 0.68$, $n = 36$).[75] Yet, correlating the same number of whaling Shetlanders with the number of Shetlanders taking part in the herring fishing from 1865 to 1900, shows a stronger, negative relationship ($r = -0.71$; $n = 36$).[76] These correlations suggest that besides a steady, long-term downturn in the whaling trade, many Shetlanders were leaving whaling to join the herring fishing boom. In other words, Shetland's whalers are clearly linked to Shetland's fishermen. The next section links nominal research on these whalers from the Agreements with government and corporate documents in Shetland

[73] Goodlad, Shetland *Fishing Saga*, 178. For a tally of vessels at the Shetland fishery, see for instance *Second Annual Report (1883) of the Fishery Board of Scotland* (Edinburgh, 1884), p. 40.
[74] See H. Smith, *Shetland Life and Trade,* 158; and Goodlad, Shetland *Fishing Saga*, p. 149.
[75] For the number of whales caught by Scottish vessels, see C. Sanger, *Scottish Arctic Whaling*, 112. Correlations do not suggest causation, and the relationship does not mean that if more Shetlanders had gone to the whaling, more whales would have been caught.
[76] The calculation uses data from all CAs in Appendix 5.1 and employment figures from the Fishery Board of Scotland reports. For a comprehensive online resource using collated data and interactive charts of all the reports, see David Sutherland, 'Statistics', *The Scottish Continental Herring Trade 1810-1914*, http://scottishherringhistory.uk/index.html (Accessed 31 July 2018).

to determine when and the extent to which these whaling Shetlanders were integrating into Shetland society, which helped to change Shetland's economy.

Connecting Arctic Whaling (Documents) to Shetland Life

Earned wages from whaling and sealing in the late nineteenth century afforded Shetland seafarers and their households the freedom to make decisions and improve their situations within a traditional barter economy that infamously hindered these things. By cross-referencing nominal research, such as crewmembers' names, places and years of birth, from the Agreements with genealogical information, then comparing these findings to owners listed in Shetland's fishing boat registers, it is possible to generally track the number of Shetland whalers who purchased fishing boats during this period.[77] These studies underline the fact that Shetland's whalers were investing in fishing vessels over a decade before the herring fishing boom gave others the means to do so. These whaler/fishermen were not distant or muted participants in the life and economy of the islands because they voluntarily stepped outside the traditional fishing and crofting ways of life but were rather some of the first catalysts in the process of transitioning Shetland's barter system into a cash economy.

In 1877, Hercules Hunter left whaling, and along with others purchased the smack-rigged fishing boat, *Quickstep*, which he used to catch both ling and herring.[78] As skipper in his first season, Hunter brought in the largest herring catch at 545 crans.[79] By 1879, he leveraged his success into employment with Gilbert Harrison and Son of Lerwick, mastering the cod smack *Beltana* to the distant Faroe fishing grounds.[80] In 1885, he brought in the largest cod and ling catch of the season as master of the *Neptune.*[81] Over the next two decades, Hunter became one of the most recognised fishermen in Shetland, so that in 1904, a year after the Norwegians had opened modern-whaling shore stations in Shetland, the Shetland Whale Fishing Committee invited Hercules

[77] Angus Johnson of the Shetland Archives deserves thanks for providing a digital transcription of Shetland's fishing boat registers (CE 85/11/6-20).
[78] SMA, CE 85/11/6, Register of Fishing Boats, 1869-1881.
[79] *Shetland Times*, 'Herring Fishing', 5 October 1878.
[80] MHA, BT 99, *Camperdown* (ON 27496), 1870; SMA, CE 85/11/6-20, 1869-1910; and Gott, *Northern Isles Family History*, https://www.bayanne.info/Shetland/ (Accessed 2 August 2018).
[81] *Shetland Times*, 'Shetland Cod and Ling Fishing', 30 May 1885. A 'finner' is a fin whale.

Hunter to appear as an expert witness at an inquiry in Lerwick. When the chairman asked Hunter if whaling would hurt the herring industry, he stated,

> Yes it will…The finner whale was put there as a guard to the coast. The finner drove the herrings in on the inshore grounds… [The fishermen] depended on the blast of the whale for finding herring. Whales were the fishermen's guide book, and if they were taken away from Shetland the fishermen could give up their calling. It would ruin the islands.[82]

For Hercules Hunter, whaling – at least the modern hunting of rorquals out of Shetland – had ceased to be a benefit to Shetland fishermen. It now threatened to compromise Shetlanders' way of life.

Taking the 1870 *Camperdown* as an example, nearly half of those from the sealing voyage (at least 17 of 36 Shetlanders) owned fishing vessels, usually fourerns before 1880, and various types of decked herring boats after 1880. From the whaling voyage, at least 6 of 23 (26 per cent) owned fishing boats.[83] One of the Shetlanders was Magnus Leask (1836-1914) of Nesting who sailed as line manager on the sealing voyage. The previous year, Leask had registered his fourern *Fly* for inshore handline fishing, but by 1891, Leask had partnered with another Shetland whaler from Nesting, Hugh Robertson (1856-1947), to purchase a decked herring boat that they named *Camperdown.*[84] Another line manager who went with the *Camperdown* to the Davis Straits in 1870, was Robert Reid. He named his fourern after his wife, *Margaret*, as did William Gifford, who only went to the sealing. He named his fourern after his wife, *Helen*.[85] Other Shetland fishermen from other whaling vessels and years, registered their boats with names peculiar to Scottish whaling: *Tay, Eclipse, Active,* and even *Ravenscraig.* The instances of Shetland whalers who lived as fishermen and purchased fishing boats are too numerous to recount in detail, but the evidence is clear. Many of Shetland's whalers were Shetland's fishermen, and long before the herring fishing boom got underway, many owned fishing boats, or at least a share of one.

Besides being fishermen, many whalers were also crofters. In 1872, Sheriff William Guthrie's commission report on the Shetland truck system noted that, 'the

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[82] *Buchan Observer and East Aberdeenshire Advertiser*, 'Shetland Whale Fishing Committee, Inquiry at Lerwick', 7 June 1904.
[83] SMA, CE 85/11/6, 1869-1881.
[84] SMA, CE 85/11/7, 1881-1901.
[85] SMA, CE 85/11/5, 1869.

circumstances of the [whaling] men are generally so much better than those of ordinary ling fishermen, that they are not compelled to get credit to the same extent'.[86] One of the men Guthrie interviewed for his report was Andrew Blance (1841-1923) of Yell. Sheriff Guthrie first asked Blance, 'Are you a fisherman, living at Burravoe?', to which Blance responded, 'Yes. I am a fisherman, but part of my time has been employed in the seal and whale fishing…I have been there every year, for, I think, the last fifteen or fourteen years'.[87] Blance in all likelihood used the money he earned from sealing and whaling to purchase the *Mimy*, an open, clinker-built fourern. He worked his boat with another man and a boy – probably his brother-in-law Charles Blance and his son Peter.[88]

Andrew Blance also spent his whaling earnings on improving the condition and production of his croft. Through his Hay & Company store account in Lerwick, Blance regularly bought and shipped oatmeal, flour, bran, tea and 'sids' [seeds] home. On 6 May 1873, after a sealing voyage on the *Intrepid*, he purchased and shipped 2,350 cabbage plants for 11s 9d.[89] The following year, 1874, both Andrew and his brother-in-law Charles voyaged north with the *Intrepid*.[90] Blance continued with the *Intrepid* every year until 1878, when he joined Captain Yule and the *Esquimaux* for his first voyage to Newfoundland. In 1879, Blance chose to sail with the *Mazinthien* instead of voyaging again to Newfoundland. Nevertheless, from 1885 to 1887, Blance travelled to Dundee annually to join the *Aurora* and Captain James Fairweather heading to Newfoundland. 1887 also marked the fourth year in a row that Andrew Blance went whaling with his son Peter. Andrew worked as a harpooner, and Peter sailed as an able-bodied seaman.[91] With whaling becoming less of an option by the 1890s, Peter Blance transitioned from whalers to the merchant marine, eventually making captain and relocating to Leith, near Edinburgh, Scotland. Sometime after Andrew Blance's mother died in 1901, Andrew and his wife Christina moved to Leith to be near his son's family. His emigration marked one of the few instances in which a former whaler left Shetland to live somewhere else. Among the 46 Shetlanders from the 1870 *Camperdown* voyages, only one – Laurence

[86] *BPP, Second Report into Shetland Truck*, vol. 1, p. 43.
[87] *Ibid.*, pp. 221-22.
[88] SMA, CE 85/11/6, 1869-1881.
[89] SMA, D 31/6/35, Hay & Co., 'Greenland Books', 1871-77.
[90] MHA, BT 99, *Intrepid* (ON 18504), 1874.
[91] MHA, BT 99, *Jan Mayen* (ON 27526), 1884; and TNA, BT 100/289, *Aurora* (ON 75196), 1885-87.

Jamieson of Yell – is known to have emigrated, moving to Riverton, New Zealand. Connecting information from Agreements with corporate and government documents enhances our knowledge of how individual Shetlanders were integrated within their communities. The biographical sketches related here reveal that Shetlanders who went to the Greenland whaling responded to social, economic and environmental factors by alternating between various forms of work as local and transoceanic economic opportunities and importunities arose.

Finding Women in the Shetland Whaling Trade

Like the fishing trades, at first consideration whaling in Shetland appears to have been the exclusive domain of men.[92] Yet, as we have seen in previous chapters, Dundee's whaling trade went far beyond those who directly participated in the hunting of whales. Though Shetland women did not voyage in the Arctic whalers, the trade still affected their lives, and many engaged with it either through handknitting, selling produce, or accessing and spending cash allocated by their seafarer's monthly wage allotments. While cloaked in domestic production, these activities were essential not only in supporting joint maritime households but also maintaining Shetland's domestic economy. Reginald Byron argues that in northern Europe, households (rather than more narrowly defined nuclear families) emerged as a distinct development, and each member within it laboured collaboratively according to gender-assigned roles.[93]

As Abrams has asserted, 'hand knitting does not strike one as the most likely bedfellow of fishing and seafaring, but in fact it was ideally suited to the economic and environmental conditions in the Shetland Islands'.[94] Whalers arriving from British ports remarked on Shetlanders' knitting efforts as they recorded their observations upon approaching Shetland. In 1866, the surgeon Charles Edward Smith aboard the *Diana* of Hull wrote down his thoughts on Shetland's landscape and its way of life.

[92] This clearly has been shown not to be the case. See James Coull, 'Women in Fishing Communities' in James Coull, Alexander Fenton and Kenneth Veitch (eds.), *Scottish Life and Society,* vol. 4, *Boats, Fishing and the Sea* (Edinburgh, 2008), pp. 277-78. See also Scottish Fisheries Museum, Anstruther, Scotland, 'Herring Girls' display.
[93] Byron, 'Maritime Household', pp. 271-92.
[94] Abrams, '"There is Many a Thing That Can Be Done with Money": Women, Barter and Autonomy in a Scottish Fishing Community in the Nineteenth and Twentieth Centuries', *Signs*, 37:3 (2012), p. 605.

> There is nothing to see but droves of small, shaggy ponies; small, active, long-woolled sheep; and small, stunted cattle, listless men and boys followed by collie dogs attending to the stock, and little groups of women, girls, boys, or aged men, carrying turf upon their backs in baskets along the winding roads, and all busy knitting and talking as they creep along.[95]

While Shetland women are renowned for their fine lace and elaborate knitted wares, more often they produced clothing and goods for everyday use. An excerpt of *Sketches and Tales of the Shetland Islands* from the 1875 *Peace's Orkney and Shetland Almanac* describes the various grades of wool and the associated products made by them.

> The coarsest is set aside for the fisherman's socks and mittens; a second quality is used for a sort of twilled blanketing, woven by some superannuated fishermen, in a very primitive hand-loom. This *claith* (so it is called) if grey or mixed, is dyed with indigo, and makes very durable jackets and trousers; if white, it is used for blankets and petticoats, or under-shirts for the men.[96]

Women and older men retired from the sea accomplished most of these tasks without statistical or economic measure, yet indirect evidence scattered throughout government and corporate documents hints at their activity and involvement.[97] In maritime-oriented Crew Agreements, the products women knitted emerge from the inventories of deceased seafarers' goods. In the case of George Gifford, who died at sea while voyaging with the *Camperdown* in 1870, Captain William Bruce listed the line manager's effects as consisting of:

Seven shirts	Nine pair drawers
Eight pair stockings	Four pair trousers
Three vests	Four frocks
Five pair mittens	Three caps
One oil jacket & trousers	Two pair sea boots
Two bags	One blanket & cover
Five mufflers	One pair boot soles
One pair braces	Three jackets
One bar of soap	One towel[98]

[95] Charles Edward Smith, *From the Deep of the Sea* (London, 1922), p. 16.
[96] William Peace, *Peace's Orkney and Shetland Almanac* (Kirkwall, 1875), p. 76.
[97] Older men who no longer went to sea were known to make heavy woollen bedcovers known as 'taatit rugs'. See Carol Christiansen, *Taatit Rugs: The Pile Bedcovers of Shetland* (Lerwick, 2015). She features one taatit rug made by Arthur Shearer (1856-1929), a whaler/crofter from Whalsay, p. 105.
[98] MHA, BT 99, Official Log, *Camperdown* (ON 27496), 1870. For more historical research using material culture within CA inventories, see Meaghan Walker, 'In the Inventories of Deceased British Merchant

This simple inventory reveals that most of Gifford's personal belongings were likely sourced by Gifford's female kin to support him in the whaling effort. If not already owned, items such as sea boots, boot soles, oil jackets and oil trousers would have been purchased from the same merchant who served as Gifford's whaling agent. Everything else could have been made at home. This partly explains why certain items such as mittens, mufflers, stockings, drawers and shirts were owned in larger quantities.

Merchant account books corroborate what is suggested in the Agreements. George Gifford's 1854 Greenland account with Hay & Company while he served on the whaler *Jane* out of Bo'ness, Scotland, reveals that on 7 March, he bought soap, soda, coffee, sugar, tea, a knife, and an oil coat.[99] On 9 March, he further purchased twine, a chest lock, a share of a fiddle (in league with 15 others at 1s 7d each), and some mess kit items. The fact that none of these transactions included personal clothing supports the premise that women either in the Gifford household or from other kith or kin provided those items.

George Gifford's 1854 store account is representative of what other Shetlanders joining his crew purchased as well. Occasionally a seafarer purchased a cap, 'duck' or a shirt, but most transactions were for items like knives, moleskin, canvas and other small quotidian needs. Gifford's account also indicates that household members withdrew credit or cash on his store account while he was away. On 22 June, his mother withdrew £1 2s 1d in cash and credit, and his father withdrew another £1 6s in cash on 20 October.[100] This too is fairly representative of Greenland accounts, not only for 1854, but also 1867.

In addition to the Shetlanders' individual accounts, the Hay & Company Greenland books also list hosiery purchases made by the British whaling crews and their captains calling at Lerwick. The hosiery that the Lerwick merchants sold to British whalemen for cash was the same stuff the Shetland women the knitted for their men. A list of items purchased by 31 'Dundonians' aboard the *Intrepid* captained by David

Seafarers: Exploring Merchant Shipping and Material Culture, 1860-1881', *IJMH*, 31:2 (2019), pp. 330-46.

[99] SMA, Hay & Co. 'Greenland Books', D 31/6/21, 1853-55.

[100] *Ibid.*

Soutar in March 1867, provides a familiar sample of the effects men desired.[101] William Munro, a 43-year-old harpooneer from Cromarty, purchased ten pairs of mitts (at 6d each), five pairs of gloves (at 1s apiece), and one cap (at 2s 9d) for 9s 9d total cash. Peter Farquharson [sic, Ferguson], a line manager from Dundee, purchased six pairs of mitts, four pairs of stockings (at 2s 3d each), a tin plate (6d) and two shawls (3s each) for 18s 6d. The shawls were likely gifts for loved ones back home, though in other cases, they may have been intended for exchange with Inuit in the Arctic. Captain Soutar's merchant record comprises a mixture of personal and shipboard purchases including two pairs of slippers (2s each), four pairs of child's stockings (1s apiece), a pair of brown stockings (2s 9d) and twenty dozen eggs at 7d/dozen. The brown stockings and shawl were women's apparel, which like the child's stockings, presumably were gifts for family back home. In May, he further acquired three 'scarfs' (2s each) among other sundry items. For 1867, Hay & Co. earned £18 19s 6d in cash sales from the *Intrepid* alone.[102]

Many of the wares and products which the Lerwick merchants sold for cash to whaling men originally came from Shetland women, who had bartered them in exchange for other store goods. The Minutes of Evidence in the Shetland Truck Commission report provides some of the clearest and most detailed information of Shetland women's roles in society. On 11 January 1872, Sheriff Guthrie interviewed Alexander Sandison (1800-72) of Hillswick in Northmavine parish. Alexander Sandison was a former whaler/fisher/crofter who lived in a maritime household that included his wife, her brother William Halcrow, their three adult children John, Alexander and Marion, and a fourteen-year-old farm labourer, Joan Thomason. When asked in the deposition if any of his family knitted, he replied that they did, but he did not interfere with such things. Guthrie then asked, 'Is it usual for the father of a family not to interfere with his wife and daughters' account for hosiery?'. Sandison replied,

> They manage their own affairs and their accounts themselves, and we [he and his grown sons] never interfere with them in any way…I have no concern with [their business dealings]. They see their own books and are satisfied with them… [My wife also takes eggs, sells them] and brings back any stuff

[101] SMA, Hay & Co. 'Greenland Books', D 31/6/34, 1867. Of course, not all these crew members were from Dundee, but this is how they are listed in the account books.
[102] MHA, BT 99, *Intrepid* (ON 18504), 1867. SMA, Hay & Co. 'Greenland Books', D 31/6/34, 1867.

> she wishes to get for them. That is the usual practice, and it has been so all my days.[103]

As shown earlier, some of the domestic production in knitted wares, eggs and the like eventually made their way to British whalers making port calls at Lerwick.

Sheriff Guthrie's interview with Catherine Petrie (1824-1905) of Fetlar, who knitted and traded fine shawls and veils, lends more insight into how women utilized an economy of makeshifts to support a joint maritime household. When Sheriff Guthrie asked the unmarried woman, 'Do you live with your people?', her affirmative reply meant that she lived in a croft with her elderly father and aunt, her married brother, David Cowan Moodie Petrie (1826-1889), his wife and two surviving children.[104] Catherine's household was familiar with the Greenland whaling. Her father Garth Petrie had gone to the whaling for at least every year from 1814 to 1822, while her brother did the same during the 1840s and 50s.[105] A more distant relation, James Petrie (1843-1880), who also lived in Catherine's community of Aithness, fished and went to the Greenland whaling in the 1860s. Catherine often agreed to do household and farm work for people, who paid her with 'wool in return, because wool in Fetlar is so scarce'. She went on to say that 'there are a good many people [women] who knit in the same way that I do, and come down here [Lerwick, once a year] with their shawls, because there is no other way of disposing of them'.[106]

These testimonies offer glimpses of the roles that Shetland women had through their domestic production whether in support of household members voyaging north or in their autonomous barter exchanges with merchants and each other. The biographical sketches also show the prevalence of the maritime household in Shetland. Women worked roles within these households that conformed to late-nineteenth-century gender norms, but they participated in more than just the islands' economy. Though most never left Shetland, they also contributed to the prosecution of Dundee's transoceanic whaling and sealing trade.

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[103] *BPP, Second Report into Shetland Truck,* vol. 2, p. 169.
[104] *BPP, Second Report into Shetland Truck,* vol. 2, p. 28, and Gott, *Northern Isles Family History*, https://www.bayanne.info/Shetland/ (Accessed 7 September 2018).
[105] See SMA, Hay & Co. 'Greenland Books', D 31/6/3-10, 15, 16 and 19.
[106] *BPP, Second Report into Shetland Truck,* vol. 2, p. 29.

Conclusion

In 1872, William Irvine, a partner of Hay & Company, told the Shetland Truck Commission, 'Shetland fishermen have been represented as ignorant and uneducated. This is a great mistake. They are as intelligent, shrewd, and capable of attending to their own interest as any similar class of men in Scotland'.[107] Though referring to Shetlanders by their seemingly ubiquitous lifestyle – fishing, this chapter has posited that Shetlanders' work, and hence their identities through their work, were remarkably fluid during the late nineteenth century. These identities, however, should not solely frame these Shetlanders as individuals, because most of their work fit within the makeshift strategy of a joint maritime household. Just as the *More Than a List of Crew (MTLC)* website challenges the myths and stereotypes surrounding Jack Tar, in referencing fishermen, William Irvine was undoubtedly included Shetland households who jointly fished for cod or herring, knitted clothes, bartered eggs *and* also went to 'fish' for whales and seals.[108]

Although local documentation on Shetlanders' participation in Arctic whaling is limited and scattered after 1872, whaling vessels' CAs offer potential sources of empirical and personal information for recovering this history. Quantitative analysis enables us to construct a prosopographical profile of Shetland whalers as a corporate body of maritime labourers, and we have found that many Shetlanders were older, married men who most often came from Bressay, Lerwick, and the parishes less advantageously situated for the *haaf.* In this way, the chapter has shown that data calculations in the Agreements can direct further analysis and can challenge or refine historical narratives. Shetlanders living in a pre-industrial society quickly seized upon the advantages that steam whalers offered in making two voyages to the Arctic. Many went to the sealing and whaling. More preferred the shorter voyages to the Greenland Sea, and the money they earned in this trade furnished financial advantages and freedoms for their household that were not otherwise available in Shetland's truck economy. Statistically important correlations in the data can identify shifts in local and transoceanic relationships, which are to be explained by a combination of social,

[107] *Ibid.*, p. 83.
[108] See V. Burton, 'How Do You Know He's a Sailor?', *More Than a List of Crew (MTLC), https://www.mun.ca/mha/mlc/articles/introducing-merchant-seafaring/* (Accessed 17 August 2018).

economic and environmental factors. In the case of Shetland's whalers, Arctic whaling's transition to the Newfoundland seal hunt, the collapse of the Greenland Sea sealing grounds, and the rise of Shetland's herring fishing boom account for the most precipitous declines in Shetlanders' participating numbers in whaling. In this way, Agreements have shown themselves to be useful resources for providing researchers with new perspectives for writing about social, economic and environmental processes that unfold across local and transoceanic histories.

Using empirical and individual information from Agreements in conjunction with Shetland documents, such as fishing boat registers, company account books, commission reports and merchant's letter books, mutually contextualises these sources and enhances our ability to create what Colin Jones calls one-off, 'micro-historical *pointilliste* displays'.[109] From such sketches, we learn that those Shetlanders who ventured north on Dundee whalers were never *just* whalers. Most also fished and/or worked their crofts between voyages while others transitioned from whaling to merchant seafaring. Some became fishing boat skippers and boat owners, and in doing so, they furthered the democratising of fishing boat ownership and hastened the end of the Shetland Method.

However, data shows a strong negative correlation between men to whaling and men to herring. Searching through fishing boat registers shows many boats had names unique to Dundee whaling. This infers that those who went whaling made enough cash to buy fishing boats and take full advantage of the initial herring boom. In this way, whaling became a social anchor to Shetlanders by enabling them to 'get ahead' despite living within a constrained barter economy. Shetlanders increasingly shifted away from the Arctic trade in favour of fishing in closer proximity to their joint maritime households. Nevertheless, the Arctic trade facilitated societal change in Shetland during the late nineteenth century.

[109] Colin Jones, 'Olwen Hufton's "Poor", Richard Cobb's "People", and the Notions of the *longue durée* in French Revolutionary Historiography' in Ruth Harris and Lyndal Roper (eds.), *The Art of Survival: Gender and History in Europe, 1450-2000* (Oxford, 2006), p. 191.

Conclusion

Redefining the Arctic Trade from Its Peripheries

This thesis investigates the people, connections and spaces that existed within the peripheries of Dundee's Arctic trade during its final era of operation from 1858 to 1922. Adapting to diminishing whale harvests, the industry became more malleable in its operations, more expansive in the natural resources it sought to exploit, and more diverse in its financing base and labour requirements. This thesis introduces the term 'Arctic trade' to comprehend these changes and locate the lives and activities of those who existed in the trade from its peripheries. Using transnational history approaches, it employs multiple historical scales and connections to ask new questions about an old topic. Research also explores the social and spatial boundaries that developed and changed over time. As a corollary to this, it also explores how and to what extent the Arctic trade became a social anchor, helping people 'get by', 'get ahead' and associate themselves within a more collective identity.

As a social history exploring a commercial endeavour, research organises the thesis into three primary business aspects: finance, management and labour. Research within the financial sector of the trade identifies Dundee's middle classes as the principal financiers of the Arctic trade. They contributed the largest core of participants and capital to the industry. This overturns scholarly assertions that the jute industry's manufacturers were whaling's primary backers. Textile manufacturers preferred to invest in corporate stock while maritime and other Dundonian and outside investors demonstrated more willingness to invest in ship shares. Most outside investors came from regional places in Scotland, but wealthy individuals also invested for a variety of reasons. Women participated as investors as well, both from Dundee middle classes and as outside investors.

Financially investing in the Arctic trade afforded different reasons and spaces for different participants. Textile merchants purchased corporate stock and often sought more corporate control to protect their investments. For women and the middle classes in Dundee, the Arctic trade opened opportunities to invest when other avenues were closed or constrained. Local investors close to the trade also invested as a form of civic

patriotism and self-preservation. Within the financial sector, the Arctic trade became a social anchor primarily to Dundee's middle classes with whom it afforded them an opportunity to 'get ahead'. As shipowners, it also imparted as sense of collective identity.

The smallest but most influential sector within the Arctic trade was management. Company managers and managing owners became the nexus of the trade due to their privileged access to information, the extensive range of business and personal connections and the authority they derived from the responsibilities they held. Managers engaged every group and the social spaces they inhabited within the Arctic trade. This social mobility extended their commercial, civic and personal influence. Managers used these elements to commercial and social advantage through what this thesis has called 'relational entrepreneurism'. Some managers came into the trade from working-class or non-maritime boundaries. The trade, however, afforded them opportunities to advance in society, joining Dundee's maritime middle class. While managers were not in themselves social anchors, the trade helped them to 'get ahead', sometimes to the point of leaving it for more economically enticing opportunities.

Chapters 4 and 5 examined the labourers who worked in various ways both on land and at sea. In the Arctic and in Dundee, the industry increasingly relied on casual labour to cut costs yet take advantage of people's skills. Women became a prominent source of casual labour. In the Arctic, the trade utilised men and women for labour but especially for their specialised skills. Temporary labourers in Dundee also supported the trade by cleaning whalebone or sorting and cutting mica. Though socially constrained, these labourers expressed agency and translocal connections primarily as participants in the Arctic trade's systems of production. While the industry provided few advantages for seasonal labourers in Dundee, its presence in Baffin and the eastern Arctic helped the Inuit to 'get by' during the 'hungry times' in winter. It afforded them opportunities to 'get ahead' by accessing western materials and technologies. It also developed a collective identity with the *qallunaat*. Of all the groups within the Arctic trade, the industry became the most influential social anchor among Inuit communities.

Besides translocal aspects of casual labour in Dundee and the Arctic, Dundee's whaling trade also established transmaritime connections with joint maritime households in Shetland. Historiography has generally considered Shetland whalers apart

from fisherman-crofters. They were associated with being young and free enough to go to sea. Compiled data, however, indicates that middle-aged married men formed the largest portion of Shetlanders going to the 'Greenland fishery'. These Shetlanders, however, used the Arctic trade's spaces of opportunity to 'get ahead'. Constrained within a barter economy, men went to sea to gain wages. Women within these joint households also participated in the trade by furnishing goods for trade and supporting the croft. Ultimately, the Arctic trade enabled some Shetlanders to take advantage of the herring boom by using the cash they earned to buy fishing vessels. In this way, the Arctic trade contributed to transforming Shetland from a barter economy to a monetary economy.

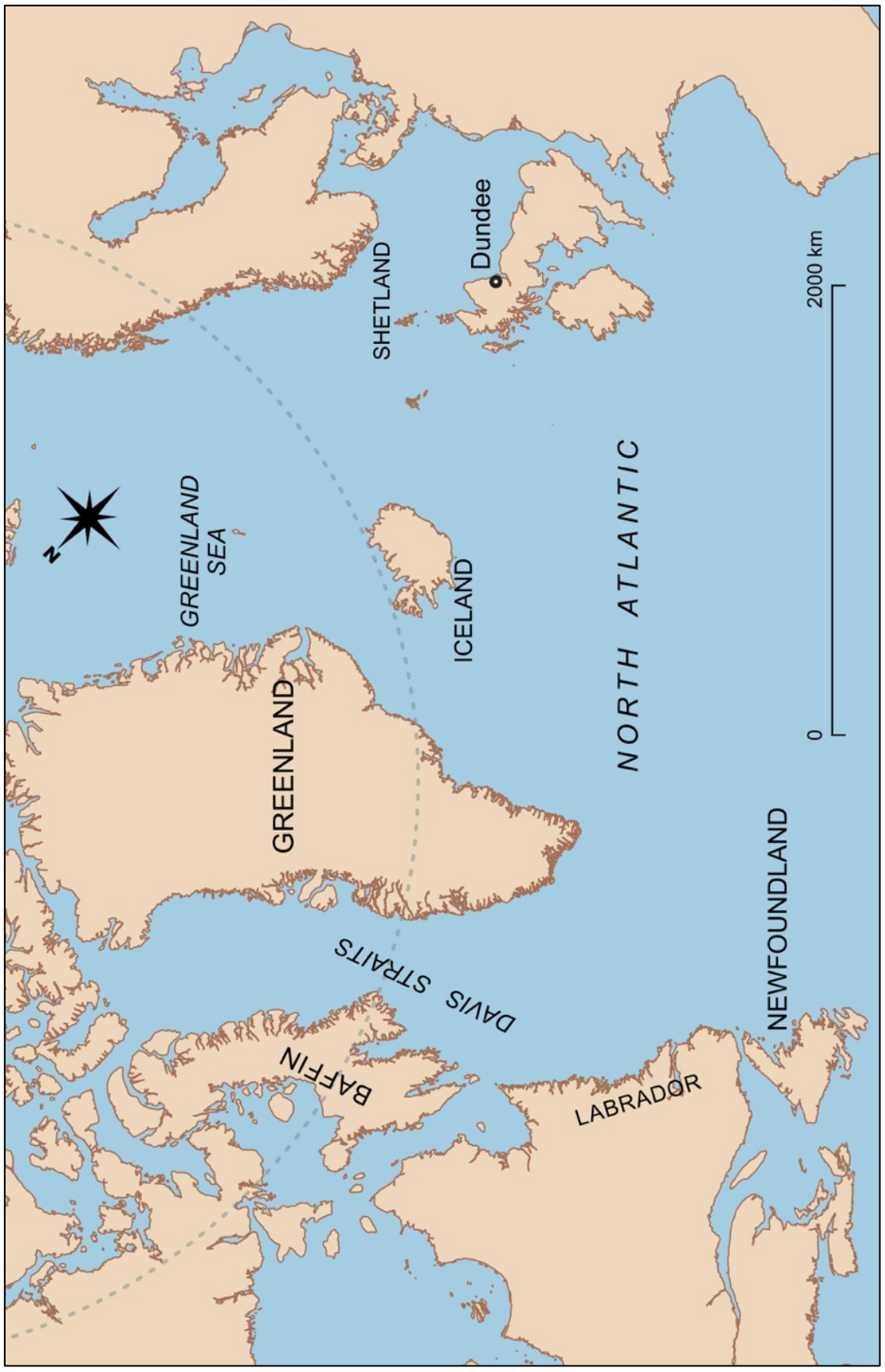
This thesis offers new perspectives which help to redefine the Arctic trade by considering those in the peripheries who supported the trade through their investments, business management and labour. As such, the Arctic trade became a transitive space of opportunity which enabled people from diverse backgrounds to express their own agency in different ways. This made the industry an important asset to various groups at different times. Despite the ultimate end of the industry even in its declining years, it served as a social anchor for each society that it engaged.

Examining Dundee's whaling trade provides a historical antecedent to various aspects of larger more contemporary narratives on wage labour, opportunism and capitalism, and resource development. In a complex world, there will always be those who are overlooked, undocumented and under-appreciated. Yet, without their labour whole systems of society and economy would struggle to get on. Of course, their treatment is and should be a concern. Now, just as then, it seems the rich get richer, and the poor just try to get by. While cleaning whalebone in the company yards no longer exists, seasonal or casual-contract labour still does. Instead of exploited sealers, today we face issues with exploited, low-wage transnational lorry drivers who are subcontracted to deliver goods for large, international corporations. As for resources, the rise of the petroleum industry quickly diminished a trade struggling to find more bowhead whales. In many ways the petroleum industry has followed the same trajectory by criss-crossing the world in pursuit of a non-renewable resource which still underpins national and global economies. No doubt the demand and use of petroleum and other 'fossil fuels' will continue for many years, but inevitably at some

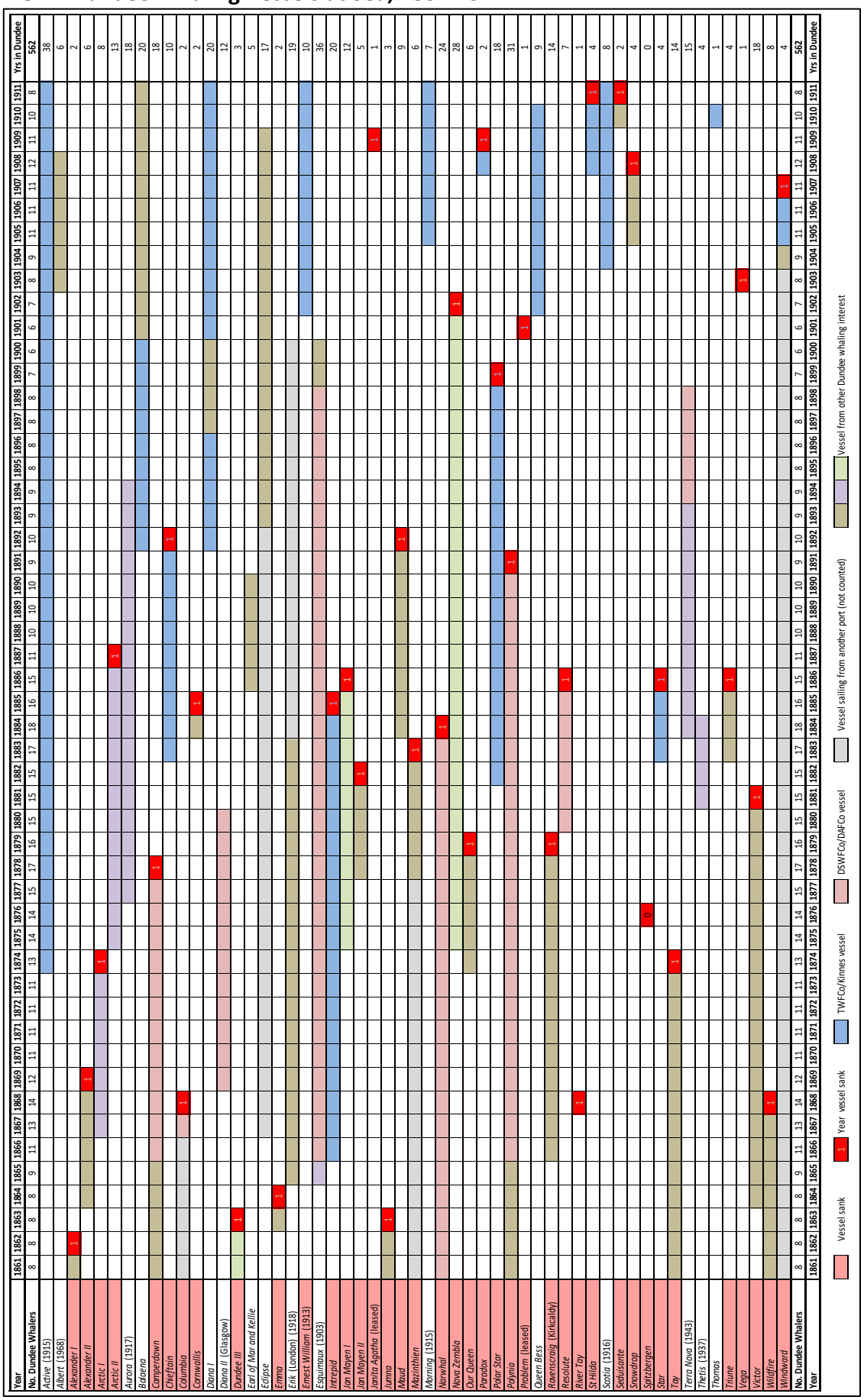
point it too will give out. We can only hope that its replacement - once again destined to be a leading product for the next age of humankind - will be a safer, cleaner and more renewable commodity source. Yet no doubt, it too will be attended multiple levels of opportunism in its production, supply and distribution. Let us wish that it will be less exploitative than its predecessors.

Appendices for General Reference

G.1. Map of Dundee, Shetland and the Northern Whale Fishery.



G.2. Dundee Whaling Vessels at Sea, 1861-1911.



G.3. List of All Whaling Investors (by 5-year intervals), 1861-1911. (1 of 10).

Lname	Fname	Occupation	Location	Ship/Company1	Ship/Coy2	Ship/Coy3	Ship/Coy4	Ship/Coy5	Ship/Coy6	Ship/Coy7	Ship/Coy8	Ship/Coy9	Ship/Coy10	Ship/Coy11	Ship/Coy12
Adams	William, Jr.	Shipmaster	Monifieth & Broughty Ferry	DAFCo	*Albert*	*Diana* (I)	*Morning*								
Adams	William, Sr.	Master mariner	Broughty Ferry	*Maud*											
Adamson	John	Grocer	Ava Lodge, Dundee	DAFCo											
Adamson	Robert	Merchant (Mgr. Dund. Water Co.)	Hermonhill, 21 Perth Rd, Dundee	TWFCo											
Adamson	William		Dundee	TWFCo											
Adie	Andrew	Textile Mfr	Dundee	TWFCo											
Adie	James	Textile Mfr	Dundee	TWFCo											
Aitken	Samuel	Hotel-keeper	Arbroath	*Triune*											
Alexander	David	Merchant	Dock St	*Active*	*Balaena*	*Chieftain*	*Diana* (I)	*Nova Zembla*	*Polar Star*	DPFCo	DSWFCo	TWFCo			
Alison	George Lloyd	Wine merchant	Dundee	*Alexander* (I)	*Dundee*	*Tay*	DPFCo								
Alison	Thomas	Produce merchant/broker	West Dock Street, Dundee	DSWFCo											
Allan	Claud Andrew	Shipowner	Glasgow	*Scotia*											
Allan	Robert Smith	Shipowner	Glasgow	*Scotia*											
Allison	James	Rope/sailmaker; Shipchandler	Dock St, Dundee; W. Newport	DAFCo	*Albert*	*Diana* (I)	*Morning*	*Nova Zembla*	*Scotia*	*Windward*					
Allison	John Millar	Sailmaker	Dundee	*Diana* (I)											
Alston	William	Jeweller	Dundee	DPFCo	DSWFCo										
Anderson	Alexander	Textile merchant	11 King Street, Dundee	DSWFCo											
Anderson	Elizabeth		Park View, Carmunnock, Glasgow	DPFCo	DSWFCo										
Anderson	Henry	Textile Engr	Dundee	*Triune*											
Anderson	John Rodgerson	Shipbroker	4 St Mary Ave, London EC	DAFCo											
Anderson	Patrick	Textile merchant	Dundee	*Polynia*	DSWFCo										
Anton	David	Master mariner	Dundee	*Polar Star*											
Anton	James	Wine merchant	10 Windsor Terrace, Dundee	BFCo	*Eclipse*	*Scotia*	*Windward*								
Arnot	David	Farmer	West Frianton, Newport, Fife	DAFCo											
Arnot	David	Commission merchant	Lilybank, Camoustie	DAFCo											
Arrott	James	Medical doctor	Dundee	*Jan Mayen* (II)											
Bales	Frank	Master mariner	Dundee	*Windward*											
Banks	Alexander Mills	Shipbroker	Dundee	DPFCo											
Banks	William	Grocer	Dundee	*Polar Star*											
Barclay	A.C.	Hosier	11 Vere St, Cavendish Sq, London W	BFCo											
Barclay	James	Shipmaster	Glenesk, Leith	BFCo											
Barrie	Ann Low	Spinster	Dundee	*Nova Zembla*											
Barrie	Charles	Shipowner	33 Albert Square, Dundee	*Balaena*	DAFCo	*Scotia*	BFCo	*Nova Zembla*							
Barrie	Elizabeth Dargie	Spinster	Dundee	*Nova Zembla*											
Barrie	Joseph Johnstone	Merchant [Insurance]	Dundee	DPFCo											
Barrie	Mary	Wife	Dundee	*Nova Zembla*											
Batchelor	David	Coppersmith	Dundee	*Triune*											
Batchelor	John Justice	Coppersmith	Dundee; Wormit	*Diana* (I)	*Morning*										
Bates	James	Commission agent	Dundee	*Chieftain*											
Baxter	Thomas H.	Grocer	Dundee	TWFCo											
Bell	Alexander	Farmer	Davidston, Auchterhouse	DSWFCo	*Jan Mayen* (II)										
Bell	David	Farmer	Auchtertyre, Meigle	DSWFCo											
Bell	George Gilfillan	Produce broker/grocer	2 Horse Wynd, Dundee	BFCo	*Nova Zembla*										
Bell	James	Wholesale grocers	Dundee	DPFCo											
Bell	James	Wholesale grocers	Dundee	DPFCo											
Bell	James H.	Textile merchant	Dundee	DPFCo											
Bell	John	Writer	Dundee	TWFCo											
Bell	John William	Textile merchant	Dundee	DPFCo											
Bell	Margaret Todd	Widow of Robert Bell, M.D.	Dundee	TWFCo											
Bell	Peter G.	Farmer	Ardownie, Monifieth	DSWFCo											
Bell	Thomas	Textile merchant	Belmont Works, Dundee	DPFCo	DSWFCo	TWFCo									
Bell	Thomas, Jr.	Textile merchant	Dundee	DSWFCo											
Bell	William	Tailor	Dundee	*Chieftain*											
Bell	William Fleming	Produce broker/grocer	2 Horse Wynd, Dundee	BFCo	DAFCo	DPFCo	*Nova Zembla*								
Benvie	Andrew	Linen merchant	Dundee	TWFCo											
Bett	John	Gentleman	Rohallion	*Jan Mayen* (II)											
Birch	Sydney Charles	Shipbroker	3 Fenchurch Ave, London SE	DAFCo											
Bird	David, Jr.	Chartered accountant	94 Hope Street, Glasgow	DSWFCo											

G.3. List of All Whaling Investors (by 5-year intervals), 1861-1911 (2 of 10).

Lname	Fname	Occupation	Location	Ship/Company1	Ship/Coy2	Ship/Coy3	Ship/Coy4	Ship/Coy5	Ship/Coy6	Ship/Coy7	Ship/Coy8	Ship/Coy9	Ship/Coy10	Ship/Coy11	Ship/Coy12
Bird	Katherine	Wife of David Bird, Accountant	Airlewood, Bellahouston, Glasgow	DPFCo	DSWFCo										
Birrell	John Fraser	Ins. agent/whaling mgr/merchant	Dundee	*Chieftain*	*Star*										
Black	Thomas M.	Surveyor of Taxes	Dundee	DSWFCo											
Blackadder	Robert	Civil Engr	Dundee	DSWFCo											
Blyth	William Matthew	Foreign coaling contractor	4 Fenchurch Ave., London	DAFCo											
Bordes	Antonin	Shipowner	11 Boulevard Malesherbes, Paris	DAFCo											
Borrett	Alfred Charles	Master mariner	35 Wilson Ave, Eastham	DAFCo											
Brand	David	Banker	Dundee	*Balaena*	*Diana* (I)	TWFCo									
Brand	William	merchant	Invergowrie	DPFCo											
Briggs	Henry C.	Textile Mfr	Dundee	TWFCo											
Briggs	James Alexander	Asphalt Mfr/chemist	Dundee	*Active*	*Diana* (I)	*Morning*									
Briggs	William	Asphalt Mfr	Dundee; Pitlochry	*Active*	*Diana* (I)	*Morning*	*Nowa Zembla*								
Briggs	William Archibald	Asphalt/chemical Mfr	Dundee	*Morning*											
Brodie	Robert Meldrum	Solicitor, bank agent	Dundee	*Chieftain*	TWFCo										
Brown	Alexander	Merchant	Dundee	*Diana* (I)											
Brown	Andrew	Textile merchant	Dundee	DSWFCo											
Brown	George	Accountant, cashier, shipowner	7 King St, Dundee; Newport	*Active*	*Scotia*	BFCo									
Brown	John	Gentleman	Leyfonstone, Essex	*Jan Mayen* (II)											
Brown	Peter Saunders	Iron merchant	14 Exchange St, Dundee	DAFCo											
Brown	Robert N. Rudmose	Naturalist	Aberdeen	*Scotia*											
Bruce	David	Shipowner	3 Royal Exchange Place, Dundee	DSWFCo	*Maud*	*Our Queen*	DAFCo								
Bruce	David Graham	Shipbroker	Ethelstone, Broughty Ferry	DAFCo											
Bruce	James		Dundee	TWFCo											
Bruce	William	Shipmaster	Dundee	*Camperdown*											
Bruce	William Mark	Shipowner	84 Commercial Street, Dundee	DSWFCo	DAFCo										
Bryson	David Sibbald	Oil merchant	43 Trades Lane, Dundee	*Balaena*	DAFCo	*Diana* (I)	*Polar Star*	*Chieftain*	*Star*						
Bryson	William Sibbald	Oil merchant	Dundee	*Polar Star*											
Buchan	James	Gentleman	Perth	DPFCo											
Buik	Thomas	Wine merchant	Dundee	*Chieftain*			*Triune*								
Buist	John Haddon	Upholsterer	Dundee	*Active*	*Balaena*	*Polar Star*									
Butchart	Bruce Morison	Engr	2 Garland Pl & Wellington St, Dundee	DSWFCo											
Butchart	James Foote	Mill Mgr	Calcutta	*Triune*											
Butchart	William	Mill Mgr	Dundee	DSWFCo											
Butters	John	Merchant	Cellardyke	*Diana* (I)											
Cairncross	Alexander	Engr	Broughty Ferry	*Chieftain*											
Cardno	James	merchant	Fraserburgh	*Jan Mayen* (II)											
Cargill	David	Bleacher, Textile merchant	Dundee	DSWFCo	*Mazinthien*										
Chalmers	Agnes		365 Paisley Road, Glasgow	DSWFCo											
Chalmers	Alexander	Textile merchant	Dundee	DSWFCo	*Mazinthien*	*Our Queen*									
Chandler	John	Colonial broker	17 St Mary Axe, London EC	DAFCo											
Chapman	James, Sr.	Confectioner	Dundee	*Diana* (I)	*Active*										
Christie	James	Banker	Dundee	DSWFCo											
Christie	James Morton	Farmer	Tayport	*Diana* (I)											
Christie	John	Farmer	Kirketon Barns, Tayport	DAFCo	*Diana* (I)	*Morning*	*Scotia*								
Christie	Peter	Farmer	Scotscraig, Tayport, Fife	*Camperdown*	*Polynia*	TWFCo	DSWFCo								
Clarke	William	Spirit merchant	23 Strawberrybank, Dundee	*Alexander* (I)	*Dundee*	*Toy*	DPFCo	TWFCo							
Cleghorn	William	Textile merchant	Garden Works, Dundee	DSWFCo											
Colman	William	Master mariner	Dundee	*Our Queen*											
Cook	John	Shipowner	Aberdeen	*Jan Mayen* (II)											
Cooney	John James	Shipmaster	Dundee	*Ernest William*	*Windward*										
Cooper	George	Superintending/consulting Engr	39 Dock Street, Dundee	BFCo	DAFCo										
Corsar	Charles Webster	Textile Mfr	Arbroath	DAFCo											
Couper	Thomas	Mgr, DP&L	Dundee	TWFCo											
Cox	Albert Edward	Gentleman	Dungarhill, Dunkeld, Perthshire	DAFCo											
Cox	Alfred William	Textile merchant	Wellfield Works, Dundee	DAFCo											
Cox	Arthur James	Textile merchant	Bloomfield by Dundee	DAFCo											
Cox	Edward	Textile merchant	Meadow Place Buildings, Dundee	DSWFCo	DAFCo	*Nowa Zembla*	*Active*								
Cox	George Addison	Textile merchant	Meadow Place Buildings, Dundee	DSWFCo	TWFCo	DAFCo									
Cox	George Methven	Textile merchant	Dryburgh House, Dundee	DSWFCo	DAFCo										

G.3. List of All Whaling Investors (by 5-year intervals), 1861-1911 (3 of 10).

Lname	Fname	Occupation	Location	Ship/Company1	Ship/Coy2	Ship/Coy3	Ship/Coy4	Ship/Coy5	Ship/Coy6	Ship/Coy7	Ship/Coy8	Ship/Coy9	Ship/Coy10	Ship/Coy11	Ship/Coy12
Cox	James	Textile merchant	Dundee	DPFCo	DSWFCo	TWFCo									
Cox	Thomas Hunter	Textile merchant	Meadow Place Buildings, Dundee	DPFCo	DSWFCo	TWFCo									
Cox	William	Textile merchant	Dundee	DPFCo	DSWFCo	TWFCo	DAFCo								
Cox	William Henry	Textile merchant	Snaigow, Dunkeld, Perthshire	DAFCo											
Crabbe	Alexander Stark	Mill Mgr	Calcutta	*Triune*											
Cragg	John	Bank Mgr	30 Lombard St, London	DAFCo											
Crichton	Alexander Black	Bag Mfr	Johnston St, Factory, Dundee	DAFCo	*Polar Star*	*Windward*									
Crighton	John	Plumber	Dundee	*Diana* (I)											
Croll	David	Seed merchant	63 Commercial St, Dundee	DAFCo											
Croshaw	George	merchant, shipowner	116 Fenchurch St, London	DAFCo											
Croudace	Elspeth M. Stephen	Wife	Netherby, Broughty Ferry	DSWFCo	*Mazinthien*	*Triune*									
Croudace	William Storey	Ship agent	Dundee	*Mazinthien*	*Triune*										
Crowe	David	Wine merchant; shipchandler	34 Dock St, Dundee	*Active*	*Balaena*	*Diana* (I)	*Morning*	*Scotia*	*Star*	DAFCo					
Cumming	Andrew Watt	Solicitor	Dundee	DPFCo											
Cunningham	David	Harbour Engr	Dundee	*Eclipse*											
Cunningham	John	Wine merchant	Dundee	TWFCo											
Cunningham	William	Spinner and Mfr	Dundee	*Eclipse*											
Curr	Christina Robson	Widow of William Curr	Dundee	TWFCo											
Currie	Agnes Cuthbertson	Spinster	Troon	*Scotia*											
Currie	Walter Thomson	Solicitor	5 Bank St, Dundee	DSWFCo	DAFCo										
Dalgleish	E.F.M.	Wife	Errol Park, Errol	DSWFCo											
Dalgleish	William O.	Textile merchant	King St, Dundee	DPFCo	DSWFCo	DAFCo									
Davey	William Charles	Master mariner	6 Gloucester Rd, Feignmouth	DAFCo											
Davidson	James	Gentleman	Dundee	DPFCo											
Davidson	Robert	Master mariner	Dundee	*Diana* (I)	*Polar Star*										
Deuchars	Jane Lowson	Relict of Alexander Deuchars	Dundee	TWFCo											
Dickie	James Alexander	Wire worker/Bell hanger	18 Barrack St, Dundee	DAFCo											
Dickie	William Bruce	Solicitor	Dundee	*Active*											
Dodds	Mary Stevenson		67 Great King St. Edinburgh	BFCo											
Dodds	John Adams (J.A.)	Shipowner	67 Great King St, Edinburgh	BFCo											
Don	William	Writer	Dundee	TWFCo											
Donaldson	George	Timber merchant	Leven, Fife	DAFCo											
Donaldson	James	Timber merchant	Mansfield, Tayport	DAFCo											
Douglas	Andrew	Textile merchant	Dundee	DPFCo	DSWFCo	*Our Queen*									
Douglas	William Andrew	Textile merchant	Dundee	DPFCo	DSWFCo	*Mazinthien*	TWFCo								
Douglas	John		Glasgow	TWFCo											
Downie	Archibald	House proprietor/ret. restaurantr	Dundee; Newport	*Active*	*Scotia*										
Downie	Charles	Coffee housekeeper/Restuarantr	Whitehall Cres, Dundee	*Active*	BFCo	*Scotia*									
Duncan	Alexander	Builder	Dundee	*Our Queen*											
Duncan	Charles	Shipmaster to shipchandler	East Dock St, Dundee	*Active*	*Our Queen*	*Polar Star*	*Star*	*Triune*	TWFCo						
Duncan	David	Textile Mfr	Arbroath	*Camperdown*	DSWFCo										
Duncan	David	Solicitor	Dundee	*Diana* (I)	*Morning*										
Duncan	Elizabeth Crockatt		Dundee	TWFCo											
Duncan	George	merchant, draper/haberdasher	Dundee	TWFCo											
Duncan	John	Stationer	Castle St, Dundee	BFCo											
Duncan	David	Widow	Dundee	TWFCo											
Durham	James	Stationer	Dundee	*Eclipse*											
Duthie	John	Mgr of whaler *Earl of Mar & Kellie*	London	*Earl of Mar & Kellie*											
Easton	Thomas	Slater	Broughty Ferry	*Chieftain*											
Edward	Charles	Architect	Dundee	*Mazinthien*											
Edwards	George Walker		276 Camden Rd, London	DAFCo											
Ewan	John	Textile merchant/Mfr	Dundee	DSWFCo	TWFCo										
Fairweather	Alexander	Shipmaster	Dundee	*Balaena*											
Fairweather	Samuel	Textile Mfr	Abbey Works, Arbroath	BFCo											
Farquharson	Thomas	Marine ins broker/shipowner	26 Commercial St, Dundee	BFCo	*Scotia*	*Windward*	*Albert*	*Diana* (I)	*Morning*						
Feathers	Peter A.	Nautical instr maker/optician	43 Dock St, Dundee	TWFCo											
Ferguson	Maud Mary	Wife	Dundee	*Windward*											
Ferguson	Robert	Shipowner; mgr of *Windward*	Dundee	*Windward*											
Ferguson	Thomas Chalmers	Oil merchant	Dundee	*Windward*											

G.3. List of All Whaling Investors (by 5-year intervals), 1861-1911 (4 of 10).

Lname	Fname	Occupation	Location	Ship/Company1	Ship/Coy2	Ship/Coy3	Ship/Coy4	Ship/Coy5	Ship/Coy6	Ship/Coy7	Ship/Coy8	Ship/Coy9	Ship/Coy10	Ship/Coy11	Ship/Coy12
Ferrier	James Geekie	Secretary	Edinburgh	*Scotia*											
Findlay	Charles	Textile merchant	Dundee	*Star*											
Findlay	William		Cluny, Aberdeenshire	DPFCo											
Findlay	William		Edinburgh	DPFCo											
Flack	Walter Sutton	Colonial broker	17 St Mary Ave, London EC	DAFCo											
Fleming	James	Merchant	Dundee	*Diana* (I)											
Fleming	John	Merchant (wholesale grocer)	Dundee	*Balaena*	DPFCo										
Fleming	Joseph	Merchant [Clothier]	15 Overgate, Dundee	TWFCo											
Fleming	Robert	[Financial Mgr]	Dundee	TWFCo											
Fleming	William	Merchant (wholesale grocer)	Seagate, Dundee	*Balaena*	DPFCo										
Forrester	Alexander	Baker	Dundee	DSWFCo											
Fraser	William	Master mariner	27 Palmerston St, Montrose	DAFCo											
Galloway	William	Stevedore	Long Lane, Broughty Ferry	*Albert*	BFCo	*Eclipse*									
Garriock	Lewis Francis U.	Gentleman [Originally,Scalloway]	Dundee	*Star*											
Gellatly	Beatrice Jane	Spinster	Broughty Ferry	*Nova Zembla*											
Gellatly	Emily Toulmin	Spinster	Broughty Ferry	*Nova Zembla*											
Gellatly	Emma	Wife	Sawston, Cambridgeshire	*Chieftain*											
Gellatly	James	Engr	Sawston, Cambridgeshire	*Chieftain*											
Gellatly	Rose Edward	Spinster	Broughty Ferry	*Nova Zembla*											
Gellatly	William	merchant	Albert Square, Dundee	DSWFCo	*Nova Zembla*										
Gibson	Joseph	Avg adjustor; marine ins broker	26 Commercial St, Dundee	*Active*	*Balaena*	*Diana* (I)	*Eclipse*	*Maud*	DSWFCo	DAFCo					
Gibson	William	Shipowner; insurance	Arbroath	*Narwhal*	DSWFCo										
Gilroy	Alexander Bruce	Textile merchant	Tay Works, Dundee	DAFCo											
Gilroy	Alexander, Jr.	Textile merchant	Meadow Place Bldgs, Dundee	DPFCo	DSWFCo										
Gilroy	George	Textile merchant	Lochee Rd, Dundee	DSWFCo											
Gilroy	Alexander	Gentleman	Broughty Ferry	*Mazinthien*											
Gourlay	Henry	Shipbuilder	Dundee	DPFCo											
Gourlay	Henry Garreth	Engr/Shipbuilder	Dundee Foundry, Dundee	DAFCo											
Grant	Osbert Clare Forsyth	Gentleman/adventurer	Ecclesgreig	*Snowdrop*	*Seduisante*										
Grant	Peter	Minister	Dundee	DPFCo											
Gray	Andrew	Ship chandler	Dundee	*Scotia*											
Gray	James Mitchell	Solicitor	30 Reform St, Dundee	BFCo	*Windward*										
Gray	John, Jr.	Merchant	24 George Square, Glasgow	DPFCo	DSWFCo										
Gray	Thomas Scott	Medical doctor	Dundee	DPFCo	DSWFCo										
Greig	Alice		Glencarse, Perthshire	DAFCo											
Greig	David	Physician	Dundee	DPFCo											
Greig	Thomas Watson	Landowner	Glencarse, Perthshire	DAFCo											
Greig	Thomas, Jr.	Barrister	Glencarse, Perthshire	DAFCo											
Grimond	Joseph	Textile merchant	Dundee	DPFCo											
Guild	James Findlay	Consulting Engr	Dundee	*Triune*											
Guild	Robert	Shipowner	Dundee and Boatland, Perth	DPFCo											
Guthrie	Alexander	Textile merchant	Dundee	DSWFCo											
Guy	Rosena Wilson	Wife	Newport	*Chieftain*											
Guy	William	Shipmaster (Mars Training Ship?)	Woodhaven,Wormit, Fife	*Albert*	*Nova Zembla*	BFCo									
Hall	George	Gentleman	Park Hill Rd, Croydon	DAFCo											
Halley	George	Textile merchant	Wallace Craigie Works, Dundee	DSWFCo											
Halley	William	Flaxspinner	Dundee	DSWFCo											
Hamilton	James	Shoemaker	Nethergate, Dundee	DPFCo											
Hardie	James	Schoolmaster	London	*Windward*											
Harris	James	Corn merchant	Dundee	TWFCo											
Harris	William	Baker to corn merchant	Dundee	TWFCo											
Hedding	James	Paper maker	Sawston, Cambridgeshire	*Chieftain*											
Henderson	Alexander	Textile merchant	So. Dudhope Works	DSWFCo	*Jan Mayen* (II)	*Mazinthien*	TWFCo	DAFCo							
Henderson	John	Banker	30 Lombard St, London EC	DAFCo											
Henderson	John	Textile Mfr	Lindsay St, Dundee	DPFCo											
Henderson	John Gilchrist	Clerk then Textile merchant/Mfr	Lindsay St	DPFCo	*Nova Zembla*										
Henderson	Richard	Textile merchant/Mfr	Dundee	*Nova Zembla*	DPFCo										
Henderson	William	Textile Mfr	Dundee	DPFCo											
Hendry	Andrew	Solicitor	Dundee	DPFCo	DSWFCo										

G.3. List of All Whaling Investors (by 5-year intervals), 1861-1911 (5 of 10).

Lname	Fname	Occupation	Location	Ship/Company1	Ship/Coy2	Ship/Coy3	Ship/Coy4	Ship/Coy5	Ship/Coy6	Ship/Coy7	Ship/Coy8	Ship/Coy9	Ship/Coy10	Ship/Coy11	Ship/Coy12
Higgins	Henry Alleyne	General produce broker	8 Riversdale Rd, West Kirby, Cheshire	DAFCo											
Hodge	Thomas	Cooper	Dundee	*Windward*											
Hogg	William	Merchant (grocer/wine merchant)	Dundee	*Chieftain*											
Holman	Ernest Symons	Shipowner	London	*Windward*											
Horn	Andrew		Waterford	*Scotia*											
Horne	David Clunie	Shipmaster	Dundee	*Nova Zembla*											
Howarth	William Duncan	Warpsizer	30 Lancaster Rd, Birkdale, Southport	DAFCo											
Hull	Edmund C.P.	Foreign coaling contractor	4 Fenchurch Ave., London	DAFCo											
Hume	John	Ret TWFCo mgr, shipchandler	Dundee and Broughty Ferry	TWFCo											
Hunter	William	Gentleman	Hilton, Cupar, Fife	*Albert*	BFCo	*Eclipse*									
Hynd	James	Painter, paperhanger, shipchandler	Dundee	TWFCo											
Isles	James	Wine merchant	Blairgowrie	DPFCo											
Jack	John, Jr.	Blacksmith [ship smith/Engr]	Dundee	*Active*	*Balaena*	*Diana* (I)	*Polar Star*	*Scotia*	*Star*						
Jack	Thomas	Shipowner	Larne Harbour, Antrim	*Scotia*											
Jackson	Robert Heck	Telegraphist	Crail	*Scotia*											
Johnson	Mabel Leigh	Spinster	Broughty Ferry	*Diana* (I)	*Nova Zembla*										
Johnstone	Joseph John	Solicitor	Dundee	*Star*											
Keiller	Alexander	merchant	Dundee	DPFCo											
Kennedy	Robert Grimman	Textile merchant/Mfr	Dundee	*Jan Mayen* (II)											
Kerr	Charles	Sculptor	Forfar	*Diana* (I)											
Kidd	David	Stockbroker	Royal Exchange, Dundee	DPFCo											
Kidd	George Watson	Licensed victualler; wine merchant	London	*Active*	*Diana* (I)	*Morning*									
Kidd	Robert	Potato merchant	Greenmarket, Dundee	BFCo											
Kilgour	David	Shipmaster	Dundee	*Chieftain*											
Kinmond	Alexander	Textile merchant	Dundee	TWFCo											
Kinmond	John G.	Textile merchant [Calenderer]	Trades Lane, Dundee	BFCo	*Diana* (I)										
Kinnear	Peter	Butcher	Broughty Ferry	*Chieftain*											
Kinnes	Robert	Ship agent	Dundee	*Active*	*Balaena*	*Chieftain*	*Diana* (I)	*Ernest William*	*Morning*	*Our Queen*	*Polar Star*	*Scotia*	*Star*	TWFCo	*Problem*
Kinnes	Walter	Ship agent	Dundee	*Diana* (I)	*Scotia*	[CGTCo]									
Kirkcaldy	Thomas	Paint Mfr	East London Works, London E.	DAFCo											
Knox		Widow of David Knox	Dundee	TWFCo											
Knuck	James Henry	Merchant (packer/shipper)	Dundee	*Windward*											
Laburn	Robert Wilson	Slate merchant	Dundee	*Polar Star*	*Star*										
Laing	Thomas	Accountant	368 Perth Rd, Dundee	DAFCo											
Laird	Alexander	Grocer & spirit dealer	127 Hilltown, Dundee	DAFCo											
Lamont	James	Gentleman	Knockdow, Argyleshire	*Diana* (II)	DSWFCo										
Lawson	Alexander		Annfield House, Kingskettle, Fife	*Polynia*	DSWFCo										
Lawson	John Smith	Ropemaker	Dundee	*Scotia*	*Windward*										
Lawson	Robert	Rope spinner	Tay Ropeworks, Dundee	DAFCo											
Lawson	William	Warehouseman	Preston Park, Brighton	BFCo											
Leask	Joseph	Merchant	Lerwick	DSWFCo											
Leete	William Griffith	Produce broker	19 Old Hall St, Liverpool	DAFCo											
Leitch	Andrew	Shipbrokers	Maritime Bldgs, Dundee	BFCo	*Maud*										
Leng	William Christopher	Newspaper proprietor; Printer	Dundee	*Diana* (I)	*Morning*										
Leslie	James	Merchant	Anstruther	*Diana* (I)											
Leslie	Robert	Surveyor of cargoes	Loftus, Arbroath	DAFCo											
Linn	Mary Lyall	Spinster	Barnhill, Broughty Ferry	*Diana* (I)	*Morning*	*Nova Zembla*									
Littlejohn	David S.	Solicitor	Dundee	DPFCo											
Lockhart	Ninian	Textile Mfr	Kirkcaldy	*Rovenscraig*											
Logan	Helen Stephen		Free Ch. Manse, Leslie, Fife	DSWFCo											
Lorimer	James	Milliner Textile	Dundee	*Polar Star*											
Lorimer	Richard	Milliner Textile	Dundee	*Balaena*											
Lorimer	Robert	Milliner Textile	Dundee	*Diana* (I)											
Low	Alexander	Textile merchant/Mfr	Dundee	TWFCo											
Low	James	Bank agent	Dundee	DPFCo											
Low	James Adams	Merchant	11 Billiter Square, London EC	DAFCo											
Low	James Fairweather	Textile Engr	Monifieth	DPFCo	*Nova Zembla*										
Low	James Smellie	Textile merchant/Mfr	Dundee	*Diana* (I)											
Low	John	Gentleman	Perth	DPFCo											

G.3. List of All Whaling Investors (by 5-year intervals), 1861-1911 (6 of 10).

Lname	Fname	Occupation	Location	Ship/Company1	Ship/Coy2	Ship/Coy3	Ship/Coy4	Ship/Coy5	Ship/Coy6	Ship/Coy7	Ship/Coy8	Ship/Coy9	Ship/Coy10	Ship/Coy11	Ship/Coy12
Low	Samuel Miller	Textile Machine maker	Monifieth Foundry, Monifieth	BFCo	*Nova Zembla*										
Low	Walter	Merchant & shipowner	London	*Triune*											
Low	William	Textile machine maker	Monifieth	*Nova Zembla*											
Lowson	William	Merchant [Rope/Textile]	Dundee	DPFCo	*Jan Mayen* (II)										
Luis	John Henry	Textile merchant	Dundee	DPFCo											
Luke	James	Textile merchant	Dundee	DPFCo	*Jan Mayen* (II)	TWFCo									
MacBean	W.C.	Accountant	18 Queen St, Peterhead	BFCo											
Macdonald	William Kid[?]	Town clerk	Arbroath	DAFCo											
Machan	William N	Shipowner/shipbroker	King William Dock, Dundee	DPFCo											
Macintyre	Anne		10 Balgillo Terrace, Broughty Ferry	BFCo											
Macintyre	George E.	merchant	9 Meadow Place, Dundee	BFCo											
Macintyre	Thomas	Paint Mfr	Glasgow	*Windward*											
Mackay	George	Master mariner	Broughty Ferry	*Windward*											
Mackenzie	George	Banker	Craiglee, Harecraig, West Ferry	DSWFCo											
Mackie	David	Textile merchant	1 Royal Exchange Place, Dundee	BFCo											
Mackinlay	John Caverhill	Iron merchant	27 Wallbrook, London EC	DAFCo											
Mair	Alexander Duncan	Engr	Dundee	*Triune*											
Malcolm	William	Grocer	Hilltown, Dundee	DSWFCo											
Martin	David	Textile merchant and shipowner	Dundee	TWFCo											
Martin	James Kennedy	Shipbuilder	Dundee	*Alexander* (I)	*Dundee*	*Tay*									
Martin	William	Tanner	63 Brunswick St, Glasgow	BFCo											
Martin	William Henry Blyth	Solicitor	Dundee	*Diana* (I)											
Martin	William M.	Clerk	Dundee	DPFCo											
Martin	William Y. Blyth	Gentleman		TWFCo											
Maxwell	Charles Chalmers	Gentleman	Dundee	*Mazinthien*											
McAra	Alexander	Coppersmith	East Dock St, Dundee	BFCo	*Scotia*	*Windward*	*Active*	DAFCo							
McAra	Alexander, Jr.	Coppersmith	East Dock St, Dundee	BFCo											
McAra	Elizabeth		12 Craigie Terrace, Ferry Rd, Dundee	*Scotia*	BFCo										
McAra	Margaret		Gray Cottage, Brock St, Monifieth	BFCo											
McAra	Nelly		12 Craigie Terrace, Ferry Rd, Dundee	*Scotia*	BFCo										
McCrae	John	Gas Engr	Dundee	*Polar Star*											
McFarlane	Archibald Petrie	Marine surveyor	Newcastle-on-Tyne	*Morning*											
McFarlane	Janet	Widow	Dundee	*Morning*											
McGavin	Robert	Merchant	Tannage Court, Dundee	*Narwhal*	DSWFCo	DAFCo									
McIntosh	Thomas	Sailmaker/Tentmaker	Dundee; Wormit	*Diana* (I)	*Morning*	*Scotia*									
McIntosh	William Ferguson	Contractor/shiprigger	Manyfield, Dundee	*Active*	*Mazinthien*	*Polar Star*	*Star*	*Triune*	DAFCo	*Diana* (I)					
Mckay	Henry	Shipmaster	73 Strathmartine Rd, Dundee	DAFCo											
McQueen	David	Packing-case maker	Dundee	*Chieftain*											
McVitie	Robert	Civil Mfr	Edinburgh	*Scotia*											
Methven	James Cox	Textile merchant	Lyndhurst by Dundee	DAFCo											
Methven	Thomas E.	Coal merchant	Broughty Ferry	DPFCo											
Millar	James	Ship agent	Dundee	DPFCo	*Jan Mayen* (II)	*Our Queen*									
Miller	John	Farmer	Omachie near Dundee	*Morning*											
Miller	Margaret Confute		65 Osborne Terrace, Aberdeen	BFCo											
Miller	Richard Armit	Insurance/stockbroker/shipowner	31 Panmure St, Dundee	DPFCo	DSWFCo	DAFCo	*Star*	*Jan Mayen* (II)	*Mazinthien*	TWFCo	*Nova Zembla*	BFCo			
Miller	James	Farmer	Broughty Ferry	*Morning*											
Mills	James B.	Accountant	Newport	DPFCo											
Milln	Alexander Maxwell	Textile Reedmaker	Baltic St, Dundee	*Balaena*	BFCo										
Milln	George	Solicitor	Arbroath	DAFCo											
Miln	Robert	Textile merchant/Gentleman	Arbroath/Broughty Ferry	DSWFCo	DPFCo										
Milne	David	Pawnbroker	Dundee	*Diana* (I)											
Milne	John	Corn merchant	32 St Andrews St, Dundee	*Chieftain*	DAFCo										
Milne	William Fraser	Master mariner	Dundee; Tayport	*Albert*	*Eclipse*	*Maud*									
Mitchell	David	Solicitor	Dundee	TWFCo											
Mitchell	Grace C. Hunter	Wife	Broughty Ferry	*Albert*											
Mitchell	James	Corn merchant	1 Commercial St, Dundee	BFCo	DSWFCo										
Mitchell	James	Shipowner	39 Dock Street, Dundee	*Albert*	BFCo	*Eclipse*	*Maud*								
Mitchell	John	Gentleman	Arngask, Dundee	DPFCo											
Mitchell	John Miller Hunter	Shipowner	39 Dock Street, Dundee	BFCo	*Albert*										

G.3. List of All Whaling Investors (by 5-year intervals), 1861-1911 (7 of 10).

Lname	Fname	Occupation	Location	Ship/Company1	Ship/Coy2	Ship/Coy3	Ship/Coy4	Ship/Coy5	Ship/Coy6	Ship/Coy7	Ship/Coy8	Ship/Coy9	Ship/Coy10	Ship/Coy11	Ship/Coy12
Mitchell	Thomas	Stevedore	Dundee	*Morning*	*Scotia*										
Moffat	James	Textile Mfr/merchant	Dundee	*Balaena*	*Chieftain*										
Moir	Elspeth M.		1 Balmoral Pl, Engside Rd, Glasgow	DSWFCo											
Moir	William	Bank agent/insurance agent	Dundee	DPFCo	*Nova Zembla*										
Molison	Francis	Textile merchant	Dundee	DSWFCo											
Molison	Elizabeth		Errol	DSWFCo											
Mollison	James, Jr.	Jute spinner/merchant	Dundee	*Active*	*Balaena*	*Diana* (I)	*Polar Star*	*Triune*							
Mollison	James, Sr.	Shipbuilder	Dundee	*Active*	*Balaena*	*Diana* (I)	*Polar Star*	*Chieftain*	*Star*	*Triune*					
Moon	David Steele	Medical practitioner	Dundee	TWFCo											
Morley	Cornelius	Shipowner	Portlaw, Waterford	*Scotia*											
Morrison	David James	merchant	Dunoon, Argyle	*Active*											
Morrison	William Borwick	Merchant	10 Panmure St, Dundee	BFCo	*Active*										
Morton	Andrew	Mill Mgr Textile	Dundee	*Triune*											
Morton	James Baird	Clothier Textile	Dundee	*Windward*											
Mossman	Robert Cockburn	Meteorologist	Edinburgh	*Scotia*											
Mudie	Margaret Stephen		Corona, Broughty Ferry	DSWFCo											
Murdoch	Robert	Banker	Broughty Ferry	*Diana* (I)											
Mutch	James Shepherd	Shipowner	Peterhead/Dundee	*Albert*											
Mutch	Jessie A. Sutherland	Wife	Peterhead	*Albert*											
Myles	Andrew	Accountant		TWFCo											
Myles	David	Accountant	Dundee	*Star*											
Neish	James	Textile merchant	Dundee	DPFCo	TWFCo										
Neish	James N.		Dundee	DPFCo											
Newall	George A.	Engr	St Phillips Iron Works, Bristol	DSWFCo											
Newall	George Hair	Merchant	Broughty Ferry; Bristol; Glasgow	DSWFCo											
Nicoll	Alexander	Textile Mfr	Dundee	DPFCo											
Nicoll	George Hall	Ironmonger	Dundee	*Triune*	TWFCo										
Nicoll	James	Ship store dealer	34 Dock St, Dundee	DAFCo											
Nicoll	William	Blacksmith [ship smith/Engr]	Dundee	*Diana* (I)	*Polar Star*	*Star*	TWFCo								
Nicoll	William	Lime merchant	Dundee	DPFCo											
Nicoll	William	Baker	4 Nethergate, Dundee	*Nova Zembla*											
Noble	Alexander	Chemist	34 Lauder Rd, Edinburgh	DAFCo											
Norrie	William H.	Textile merchant	Dundee	DSWFCo											
O'Ryan	Edmund	Gentleman	Larne Harbour, Antrim	*Scotia*											
Ogilvy	James	Grocer	Dundee	*Nova Zembla*											
Orchar	James Guthrie	Textile Engr	Dundee	DPFCo	*Nova Zembla*										
Ovenstone	Mary Barrie	Wife	Dundee	*Nova Zembla*											
Ower	George	Glazier	Dundee	TWFCo											
Paterson	Anne F.		17 Dean Terrace, Edinburgh	DSWFCo											
Paterson	James	Textile merchant	6 Panmure St, Dundee	BFCo	DSWFCo	TWFCo									
Pattullo	William Langlands	Accountant	Dundee	*Morning*											
Peddie	W.S.	Teacher	Dundee Orphan Institute	TWFCo											
Peters	David	Master mariner	Dundee	*Star*											
Peters	David	Master mariner	6 Crouch Stall Rd, London N.	DAFCo											
Peters	Thomas Lyle	Commission & Wine merchant	20 Dock St, Dundee	*Active*	*Balaena*	DAFCo	*Nova Zembla*	DPFCo	*Star*						
Philip	Joseph	Produce merchant	South Union St, Dundee	DPFCo	BFCo										
Phillips	Jeffrey	Master mariner	Dundee & Kirkcaldy	*Eclipse*	*Albert*										
Pinkney	Mathilda Paris	Wife	Sunderland	*Triune*		*Polar Star*									
Pirie	David	Painter	6 Windsor Terrace, Dundee	DAFCo	*Nova Zembla*		DPFCo	TWFCo							
Pirie	James H. Harvey	Doctor	Edinburgh	*Scotia*											
Powrie	James	[Gentleman/scientist]	Reswallie, Forfar	DSWFCo	TWFCo										
Primerose	Agnes Todd		7 Duntrune Terrace, Broughty Ferry	BFCo											
Primerose	Alfred G.	Merchant (Manure & Feed)	29 Dock St, Dundee	BFCo											
Pullar	Lawrence	Gentleman	Bridge of Allan	*Scotia*											
Rae	Alexander Stewart	Iron merchant	Barnhill, Broughty Ferry	*Diana* (I)	*Morning*	*Scotia*									
Raiff	David Laing	Clerk	Regents Park, London NW	DAFCo											
Ramsay	Alexander	Surgeon	Broughty Ferry	DSWFCo											
Reich	David	Textile merchant	104 Commercial St, Dundee	BFCo											
Rennie	Alexander Dickson	Oil merchant	124 St Vincent St, Glasgow	DAFCo											

G.3. List of All Whaling Investors (by 5-year intervals), 1861-1911 (8 of 10).

Lname	Fname	Occupation	Location	Ship/Company1	Ship/Coy2	Ship/Coy3	Ship/Coy4	Ship/Coy5	Ship/Coy6	Ship/Coy7	Ship/Coy8	Ship/Coy9	Ship/Coy10	Ship/Coy11	Ship/Coy12
Rennie	David	Bank agent	Commercial Bank of Scotld, Glasgow	DAFCo											
Renny	Samuel	Textile Mfr	Arbroath	*Triune*											
Reoch	James	Upholsterer/Gentleman	Dundee	DPFCo	TWFCo										
Reoch	James	Plumber	Dundee	DPFCo											
Reoch	James	Textile merchant	East Newport	DPFCo											
Rhind	John	merchant	London	*Triune*											
Ritchie	Robert	Ship agent	3 Hunter Pl, Broughty Ferry	DAFCo											
Ritchie	Robert Bower	Chartered accountant	Union Bank, Dundee	DAFCo											
Robb	Joseph	Pawnbroker	Dundee	*Polar Star*											
Robertson	Alexander	merchant	Dundee	*Chieftain*											
Robertson	David	Mercantile clerk	Cedar Place, Broughty Ferry	DAFCo											
Robertson	James	Shipmaster	Prosen Cottage, Newport	BFCo											
Robertson	John	Textile merchant/Mfr	Elieslea, Broughty Ferry	*Balaena*	*Diana* (I)	BFCo									
Robertson	John Constable	Chartered accountant	Dundee	BFCo											
Robertson	Peter	Lathsplitter	Dundee	DPFCo	*Nova Zembla*	*Triune*									
Robertson	Thomas	Seaman then Shipmaster	Dundee; Newport	*Active*	*Polar Star*	*Scotia*									
Robertson	William	Textile Engr	Dundee	DPFCo	*Nova Zembla*										
Rogers	William Thompson	Stevedore	Dundee	*Balaena*											
Rogers	William Thomson	Coal merchant	109 Ferry Rd, Dundee	DAFCo											
Rollo	George	Shipmaster	Woodside, East Newport	TWFCo											
Rottenburg	Paul Immanuel	Merchant	Glasgow	*Scotia*											
Russel	John	Merchant	Kirkcaldy	DSWFCo											
Russell	James	Chemist	Dundee	DPFCo											
Salmon	William	Shipmaster	Peterhead; Dundee	*Jan Mayen* (II)	*Polar Star*	*Star*									
Salmond	William	Grocer	Newport	*Diana* (I)											
Salvesen	Frederick Gulov	Shipowner	Leith	*Scotia*											
Sangster	John Boyd	Master mariner	Aberdeen	*Triune*											
Scott	Alexandra	Spinster	Dundee	*Active*											
Scott	Andrew	Shiprigger/painter	Victoria Dock, Dundee	*Maud*	DAFCo	*Albert*	BFCo	*Eclipse*	*Windward*	*Scotia*					
Scott	Andrew Eddington	Stevedore	Victoria Dock, Dundee	BFCo											
Scott	David	Insurance agent	Dundee	DPFCo											
Scott	David	Clerk then Stevedore	Victoria Dock, Dundee	*Albert*	BFCo	*Eclipse*									
Scott	Elizabeth L. Webster	Spinster	Dundee	*Active*											
Scott	Georgina	Spinster	Dundee	*Active*											
Scott	Hugh & Alex. Whitson	Textile Mfrs	Dundee	DPFCo											
Scott	James	Textile Mfr	Dundee	*Windward*											
Scott	Jane Morgan	Spinster	Dundee	*Active*											
Scott	Mary Taylor	Spinster	Dundee	*Active*											
Scott	Peter Chalmers	Textile merchant/Mfr	Dundee; Perthshire	DPFCo	*Nova Zembla*										
Scott	William	Pawnbroker, merchant	Dundee	*Diana* (I)	*Polar Star*										
Scrimgeour	Charles William	Wholesale provision merchant	79 High St, Dundee	*Active*	*Balaena*	*Diana* (I)	*Polar Star*	BFCo	*Scotia*						
Scrimgeour	David	Wholesale provision merchant	79 High St, Dundee	*Active*											
Scrimgeour	George	Wholesale prov merch; hamcurer	79 High St, Dundee	*Active*	*Balaena*	*Diana* (I)	*Polar Star*	BFCo							
Scrimgeour	Jessie Gibson	Wife of Geo Scrimgeour, hamcurer	Dundee	*Chieftain*											
Scrimgeour	John	Wholesale provision merchant	Dundee	*Active*											
Scroggie	Robert Vallentine	Shipowner	Dundee	*Nova Zembla*	DPFCo										
Ritchie	Elizabeth Lawson [S.]	Widow - Wm Scrymgeour, draper	Dundee	*Active*											
Sharp	John	Textile merchant	Blinshall Street, Dundee	DSWFCo	TWFCo										
Shearer	James	Secretary, Clappington Spinning Co.	Dundee	*Balaena*											
Shepherd	Walter	Textile merchant	Dundee	TWFCo											
Sherwood	Charles Smith	Gentleman	Broughty Ferry & Strand, London	DPFCo											
Shiell	John	Solicitor	5 Bank St, Dundee	DAFCo											
Shiven	Edward Baxter	Textile merchant	Wilton of Craigie by Dundee	DAFCo											
Sime	William	Stationer	Dundee	TWFCo											
Sinclair	Robert	Doctor of medicine	Roseangle House, Dundee	DAFCo											
Slimman	George	Lathsplitter	Dundee	*Triune*											
Small	David, Jr.	Textile merchant	9 Meadow Place Bldg, Dundee	DAFCo											
Smith	Alexander Muir	Physician	Glasgow	*Diana* (I)	*Morning*										
Smith	Allan Souter	Engr/shipbuilder	Dundee	*Eclipse*	*Maud*										

G.3. List of All Whaling Investors (by 5-year intervals), 1861-1911 (9 of 10).

Lname	Fname	Occupation	Location	Ship/Company1	Ship/Coy2	Ship/Coy3	Ship/Coy4	Ship/Coy5	Ship/Coy6	Ship/Coy7	Ship/Coy8	Ship/Coy9	Ship/Coy10	Ship/Coy11	Ship/Coy12
Smith	Benjamin Leigh	Explorer/Gentleman	London	*Balaena*											
Smith	Charles	Shipyard Mgr	Dundee; Broughty Ferry	*Active*	*Diana* (I)										
Smith	Henry, Jr.	Textile merchant	Dundee	TWFCo											
Smith	James	Textile merchant	Dundee	DSWFCo	TWFCo										
Smith	James Nicol	Textile Mfr	Pole Park Works, Dundee	*Balaena*	*Nova Zembla*	BFCo									
Smith	John	Textile Mfr	Alyth	DPFCo											
Smith	John	Textile Spinner	Perth	*Jan Mayen* (II)											
Smith	Robert	Solicitor	Dundee	*Chieftain*											
Smith	Robert George	Bank Mgr	London	*Windward*											
Smith	Thomas	Textile merchant	Dundee	*Narwhal*	DSWFCo	*Jan Mayen* (II)	TWFCo								
Smith	William	Gentleman	Newport & Leuchars, Fife	DPFCo											
Smith	William	Wine merchant	Vault, Dundee	BFCo											
Soot	James	Merchant	Dundee	*Narwhal*	TWFCo	DSWFCo									
Soutar	David	Master mariner	Dundee	*Triune*	*Mazinthien*										
Spalding	Andrew	Cashier [Accountant]	Barry (near Carnoustie)	*Diana* (I)											
Spiller	Charlotte	Wife	Belfast	*Scotia*											
Spreull	Andrew	Veterinary surgeon	Dundee	*Active*	*Diana* (I)	*Triune*									
Stannard	Margaret Jones	Widow of Capt R.B. Stannard	Newcastle-on-Tyne	*Eclipse*			DSWFCo								
Stannard	Richard Bean	Master mariner	Newcastle-on-Tyne	*Eclipse*											
Stark	David	Merchant	Kirkcaldy	DSWFCo											
Steele	David	Banker	Forfar	*Diana* (I)											
Stephen	Alexander, Sr.	Shipbuilder	Dundee	*Camperdown*	*Narwhal*	*Arctic* (I)	DSWFCo								
Stephen	Alexander, Jr.	Shipbuilder	Linthouse, Govan, Glasgow	DSWFCo											
Stephen	John	Shipbuilder	Linthouse, Govan, Glasgow	DSWFCo											
Stephen	William	Shipbuilder	Marine Parade, Dundee	*Polynia*	*Arctic* (II)	*Aurora*	*Terra Nova*	*Thetis*	DSWFCo						
Stewart	Arthur Fordyce	Merchant	London	*Windward*											
Stewart	D.K. [?]			TWFCo											
Stewart	David	Grocer	Dundee	*Chieftain*											
Stewart	John	Ship & insurance broker	London	*Triune*											
Stewart	Williamina Stephen	Wife of missionary	Lovedale, Alice, South Africa	DSWFCo											
Stiven	James	Textile mill furnisher	7 Royal Exchange Lane, Dundee	BFCo											
Stiven	William	Accountant	Reform St., Dundee	DPFCo	DSWFCo										
Stiven	William	Shipchandler	King William Dock, Dundee	DPFCo											
Strachan	James	Calenderer/Gentleman	Dundee	DPFCo	TWFCo										
Strong	William	Wine merchant	Dock Street, Dundee	DPFCo	DSWFCo	TWFCo	*Alexander* (I)	*Dundee*	*Tay*	*Jan Mayen* (II)	*Our Queen*				
Sturrock	James	Cashier	Dundee	*Star*											
Sturrock	James D.	Shipmaster	Dundee	DSWFCo											
Sturrock	John	Engr. surveyor	Dundee	*Triune*											
Sturrock	William	Farmer	Burnhead, Auchterhouse	DPFCo	DSWFCo										
Swan	Alexander	Textile merchant	Kirkcaldy	DSWFCo											
Swan	Patrick D.	Textile merchant	Kirkcaldy	DSWFCo											
Syme	James	Farmer	Leuchars	*Diana* (I)	*Morning*										
Symers	John	Bank agent	Dundee	TWFCo											
Tait	George Reid	Merchant and shipowner	Lerwick, Shetland	*Triune*											
Tait	Thomas	Master mariner	39 Hamilton St, Cardiff	DAFCo											
Taylor	Elspeth K. Henderson		Seymour Lodge, Perth Rd, Dundee	DAFCo											
Taylor	John	Agent	Dundee	DSWFCo											
Taylor	John	Seaman	Dundee	*Maud*											
Taylor	William Ogilvie	Shipowner, ship agent	Dundee	*Alexander* (I)	*Dundee*	*Tay*	DPFCo								
Taylor	William Scott	Waste merchant	Dundee	*Diana* (I)	*Morning*	*Scotia*									
Taylor	William Scott	Waste merchant	Dundee	*Diana* (I)	*Morning*	*Scotia*									
Taylor	Mary P. Sturrock	Widow of W.O. Taylor[?]	Newport	DPFCo											
Thomas	Eliza S.		Whatley Rd, Clifton, Bristol	DSWFCo											
Thomas	Emily P.		7 Ashgrove Road, Clifton, Bristol	DSWFCo											
Thompson	Cornelius	Shipowner	Aberdeen	*Jan Mayen* (II)											
Thompson	George, Jr.	Shipowner	Peterhead	*Jan Mayen* (II)											
Thompson	Magnus	Master mariner	38 Buchanan Rd, Seacombe	DAFCo											
Thoms	Patrick H.	Bank/insurance merchant	Crescent House, Perth Road, Dundee	DSWFCo	TWFCo										
Thoms	Thomas Watt	Merchant	Cowgate, Dundee	DSWFCo	TWFCo										

G.3. List of All Whaling Investors (by 5-year intervals), 1861-1911 (10 of 10).

Lname	Fname	Occupation	Location	Ship/Company1	Ship/Coy2	Ship/Coy3	Ship/Coy4	Ship/Coy5	Ship/Coy6	Ship/Coy7	Ship/Coy8	Ship/Coy9	Ship/Coy10	Ship/Coy11	Ship/Coy12
Thomson	Alexander	Shipowner	Dundee	*Mazinthien*											
Thomson	Andrew	Draper	St Monance, Fife	*Windward*											
Thomson	David Couper	Newspaper proprietor	Dundee Courier Office, Dundee	DAFCo											
Thomson	George			TWFCo											
Thomson	James	House Proprietor	Dundee	DSWFCo											
Todd	Francis Hood	Wine merchant	Argyle House, Tayport	TWFCo											
Todd	John	Upholsterer	Broughty Ferry	*Chieftain*											
Tosh	Alexander	Chartered accountant	11 Reform St, Dundee	BFCo											
Traill	James Patterson	Shipowner	63 Fenchurch Ave, London	DAFCo											
Traill	John	Surgeon	Arbroath	DSWFCo											
Trinder	Oliver Jones	Shipbroker	4 St Mary Axe, London EC	DAFCo											
Turnbull	Thomas Smith	Engr	North Queens Ferry, Fife	*Morning*											
Walker	Peter G.	Textile merchant	Meadowside, Dundee	DSWFCo	TWFCo										
Walker	William	Market gardener	Dundee	*Chieftain*	*Star*										
Wallace	Peter	Shipbuilder	Troon	*Scatia*											
Watson	Henry	Shipbroker	8 Victoria Cres, Dowanhill, Glasgow	DAFCo											
Watson	James	Wine merchant	Dundee	*Nowa Zembla*											
Watson	John	Mariner	Dundee	*Chieftain*											
Watson	John Monrice	Stock broker	Dundee	*Albert*	*Eclipse*										
Watson	Patrick	Draper	Dundee	TWFCo											
Watson	Robert Lowson	Wine merchant	Dundee	DPFCo	*Nova Zembla*										
Watson	Thomas	Produce merchant	South Union St, Dundee	BFCo											
Watt	Archibald A.	Merchant (real estate)	Dundee	DPFCo											
Watt	Harriet	Wife	Broughty Ferry	*Morning*	*Scatia*										
Webster	Annie		Ashbrook, Arbroath	DAFCo											
Webster	Francis	Textile Mfr	Ashbrook, Arbroath	DAFCo											
Webster	James	Mfr	Queen St, London	DAFCo											
Webster	James B	Banker	Commercial Bank, Dundee	BFCo											
Webster	Jessica		Denley, Arbroath	DAFCo											
Webster	William A.	Textile Mfr	Denley, Arbroath	DAFCo											
Weinberg	Isaac Julius	Textile merchant	Fernbrae, Dundee	DPFCo	DAFCo	*Scatia*									
Welch	George	Shipowner/Ship agent	Dundee; Newport	*Polar Star*	*Star*	TWFCo	*Our Queen*	*Active*	*Jan Mayen* (II)						
Welch	John	Banker then Gentleman	Dundee & West Newport	*Active*	*Diana* (I)	*Polar Star*	*Our Queen*								
White	John	Merchant	Dundee	*Star*	*Triune*										
Whitton	George	Brewer	Dundee	TWFCo											
Whyte	Robert	Merchant	Glasgow	*Diana* (I)											
Whytock	John	Jeweller	Dundee	DPFCo											
Wighton	William		Whiteleys, 147 Nethergate	TWFCo											
Wilkie	William	Butcher	Dundee	*Diana* (I)	*Morning*	*Triune*									
Willis	Mark	Shipmaster	97 Albany St, Leith	BFCo											
Wilson	Alexander	Shipsmith	Dundee	*Chieftain*											
Wilson	John	Textile merchant/Mfr	Potomahana, Arbroath	*Albert*	BFCo	*Diana* (I)	*Eclipse*	*Morning*	*Windward*						
Wilson	William	Textile merchant	Caldrum Works, Dundee	BFCo											
Winton	Thomas	Wood/timber merchant	Dundee	*Chieftain*	*Diana* (I)										
Worrall	George	Textile Hacklemaker	Blinshall Street, Dundee	DSWFCo											
Wright	William	Tea merchant	Madeira Court, Argyle St, Glasgow	DSWFCo											
Wybrants	David William	Retired merchant	Monifieth	*Morning*											
Yeaman	James Kennedy	Merchant	Dundee	*Camperdown*	*Polynia*	DSWFCo	DPFCo								
Young	Agnes		Rowanwood, Irvine, Ayrshire	DAFCo											
Young	James	Butcher	Dundee	*Active*											
Young	James	Master mariner	Dundee	*Windward*											
Young	John	Baker	Perth	*Scatia*											
Young	John B.	Commission merchant	Dundee	DPFCo											
Young	John H.	Clerk	Dundee	DPFCo											
Young	Simon Robertson	Clerk	Dundee	*Balaena*											
Young	William	Textile Mill Mgr	Dundee	DPFCo											
Yule	Charles	Harbour master	Harbour Chambers, Dundee	*Albert*	BFCo	*Eclipse*	*Scotia*	*Maud*	*Triune*	DAFCo					
The Produce Brokers Co Ltd.			18 Bishopsgate, London E.C.	DAFCo											
William Lawson & Sons		Rope makers	224 Perth Rd, Dundee	BFCo											
James Allison & Sons		Merchants	Dock St, Dundee	BFCo											
Gilroy Brothers & Co		Textile merchant/Mfrs	Dundee	*Alexander* (ii)											
Antony Gibbs & Sons		Overseas merchants	London	*Erik*											
Cox Brothers & Co.		Textile merchant/Mfrs	Dundee	TWFCo											

Appendices for Chapter 1

1.1. Whaling Investor Occupations, 1861-1921.

1	Accountant	66	House Proprietor	131	Paper maker
2	Agent (consular)	67	Ice master (whaling)	132	Paperhanger
3	Agent (insurance)	68	Insurance agent	133	Pawnbroker
4	Agent (ship)	69	Ironmonger	134	Plumber
5	Agent (shipping line)	70	Jeweller	135	Printer
6	Architect (also called Civil Engineer)	71	Jute spinner	136	Produce broker/Grocer
7	Asphalt manufacturer	72	Landowner	137	Reedmaker
8	Average adjustor	73	Lathsplitter	138	Restauranteur
9	Bag manufacturer	74	Licensed victualler	139	Retired merchant
10	Baker	75	M.P. (title)	140	Rope & Sailmaker
11	Bank agent	76	Machine maker	141	Rope spinner
12	Bank manager	77	Manager	142	Ropemaker
13	Banker	78	Manufacturer	143	Sailmaker
14	Barrister-at-Law	79	Marine insurance broker	144	Sailmaker/Tentmaker
15	Blacksmith	80	Marine surveyor	145	Schoolmaster
16	Bleacher	81	Mariner	146	Sculptor
17	Bobbin manufacturer	82	Market gardener	147	Seaman
18	Brassfounder	83	Master mariner	148	Secretary
19	Brewer	84	Medical practitioner	149	Seed crusher
20	Builder	85	Mercantile clerk	150	Ship & insurance broker
21	Butcher	86	Merchant	151	Ship agent
22	Calenderer	87	Merchant (bank and insurance)	152	Ship chandler
23	Carting contractor	88	Merchant (cement)	153	Ship store dealer
24	Cashier	89	Merchant (clothing)	154	Shipbroker
25	Chartered Accountant (C.A.)	90	Merchant (coal)	155	Shipbuilder
26	Chemical manufacturer	91	Merchant (commission)	156	Shipmaster
27	Chemist	92	Merchant (corn)	157	Shipowner
28	Civil Engineer	93	Merchant (flax)	158	Shiprigger
29	Civil manufacturer	94	Merchant (insurance)	159	Shipsmith
30	Clerk	95	Merchant (iron)	160	Shipyard manager
31	Clothier	96	Merchant (jute)	161	Shoemaker
32	Coffee house keeper	97	Merchant (Lime)	162	Slater
33	Colonial broker	98	Merchant (linen)	163	Solicitor
34	Commission agent	99	Merchant (manure & feeding stuffs)	164	Spinner and manufacturer
35	Confectioner	100	Merchant (oil)	165	Spinster
36	Consulting engineer	101	Merchant (paint)	166	Stationer
37	Contractor	102	Merchant (potato)	167	Steamship surveyor
38	Cooper	103	Merchant (produce)	168	Stevedore
39	Coppersmith	104	Merchant (real estate)	169	Stockbroker
40	Doctor; medical doctor; physician	105	Merchant (seed)	170	Stockbroker/Agent
41	Draper	106	Merchant (ship produce)	171	Superintendent, MMO
42	Engineer (general)	107	Merchant (ship store)	172	Superintending/consulting Engineer
43	Engineer (machinery)	108	Merchant (slate)	173	Surgeon
44	Engineer (marine)	109	Merchant (spirits)	174	Surveyor of Cargoes
45	Engineer (textiles)	110	Merchant (tea)	175	Surveyor of Taxes
46	Engineer surveyor	111	Merchant (waste)	176	Tailor
47	Explorer	112	Merchant (wholesale grocer)	177	Tanner
48	Farmer	113	Merchant (wholesale provision)	178	Teacher
49	Flaxspinner	114	Merchant (Wine)	179	Telegraphist
50	Foreign coaling contractor	115	Merchant (wood/timber)	180	Town clerk
51	Gas engineer	116	Merchant/Gentleman	181	Turner
52	General dealer	117	Merchant/Manufacturer	182	Upholsterer
53	General produce broker	118	Meteorologist	183	Upholsterer/Gentleman
54	Gentleman	119	Mill furnisher	184	Varnish manufacturer
55	Gentleman/adventurer	120	Mill manager	185	Veterinary surgeon
56	Glazier	121	Milliner	186	Vice consul
57	Grocer	122	Minister	187	Warehouseman
58	Grocer & spirit dealer	123	Naturalist	188	Warpsizer
59	Haberdasher	124	Nautical instrument maker/optician	189	Watchmaker
60	Hacklemaker	125	Newspaper proprietor	190	Wholesale grocer
61	Ham-curer	126	Oil refiner	191	Widow, relict
62	Harbour engineer	127	Packer/shipper	192	Wife
63	Harbour master	128	Packing-case maker	193	Wire worker/Bell hanger
64	Hosier	129	Paint manufacturer	194	Writer
65	Hotel-keeper	130	Painter		

1.2. Different Investor Occupations by Category, 1861-1911.

	1861*	1866*	1871*	1876*	1881*	1886	1891	1896	1901	1906	1911
Textile merchants	3	5	5	7	5	6	5	5	6	4	2
Maritime sector	6	5	7	7	10	14	13	14	11	15	12
Other Dundonians	20	15	16	28	33	42	36	45	32	34	30
Outside Investors	4	4	5	7	15	14	7	26	13	28	24
Total Occupations	27	26	30	44	52	65	56	72	54	67	57

Source: CDA, CE 70/11 series; NRS, BT 2 series.

1.3. Average Investment in Company Stock (£ per Investor), 1866-1911.

Investor Category	1866*	1871*	1876*	1881*	1886	1891	1896	1901	1906	1911
Textile merchants	759	865	1,037	***1,317***	***1,287***	***585***	***398***	115	125	***200***
Maritime sector	***2,417***	***1,750***	***1,442***	367	700	520	282	***118***	***136***	150
Other Dundonians	775	833	651	643	660	492	174	87	84	75
Outside Dundee	1,722	1,222	769	842	1,137	501	221	79	111	111
Total Share Capital	67,500	67,500	97,500	110,700	97,500	54,750	25,000	5,000	5,000	5,000

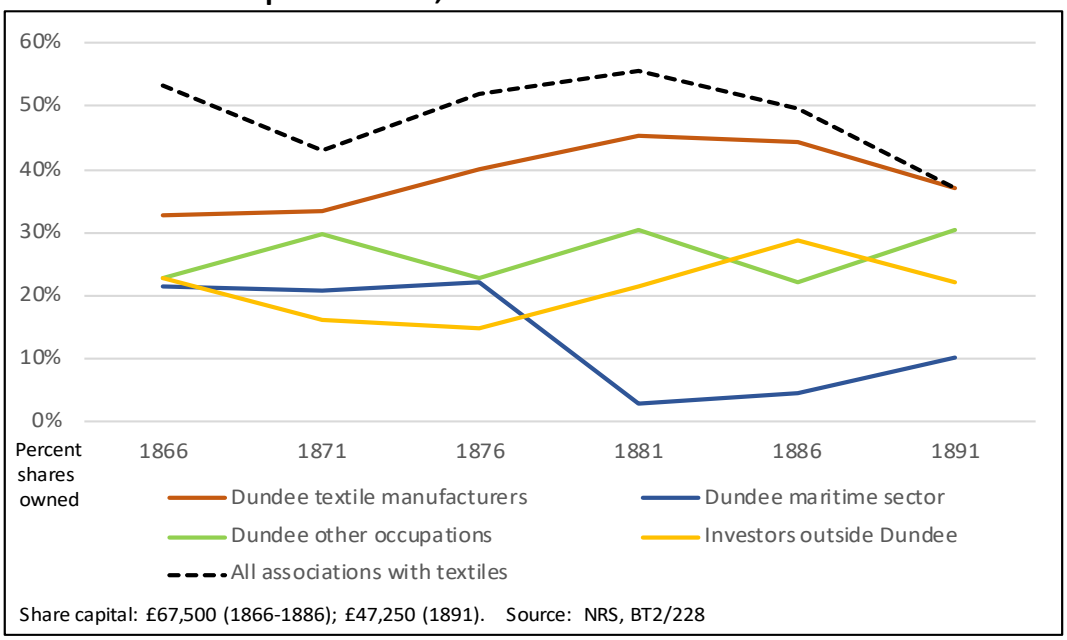
* Years with incomplete corporate data. 1861 is omitted entirely due to the lack of quantifiable data.
Values given in bold italics (e.g., ***2,417***) distinguish the leading category per interval.

1.4. Whaling Company Nominal Share Values (including Market Prices), 1861-1911.[#]

	1861	1866	1876	1881	1883	1886	1892	1896	1901	1906	1911
TWFCo	£383*	£560*	£120*	£100			£12*		£11*		
DSWFCo		£500	£500	£500	£100	£70	£25		£5*		
DPFCo			£100	£100	£100	£25	£25				
BFCo									£10	£10	£2/9s*

Sources: Local Dundee newspapers and Sheriff Court Inventories of Personal Estate.
*Market price per share in pounds sterling.
[#] CGTCo nominal stock value in 1921: £1.

1.5. Stock Ownership in DSWFCo, 1866-1891.



Share capital: £67,500 (1866-1886); £47,250 (1891). Source: NRS, BT2/228

1.6. Average Market Value for Whale Oil in Dundee, 1861-1899.[#]

1861	**1863**	**1865**	**1867**	**1869**	**1871**	**1873**	**1875**	**1877**	**1879**
£35	£52	£49	£45	£36	£36	£39	£36	NA	£33
1881	**1883**	**1885**	**1887**	**1889**	**1891**	**1893**	**1895**	**1897**	**1899[#]**
£33	£35	£23	£21	£22	£20	£23	£18	£18	£18

[#]Prices remained below £20 per ton during the first decade of the twentieth century. NA – Not available. Sources: UDAS, MS 73/26, J.P. Ingram, *Whaling & Sealing* (unpublished manuscript); and price quotes in the local Dundee papers, *DA, DC, DET* and *DPJ.*

1.7. Dividends Announced at DPFCo AGMs, 1876-1891.

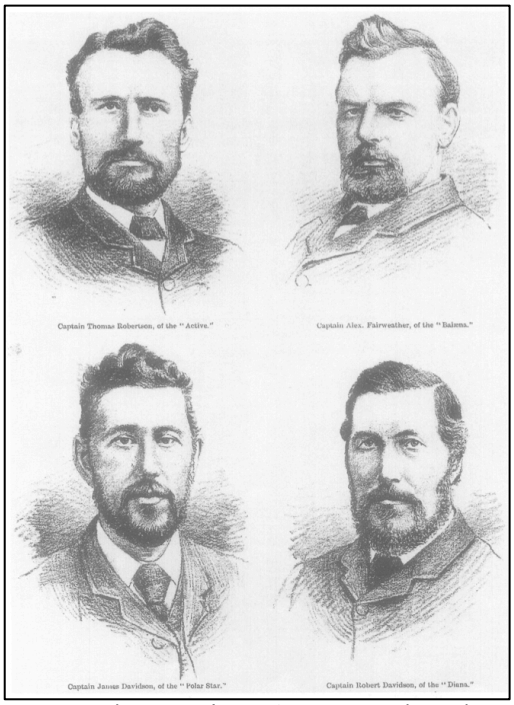
Dec. 1876	**Dec. 1877**	**Dec. 1878**	**Dec. 1879**	**Jan. 1881**	**Jan. 1882**	**Jan. 1883**	**Jan. 1884**
£3 (3%)	£4 (4%)	£10 (10%)	£15 (15%)	None	£15 (15%)	£15 (15%)	£15 (15%)
Jan. 1885	**Jan. 1886**	**Jan. 1887**	**Jan. 1888**	**Jan. 1889**	**Jan. 1890**	**Jan. 1891**	**Dec. 1891***
£7 (7%)	£7 (7%)	Devalued to £25	Called £4	No dividends	£3 (12%)	No dividends	Voted to windup

*Emergency meeting with special resolution.

Appendix for Chapter 3

3.1.1. Dundee Whaling Captains, the Faces of the Trade.

A) Quartet of DAWE captains, 1892-93.



B) Capt William Adams, Sr (1837-1890).

Sources: A) *Piper o' Dundee,* 305:12 (1892), p. 169; B) William Ferrier, *Whaling Captain William Adams Senior*, 1891, Dundee Art Galleries and Museums.

3.1.2 Group Photograph of Dundee and Newfoundland Captains, ca. 1880.

Source: CNS, Coll-203, 6.03.001, Cater Andrews Collection (redacted pending copyright permission).

3.2. Males in Middle-Class Occupations Among Total Workforce.

Location	1861 Census (per cent)	1881 Census (per cent)	1911 Census (per cent)
Aberdeen	Redacted pending copyright permission		
Dundee	Redacted pending copyright permission		
Edinburgh	Redacted pending copyright permission		
Glasgow	Redacted pending copyright permission		
Scotland overall	Redacted pending copyright permission		

Source: Morgan, Nicholas and Trainor, Richard, 'The Dominant Classes' in W. Hamish Fraser and R.J. Morris (eds.), *People and Society in Scotland, 1830-1914,* vol. 2 (Edinburgh, 1990), Table 1, p. 106.

3.3. Residential Patterns for Whaling Managers, 1861-1911.

Location	1861	1866	1871	1876	1881	1886	1891	1896	1901	1906	1911
Broughty Ferry	0	1	2	2	3	3	3	2	2	2	0
Dundee	4	4	4	2	2	1	0	0	1	0	1
Fife	0	0	0	0	0	2	2	2	2	1	1
Other	0	0	0	0	0	1	0	0	0	0	1
% in Dundee	**100**	**80**	**67**	**50**	**40**	**14**	**0**	**0**	**20**	**0**	**33**

Sources: Census; *DD* series; Dundee Valuation Roll, 1871; Forfarshire Valuation Roll, 1871, 1881, 1891.

3.4. Residential Locations for All Middle-Class Maritime Occupations, 1882.

Category	Dundee	Broughty Ferry	Newport, Fife	Tayport, Fife	Other location	Category Total
Shipowners[a]	25	26	16	10	5	82
Shipmasters[b]	75	23	8	30	3	139
Ship specialists[c]	24	4	2	0	1	31
Maritime totals	**124**	**53**	**26**	**40**	**9**	**252**
Percentage of total	49%	21%	10%	16%	4%	

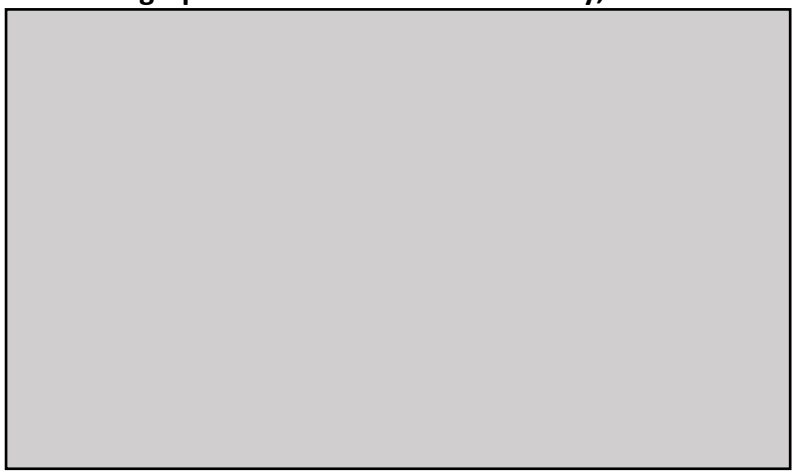
Source: CDA, *DD*, 1882.

[a] ship/marine insurance agent, shipbroker, shipbuilder, shipowner, and steamship owner.

[b] master mariner, ship captain, and shipmaster.

[c] chronometer maker, sailmaker, ship surveyor, shipcarver, shipchandler, shiprigger, shipsmith, shipwright, and stevedore.

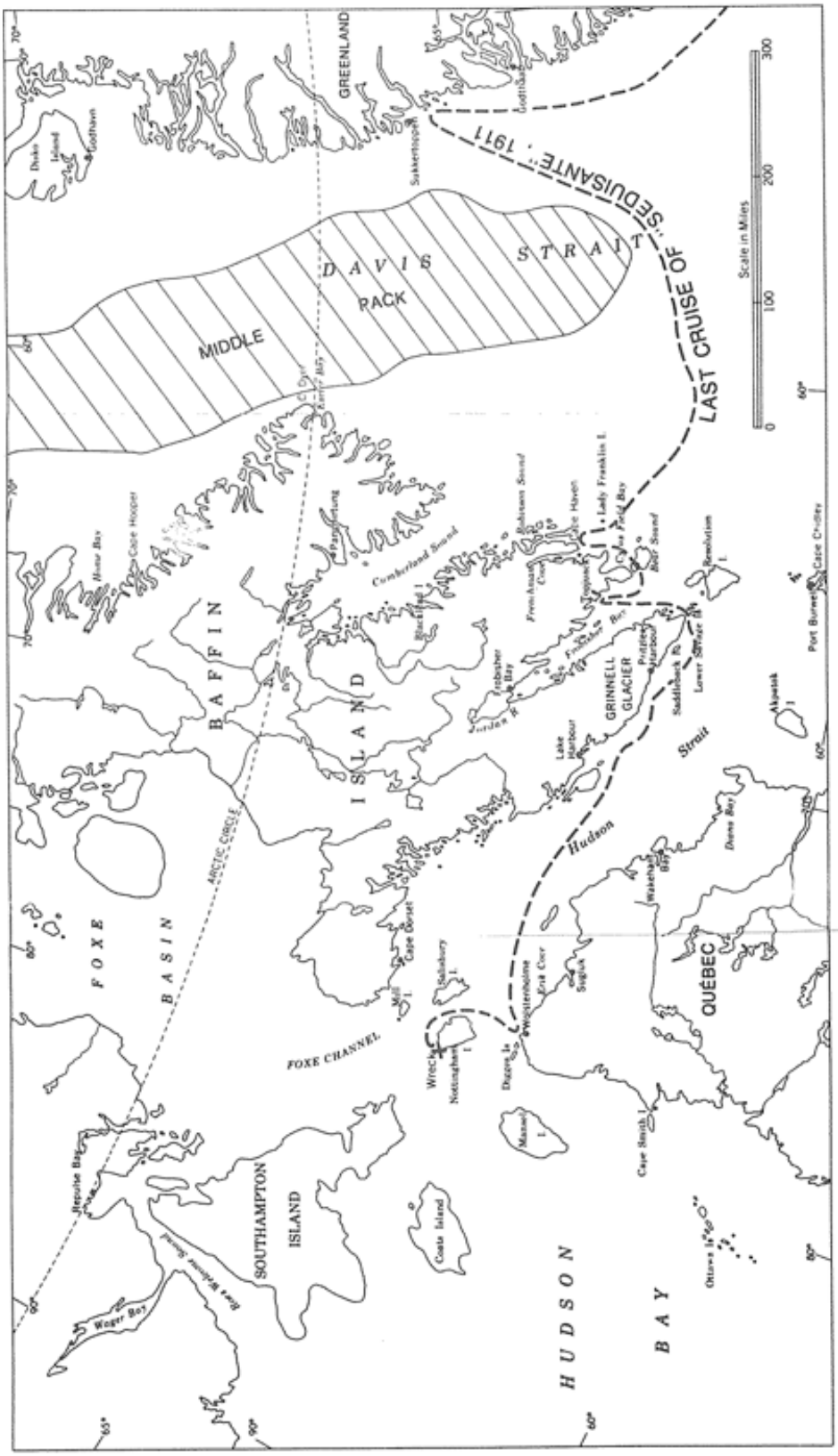
3.5. Photograph of Robert Kinnes and Family, c. 1892.



Source: Private family collection (Redacted pending copyright permission).

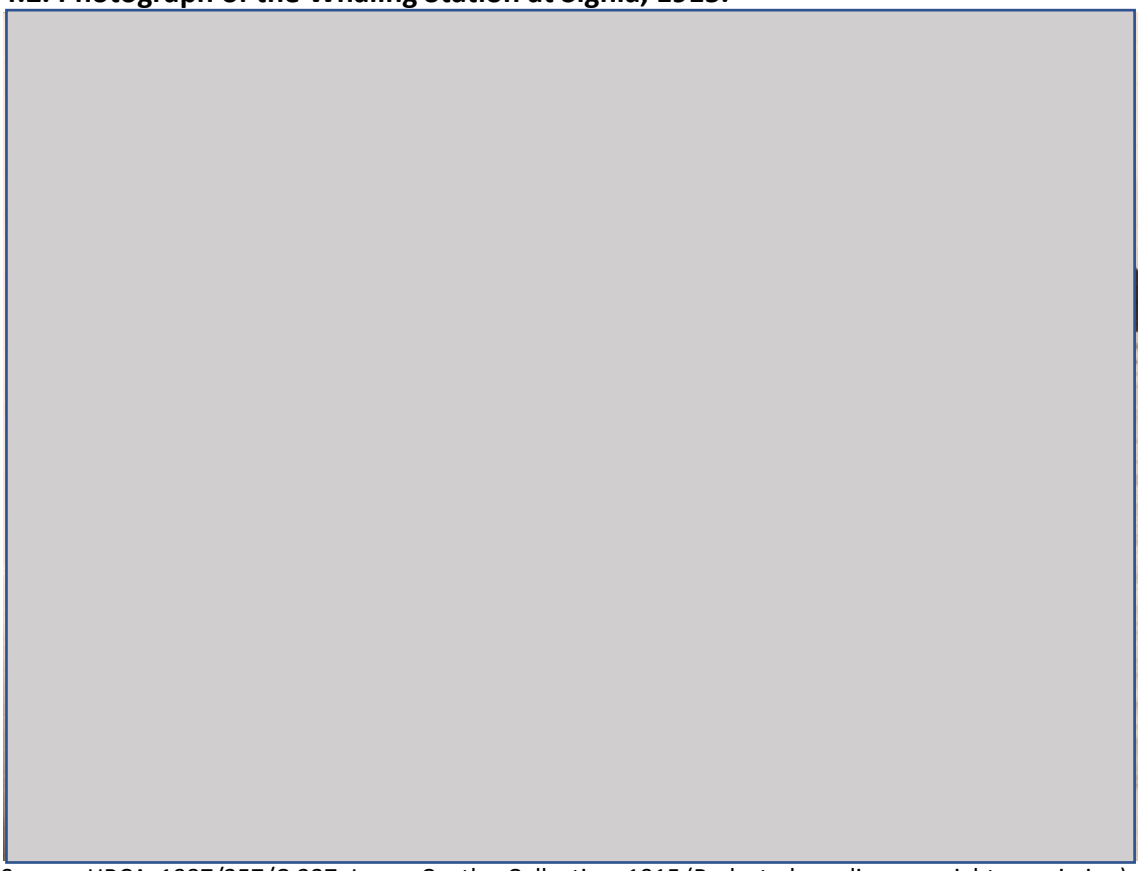
Appendices for Chapter 4

4.1. Map of Hudson Bay, Southern Baffin and Seduisante's Voyage 1911.



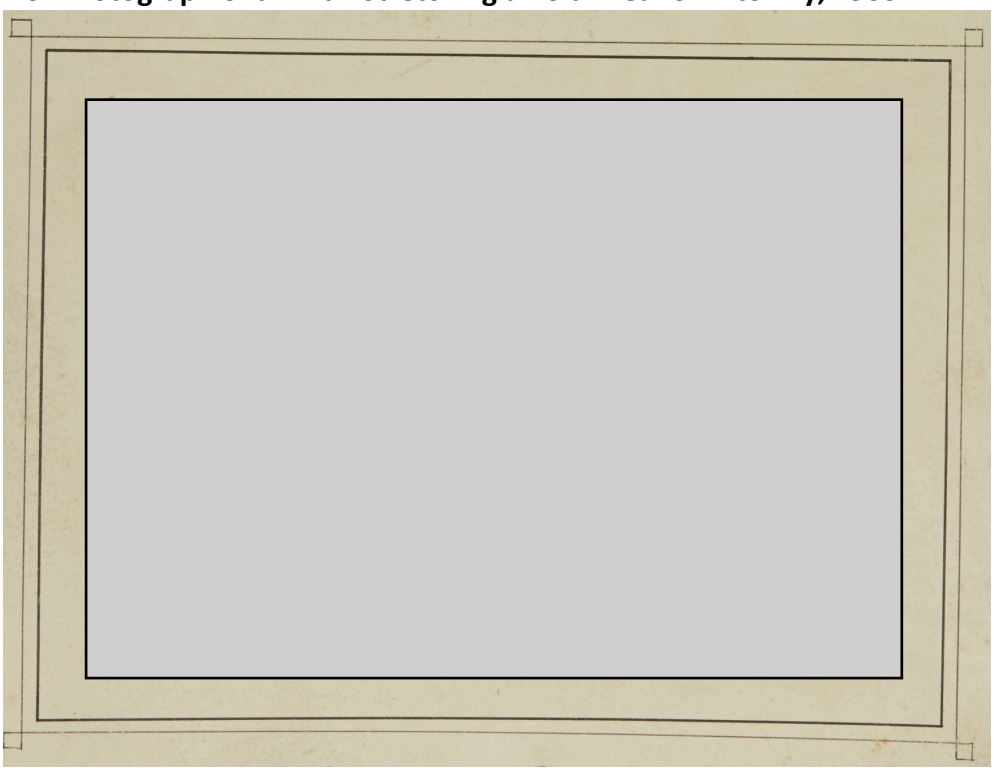
Source: Robert J. Fraser and William F. Rannie, *Arctic Adventurer: Grant and the Seduisante* (Lincoln, Ontario, 1972).

4.2. Photograph of the Whaling Station at Signia, 1915.



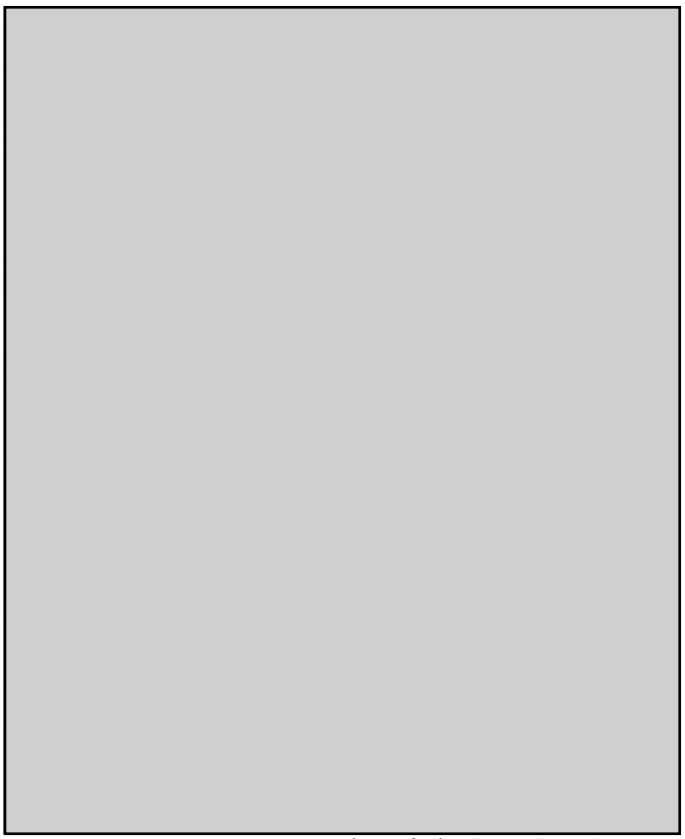
Source: HBCA, 1987/257/C-227, James Cantley Collection, 1915 (Redacted pending copyright permission).

4.3. Photograph of an Inuk Stretching a Polar Bear Skin to Dry, 1900.



Source: UStASC, ALB-111 (redacted pending copyright permission).

4.4. Photograph of an *Ulu* from Ponds Bay, ca. 1860s.



Source: NMS, A.805.45, Woman's Knife (redacted pending copyright permission).

4.5. Photograph of Inuit Women Hanging Arctic Foxskins to Dry, Lake Harbour, 1919.

Source: HBCA, 1987/257/C-435, James Cantley Collection, c. 1921 (redacted pending copyright permission).

Appendices for Chapter 5

5.1. Map of Shetland and Its Parishes, ca. 1890s.

5.2. Whaling Vessels and Archival Sources Used for Data Sample.

Dundee vessel	Official Number	Duration	Source location
Active	19557	1861 - 1913	TNA, BT 100/269
Arctic I	52578	1867 - 1874	MHA
Arctic II	72543	1876 - 1887	MHA and NMM
Aurora	75196	1877 - 1893	TNA, BT 100/289
Balaena	99205	1892 – 1911	TNA, BT 100/290
Camperdown	27496	1865 – 1878	MHA and NMM
Diana	99211	1892 - 1911	TNA, BT 100/292-93
*Eclipse**	55345	1892 - 1908	MHA and NMM
*Erik**	52665	1866 - 1881	MHA and NMM
Esquimaux	52562	1867 – 1900	MHA and NMM
Intrepid	18504	1867 – 1884	MHA and NMM
Mazinthien	19534	1878 - 1883	MHA
Morning	114847	1905 – 1914	TNA, BT 100/146
Narwhal	22686	1865 - 1884	MHA and NMM
Nova Zembla	72541	1875 – 1902	MHA and NMM
Polar Star	19568	1882 – 1899	TNA, BT 100/270
Polynia	29451	1863 – 1891	MHA and NMM
Scotia	115721	1905 – 1911	TNA, BT 100/292A
Victor	19540	1864 – 1880	MHA and NMM
Windward	27527	1904 – 1907	TNA, BT 100/275

Note: On average 68 per cent of all available CAs were sampled for each year from 1865 to 1911.
* Vessel registered with another port but based in Dundee for at least one season.

5.3. Shetlanders' Capacities Aboard Three Whalers, 1876.

Intrepid during 1876 Davis Straits whaling voyage							
1876	**Harpooner**	**BS**	**LM**	**AB**	**OS**	**Other**	**Total**
Total crew	6	17	9	5	12	11	60
Shetlanders	2	12	6	2	7	0	29
Per cent Shetlanders	33.3%	70.6%	66.7%	40.0%	58.3%	0.0%	48.3%

Esquimaux during 1876 Greenland Sea sealing voyage							
1876	**Harpooner**	**B.S.**	**L.M.**	**A.B.**	**O.S.**	**Other**	**Total**
Total Crew	8	18	15	18	10	16	85
Shetlanders	1	5	12	11	2	0	31
Per cent Shetlanders	12.5%	27.8%	80.0%	61.1%	20.0%	0.0%	36.5%
***Esquimaux* during 1876 Davis Straits whaling voyage**							
1876	**Harpooner**	**B.S.**	**L.M.**	**A.B.**	**O.S.**	**Other**	**Total**
Total Crew	7	12	5	5	13	15	57
Shetlanders	1	6	4	4	8	1	24
Per cent Shetlanders	14.3%	50.0%	80.0%	80.0%	61.5%	6.7%	42.1%
***Arctic* during 1876 Newfoundland sealing voyage**							
1876	**Harpooner**	**B.S.**	**L.M.**	**A.B.**	**O.S.**	**Other**	**Total**
Total Crew	9	18	17	18	22	16	100
Shetlanders	2	9	15	11	15	0	52
Shetland Percentage	22.2%	50.0%	88.2%	61.1%	68.2%	0.0%	52.0%
Overall total	30	65	46	46	57	58	302
Overall Shetlanders	6	32	37	28	32	1	136
Per cent Shetlanders	20.0%	49.2%	80.4%	60.9%	56.1%	1.7%	45.0%

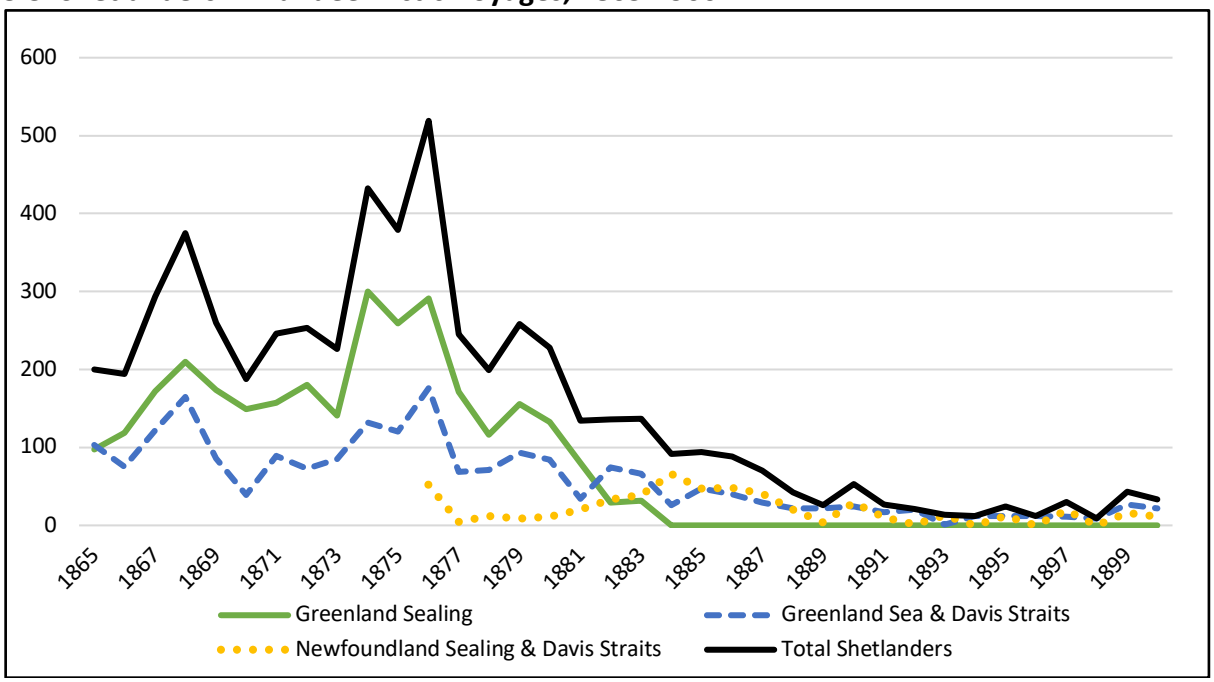
Source: MHA, BT 99, *Intrepid* (ON 18504), 1870; MHA, BT 99, *Esquimaux* (ON 52562), 1876; MHA, BT 99, *Arctic* (ON 72543), 1876.

5.4. Total Shetlanders in Arctic Whaling, 1865-1911.

Intervals	Averaged Total number of whaling crew per year	Averaged total number of Shetlanders per year	Averaged percentage Shetlanders
1865-69	728	265	36.4%
1870-74	913	269	29.5%
1875-79	1106	310	28.0%
1880-84	498	145	29.2%
1885-89	215	64	29.8%
1890-94	180	25	14.1%
1895-99	149	24	15.8%
1900-04	130	19	14.6%
1905-11	189	13	6.7%

Source: See Appendix 5.2.

5.5. Shetlanders in Dundee Arctic Voyages, 1865-1900.



Source: See Appendix 5.2.

5.6. Shetlanders' Capacities Aboard *Aurora,* 1877 (NL Sealing Voyage).

1877	Harpooner	BS	LM	AB	OS	Other	Total
Dundee crew	4	9	1	4	1	14	33
Shetlanders	3	2	0	0	0	0	5
Newfoundlanders	0	0	1	12	6	213*	19/232
Total crew	**7**	**11**	**2**	**16**	**7**	**14**	**57**

Source: TNA, BT 100/289, *Aurora* (ON 75196), 1877; Levi Chafe, *Report of the Newfoundland Seal Fishery from 1863, the first year of the steamers, to 1905* (St John's, 1905), p. 22.
*Swilers temporarily employed at St. John's for seal hunting.

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Glossary of Terms

Able Seaman	[abbreviated A.B.] A capacity or 'rating' for sailors who have gained enough sea time and proficiency to advance from O. S.
Articles	[or Crew Agreement or 'Crew Lists'] A contract signed by every crewmember at the MMO before the beginning of a voyage
Arvik	Inuit term for whale.
Baleen	[or once harvested, 'whalebone'] 'Hairy' keratin plates in the jaws of 'filter-feeding' whales that are used to collection and sieve food (krill, plankton)
Barque	A three-masted vessel with square sails on fore and main masts and fore-and-aft sails on the mizzen (third, aftermost) mast
Bedlamer	A one year old juvenile harp seal
Beset	Trapped or frozen into the ice
Black whale	Whalers' term for North Atlantic Right Whale (*Eubalaena glacialis*).
Bladdernose	Whalers' term for a hooded seal (*Cystophora cristata*)
Blubber	The fat under the skin of an animal
Boatsteerer	Member of boat's crew who steers it when in pursuit of prey
Brig	A two-masted vessel with square sails
Calender	Finishing process in textile production during which the cloth is cleaned
Clean	Whaler returning home without a catch
Coonie	[or coona] Whalers' term for denoting an Inuit wife or adult woman.
Crow's nest	[or 'barrel'] An enclosed barrel affixed next the top of the main mast, which is used as a lookout position during hunting season
Esquimaux	[or Eskimo] Earlier Western terms for the Inuit.
Fast boat	[Related to 'making fast'] A whaleboat attached to a whale by a

	line after successfully harpooning it
Fish/Fishing	A whalers' term for a whale; verb refers to hunting seals or whales. Vessels would go on seal and whale fishing voyages.
Flensing	[or 'flenching', 'flinching'] The process of removing strips of blubber from a dead whale
Floe	[or ice floe] A large sheet of ice
Fluke	The tail of a whale
Fourern	[or 'fourareen'] Clinker-built four-person, open-decked boat primarily used in Shetland for inshore fishing
Grampus	Whalers' term for an orca or killer whale (*Orcinus orca*)
Greenman	Whalers' term for someone on their first voyage in a whaler
Growler	Small icebergs, usually found near a harbour
Haaf fishing	[or 'ling fishing'] Deep sea fishing for ling, cod, and tusk
Hold	Compartment below decks for the stowage of cargo
Inuk	[Inuit term] Person. 'Inuit' is the plural term meaning 'people'
Ketch	A type of two-masted vessel with fore-and-aft rigging of different sizes
Kettle-boiler	[or 'kettle-biler'] An unemployed man who cares for the domestic duties around the home while his wife works
Lead	Narrow channel of water between ice floes
Linemanager	[also referred to as a Line coiler, Line manager; abbreviated L.M.] Member of whaling boat team assigned to managed the coiling and 'playing out' of the lines
Loose harpooneer	[or 'Loose harpooner'] A harpooneer in training, or 'on trial'
Master	The captain or skipper of a merchant vessel
Nanuq	[or *nanook*] Polar bear
Nipped	A vessel crushed by ice

Official Number	A unique and permanent identification number assigned to each registered vessel for the duration of its life while under British ownership
Ordinary Seaman	[abbreviated O.S.] Initial capacity for sailors
Outport	Any community or settlement in Newfoundland outside of the capital of St John's
Pan	Seal skins piled up on a floe waited to be loaded
Polynya	An area of open water surrounded by pack ice
Qallunaat	Plural of *qallunaaq*; the Inuit term for Euro-American outsiders.
Right whale	[or 'Greenland right whale'] Whalers' term for a bowhead whale (*Balaena mysticetus*); most desirable prey for whalers due to its huge quantities of blubber and the largest whalebone of any whale
Saddleback	[or 'Greenland seal'] Whalers' term for a harp seal (*Pagophilus groenlandicus*). Pups were especially valuable for their soft, white furs.
Salmon	Whalers' term for Arctic char (*Salvelinus alpinus*), a fish similar to the Atlantic salmon found in Baffin
Saltfish	Fish preserved in salt; often considered a
Screw	A vessel's propeller
Sea horse	A walrus (*Odobenus rosmarus*)
Shetland Method	[or 'Zetland Method'] System of land tenure, often regarded as exploitive, which required tenants to fish for land owners in exchange for rent, food subsistence and the payment of debts
Skeaman	[Dutch origins; or 'Skeeman'] Ship's officer who oversees stowage in the ship's hold
Specktioneer	[Dutch origins; or 'Spectioneer'] Officer in charge of flensing the whale; often the lead harpooneer
Stove-boat	A damaged whaleboat
Sixern	[or 'sixareen'] Clinker-built six-oared, open-decked boat primarily used in Shetland for the *haaf* fishing

Swiler	[or ‘sweiler’]; a Newfoundland sealer; one who hunts seals
Train oil	Refined whale or animal oil
Truck system	Cashless economic system based on bartering goods and Services; common in fisher/crofter societies, such as Shetland
Trying-out	Process of boiling the blubber to produce whale oil
Tun	The equivalent to 252 gallons
Tupik	A summer, conical tent or shelter covered in caribou skins.
Umiak	Dubbed a ‘women’s boat’, but it served as a large skin-covered boat capable of carrying a family and goods.
Unicorn	Whalers’ term for a narwhal (*Monodon monoceros*)
Voe	Far-reaching inland bays found throughout Shetland
Whaleboat	[or ‘boat’] A long, open boat with six oars (including a steering oar) used to pursue prey. The boat’s crew consisted of a harpooneer (in charge), boatsteerer, linemanager, and three sailors (O.S. or A.B.). Most whaling ships carried six boats.
Whaler	Multiple meanings based on context: 1) A whaling vessel; and 2) a whaleman, or whaling-hunting seafarer
White whale	Whalers’ term for a beluga (*Delphinapterus leucas*)
Yak/Yakkies	[or ‘Husky’ or ‘Huskies’] Whalers’ slang for an Inuk or group of Inuit