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Accounts and balance sheet of Hull Whale Fishery Company, 1754–1757

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ABSTRACT. A recently-discovered financial balance sheet, accounting for the first four years' transactions of the Hull Whale Fishery Company (1754–1757), adds detail to present knowledge of British Arctic whaling economics during the early years of the industry. This article summarises previously-known information on the Company and its four ships, and provides transcripts of the balance sheet covering the profits and losses of the early voyages. Based on tabulated details from the transcripts, and additional data from Customs records and muster rolls, it discusses ships, crews, voyages, catches and expenses, the products of oil and baleen, and the profits derived from them. It makes brief comparisons with similar data from Bristol and Exeter in the formative years of the industry, and draws attention to the key significance of the 40 shilling (£2) bounty during the early years.

Introduction

British ships hunted Greenland right whales *Balaena mysticetus* in Arctic waters from the late 16th century onward, providing for growing industrial markets in whale oil and baleen ('whale-bone' or 'bone'). Though Dutch and other European whalers operated effective industries through the 17th and 18th centuries, British efforts during this period proved spasmodic and barely profitable (Scoresby 1820: ii: 18, 98 *et seq.*; see also Credland 1995: 5–10). Despite the efforts of pamphleteers eager to promote an industry comparable with those on the continent (notably Elking 1722), Britain's increasing demands for oil at this time were met mainly by imports from Holland and the American colonies (Jackson 1972: 157). To promote an indigenous industry that would provide (a) oil and baleen secured by British ships and (b) a reserve of ships and trained seamen for the Royal Navy and transport service, an Act of Parliament in 1733 offered a bounty of 20 shillings (£1) per ship-ton to owners willing to equip their vessels for Arctic voyages.

The bounty of £1 per ship ton proved ineffective, as did an increase in 1739 to 30 shillings per ton: whaling continued, but involving only a few ships from London. A further increase in 1749 to 40 shillings, guaranteed for five years, was more successful. British Arctic whaling began an immediate expansion, which accelerated during the early 1750s when a growing threat of war with France over the North American colonies seemed likely to restrict supplies of oil. In 1749 the whaling fleet had involved only 6 ships annually, sailing from London alone. By 1754 London's tally had increased to 36. By 1756, at the start of the Seven Years' War, 67 ships were sailing from nine English ports, including seven from Hull (Stonehouse 2014). A further 16 sailed from Scotland, where whaling voyages had started contemporaneously in response to the increased bounty (Jackson 1976). Jackson's (1978) survey of the British whaling industry (especially chapters 1–4) and Scoresby's first-hand accounts of shipboard life, hunting techniques and economics, provide details of an enterprise which, by the early years of the 19th century, had expanded to involve at least 35 British ports, employing hundreds of ships and thousands of men afloat and ashore.

Arctic whaling developed in each port independently, with no national organisation or central authority. Only the bounty scheme, administered by Customs and Excise, provided a degree of regulation, including record-keeping, annual reports to Parliament and periodic reviews to vary the value of the bounty and the conditions under which it was awarded. Today those records, though far from complete, provide the most reliable source of information on ships, masters and some 8000 individual voyages made during the 1733–1824 bounty period. (Stonehouse 2014).

Many port records have been destroyed or lost, and those that remain are patchy. Accounts of shore-side activities, including the economic impacts and consequences of whaling on individual ports, are particularly scarce. Hence the significance of a recently-discovered early balance sheet, reporting the finances of a small whaling company operating from the port of Hull during the years 1754–1757.

The Hull Whale Fishery Company

Whaling ships from Hull first operated around Jan Mayen and Svalbard in the early 17th century, but abandoned the trade in the face of fierce opposition from continental whalers. The mid-18th century revival, based on the 40-shilling bounty, proved more successful: Hull ultimately became a major British whaling port, second only to London in numbers of ships sent annually to the Arctic.

Jackson's (1972) social and economic study of the port includes a brief history of the revival, compiled from port and customs letter books and contemporary commercial correspondence. In 1754 James Hamilton, an oil merchant, pioneered the resurgence of interest by

sending his ship *York* to the Arctic. In the same year other merchants formed a company to buy, fit out and operate whalers. Jackson (1972: 158) comments:

> Little is known of the Hull Whale Fishery Company, the only company active between 1758 and the lapse of whaling after the 1762 season. Its leaders were almost certainly merchants with interests in American and Dutch oil. Peases [a prominent business family] imported whale oil and bone from Holland, Samuel Dewittt was a Dutch sea captain and merchant, and William Turner was the largest importer of whalebone in Hull, probably in the whole of Britain. . . . The company was divided into eighty transferable shares of £250, a total nominal capital of £20,000 – more than enough to cover the cost of putting four whalers to sea. A small profit was made in the first season and a dividend of £9. 7s. 6d. was declared. The following season was better, and £25 per share was paid – ten per cent on the nominal subscription.

The company appears neither to have flourished immediately nor to have lasted long. Jackson reports that by 1758 the £250 shares were selling for £200, and that in 1762 two remaining company ships brought home only 1.5 tons of oil, 22 seal skins and nine sea-horse (walrus) skins between them, and did not return to Greenland. Jackson ascribes the company's demise to the war in Europe, which brought a general decline in trade, and to the ending of hostilities in North America, which enabled the revival of American whaling, and presumably a return to more reliable and substantial sources of oil and whalebone.

Customs records and muster rolls indicate that *Pool* continued whaling until 1760, *Berry* until 1762, and another, smaller *Leviathan* of only 341 tons sailed from Hull from 1759 to 1762. Thus *Berry* and the new *Leviathan* were probably the two company ships mentioned above. Thereafter no ships left Hull on whaling voyages for the following three years. Thus 1762 seems a likely year for the Company to have ceased whaling operations.

The Company's balance sheet

The balance sheet, folded into a small package, was discovered among a batch of papers bought at a car boot sale in 2012 by Mr Christopher Wilkinson of Knaresborough. Most of the papers, dated around the 1860s, appear to have been accounts in the keeping of John Maister, factor to the Swinton Castle (North Yorkshire) estate. Though the balance sheet bears no direct relation to the estate papers, the surname Maister suggests possible links with both Hull and the new whaling industry. Maisters were a family of merchants prominent in the town during the 18th century. While a history of the family (Ingram 1983) makes no mention of their being directly involved in whaling, Maisters are likely to have taken an interest in any new local business enterprise, and may indeed have held shares in the company. This could account for the presence of an early (and by then long-redundant) balance sheet in the possession of a later member of the family.

The document is hand-written in the form of two tables, covering both sides of a single sheet of paper measuring 37 × 47 cm. Clear and in remarkably sound condition, it has been repaired, stabilised and copied, and is lodged for safe-keeping in the archives of the Hull History Centre. The main table is headed *'The ships belonging to the Hull Whale Fishery Co. for their Several Voyages to and from Greenland in 1754, 1755, 1756, 1757'*. The reverse side bears a smaller table headed *'Ballance Account of the Hull Whale Fishery Co. Books May 20 1757. Contra'*. These are illustrated in Figs. 1, 2.

The two sides of the balance sheet are transcribed in Tables 1 and 2. In both tables, currency is shown in its original form of pounds sterling, shillings and pence (12 pence = 1 shilling, 20 shillings = 1 pound, symbolised by £1. Using the National Archives Currency Converter, the £1 of 1760 is approximately worth £75 in modern currency.) Similarly weights appear in their original form as imperial tons, hundredweights (cwt), quarters (q) and pounds avoirdupois (lb) (28 lb = 1 q, 4 q = 1 cwt, 20 cwt = 1 ton). In the text and in tables 3, 4 and 5 both currency and weights are decimalised (for example 1 lb = 0.454 kg).

Table 1 lists the expenditure and income resulting from buying the company's ships, equipping them and sending them north. Three ships operated in 1754 and 1755, four in 1756, and three again in 1757. The document was drawn up in July 1757. As the ships of that year were still at sea, expenses were recorded up to 20 May, before the catches and resulting income were known. Table 2 records the financial results of the whaling over three seasons, and lists the Company's assets on 20 May 1757. Both sides of the document are signed and dated by Richard Martson – possibly the company's secretary or business manager. The document appears to represent a mid-season stock-taking, perhaps timely for decisions concerning the following season's activities – whether to continue with whaling or put the ships to other uses. A possible alternative use would be employment with the government transport service, following Britain's formal declaration of war against France in May 1756.

The columns in Table 1 are identified by numbers 1–17 added in square brackets. Column 1 contains the years and ships names. (In customs and other official documents relating to these voyages, *Pool* is spelt *Poole* and *Ann Elizabeth* is *Ann and Elizabeth*.) Column 2 gives the company's valuation of its ships at the start of each year. 'Stores' and 'Cost' are itemised separately in each ship's first year of sailing, but together in subsequent years.

Columns 3–9 concern expenditure. Columns 3 and 7 show payments made to the crews respectively at the start and end of each voyages, the amounts varying with the size of crew and length of voyage. Column 4 details annual costs incurred in fitting out the ships. Column 5 shows annual valuations of the ships and contents for insurance purposes, and column 6 shows the

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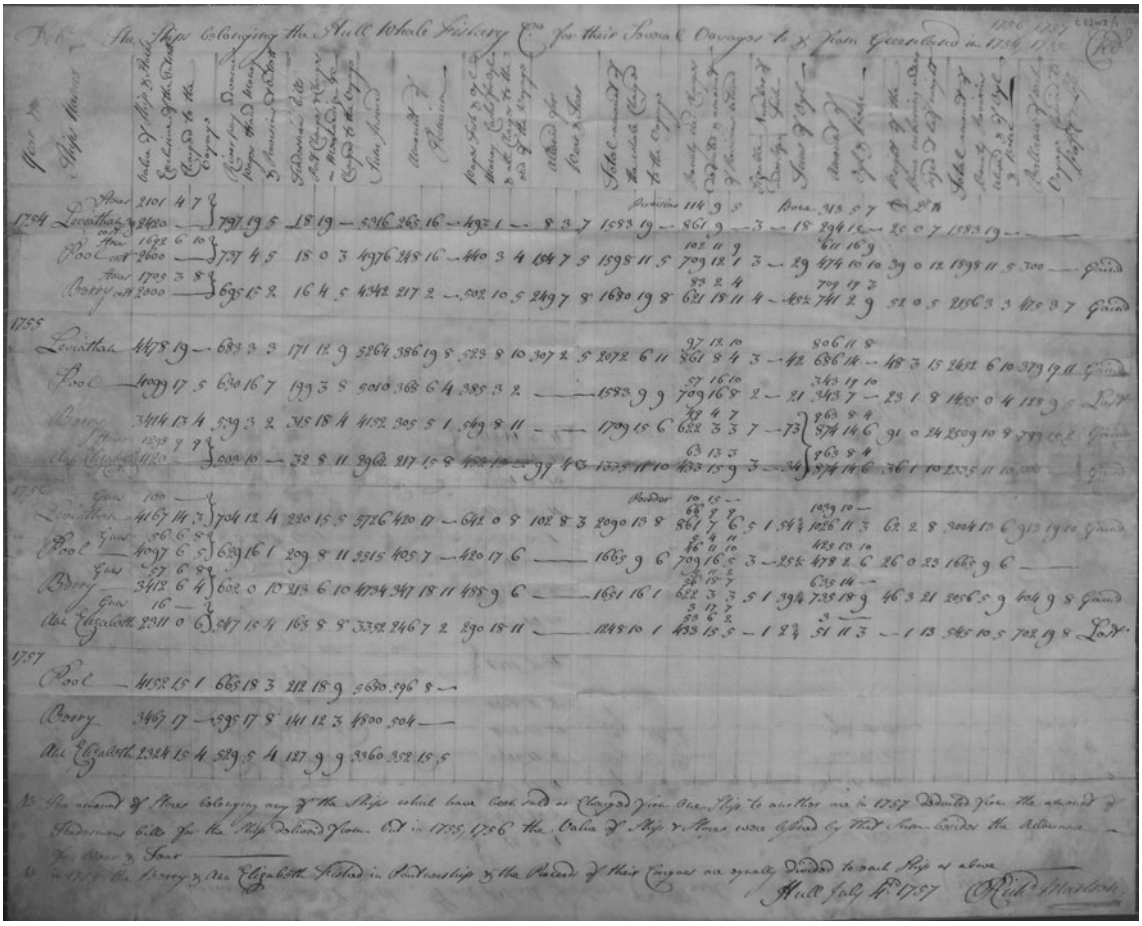

Fig. 1. The main table.

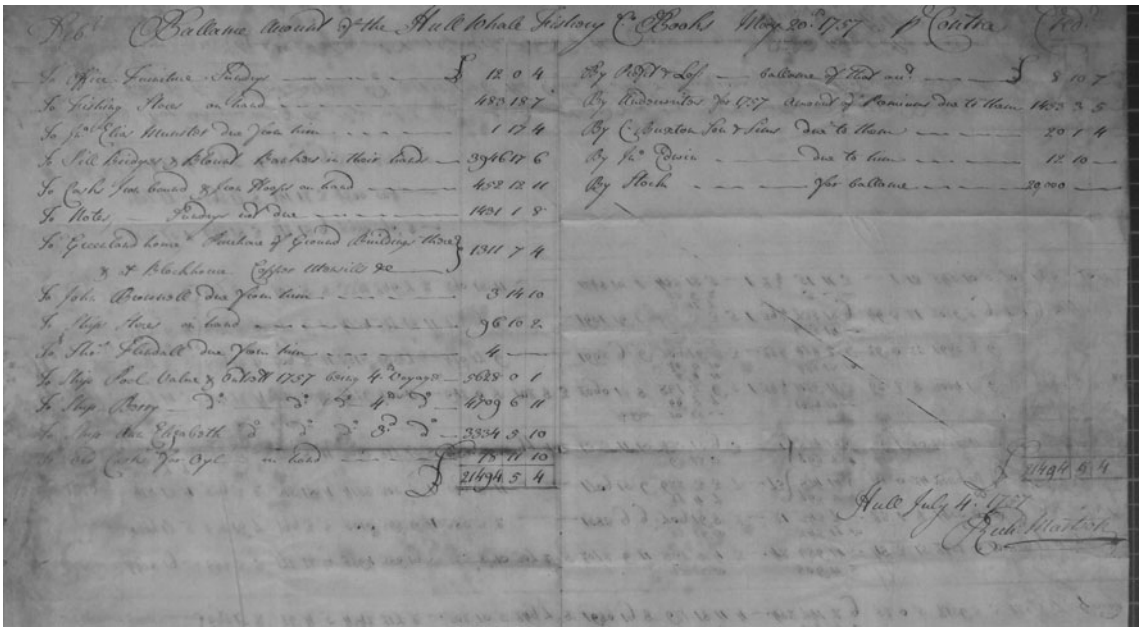

Fig. 2. The reverse-side table

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Table 1. Transcription from the main table. Accounts for the ships of the Hull Whale Fishery Company 1754–1736, and provisional accounts up to July 1757, when the company's three ships were still at sea. Financial values are retained in the original pounds, shillings and pence (1 pound = 20 shillings, 1 shilling = 12 pence). The figures in square brackets on the second line down are added to identify columns: see text. The letters in square brackets in column 13 identify returns for bone [B] and oil [O].

The ships belonging the Hull Whale Fishery Co. for their Several Voyages to & from Greenland in 1754, 1755, 1756, 1757

[1]		[2]						[3]			[4]			[5]	[6]			[7]			[8]			[9]			[10]			[11]		[12]	[13]					[14]			[15]			[16]			[17]
Year and Ships' names		Value of ships and stores, exclusive of the Outsett Charged to the Voyage						River pay Advanced Wages & Hand Money & Provisions at Outsett			Tradesmens bills Port Charges & Charges on Merchandize &c Charged to the Voyage			Sum Insured	Amount of Premium			Wages Fish & Oyl Money Cashes for Oyl and all Charges to the end of the Voyage			Allowed for Wear & Tear			Total amount of the whole Charged to the Voyage			Bounty rec.d Charges deducted and amount of Provisions returned			Number of fish		Tuns of oyl	Amount of oyl and bone					Weight of the Bone reckoning under sized at half weight			Total amount of Bounty, Provisions returned, & of Oyl & Bone			Ballance of each Voyage Carried to Profit & Loss			
																														Size able	Under size															
1754	*Leviathan*	Stores	2101	4	7	797	19	5	18	19	0	5316	265	16	0	493	1	0	8	3	7	1583	19	0	114	9	5	3	0	18	[B]	313	5	7	25	0	7	1583	19	0	0	0	0	
		Cost	2420	0	0																				861	9	0				[O]	294	15	0											
	Pool	Stores	1692	6	10	737	4	5	18	0	3	4976	248	16	0	440	3	4	154	7	5	1598	11	5	102	11	9	3	0	29	[B]	611	16	9	39	0	12	1898	11	5	300	0	0	Gain'd
		Cost	2600	0	0																				709	12	1				[O]	474	10	10											
	Berry	Stores	1705	3	8	695	15	2	16	4	5	4342	217	2	0	502	10	5	249	7	8	1680	19	8	83	2	4	4	0	45 1/2	[B]	709	19	3	52	0	5	2156	3	3	475	3	7	Gain'd
		Cost	2000	0	0																				621	18	11				[O]	741	2	9											
1755	*Leviathan*		4478	19	0	683	3	3	171	12	9	5264	386	19	8	523	8	10	307	2	5	2072	6	11	97	12	10	3	0	42	[B]	806	11	8	48	3	15	2452	6	10	379	19	11	Gain'd
																									861	8	4				[O]	686	14	0											
	Pool		4099	17	5	630	16	7	199	3	8	5010	368	6	4	385	3	2	0	0	0	1583	9	9	57	16	10	2	0	21	[B]	343	19	10	23	1	8	1455	0	4	128	9	5	Lost
																									709	16	8				[O]	343	7	0											
	Berry		3414	13	4	539	3	2	315	18	4	4152	305	5	1	549	8	11	0	0	0	1709	15	6	49	4	7	7	0	73	[B]	963	8	4	91	0	24	2509	10	8	799	15	2	Gain'd
																									622	3	3				[O]	874	14	6											
	Ann Elizabeth	Stores	1298	9	9	503	10	0	32	8	11	2962	217	15	8	482	13	0	99	4	3	1335	11	10	63	13	3	3	0	34	[B]	963	8	4	36	1	10	2335	11	10	1000	0	0	Gain'd
		Cost	1120	0	0																				433	15	9				[O]	874	14	6											
1756	*Leviathan*																					[Powder]			10	15	0																	
		Guns	100	0	0																				66	9	9	5	1	54 3/4	[B]	1039	10	0	62	2	8	3004	13	6	913	19	10	Gain'd
			4167	14	3	704	12	4	220	15	5	5726	420	17	0	642	0	8	102	8	3	2090	13	8	861	7	6				[O]	1026	11	3											
	Pool																					[Powder]			5	4	11																	
		Guns	56	6	8	629	16	1	209	8	11	5515	405	7	0	420	17	6	0	0	0			46	11	10	3	0	25 1/2	[B]	425	13	10	26	0	23	1665	9	6	0	0	0	
			4097	6	5																	1665	9	6	709	16	5				[O]	478	2	6											
	Berry																					[Powder]			5	11	2																	
		Guns	57	6	8																				56	18	7	5	1	39 1/4	[B]	635	14	0	46	3	21	2056	5	9	404	9	8	Gain'd
			3412	6	4	602	0	10	213	6	10	4734	347	18	11	488	9	6	0	0	0	1651	16	1	622	3	3				[O]	735	18	9											
	Ann Elizabeth																					[Powder]			3	17	7																	
		Guns	16	0	0																				53	6	2	0	1	2 3/4	[B]	3	0	0	0	1	13	545	10	5	702	19	8	Lost
			2311	0	6	547	15	4	163	8	8	3352	246	7	2	290	18	11	0	0	0	1248	10	1	433	15	5				[O]	51	11	3											
1757	*Pool*		4152	15	1	665	18	3	212	18	9	5680	596	8	0																														
	Berry		3467	17	0	595	17	8	141	12	3	4800	504	0	0																														
	Ann Elizabeth		2324	15	4	529	5	4	127	9	9	3360	352	15	5																														

NB. The amount of Stores belonging any of the Ships which have been sold or Charged from one ship to another are in 1757 deducted from the amount of Tradesmens bills for the Ship delivered from but in 1755, 1756 the Value of Ship and Stores were lessened by that Sum besides the Allowance Wear & Tear. 1755 the Berry and Elizabeth fished in Partnership & the Proceeds of their Cargoes are equally divided to each Ship as above. Hull July 4th 1757. Richd. Martson.

Table 2. Transcription from the reverse-side table. Balance sheet for the company as at 20 May 1757.

Ballance Account of the Hull Whale Fishery Co. Books May 20 1757. Contra

To Office Furniture Sundrys	£	12	0	4	By Profit & Loss —— Ballance of that Account	£	8	10	7
To Fishing Stores on hand		483	18	7	By Underwriters for 1757 Amount of Premiums due to them		1453	3	5
To John Elias Munster due from him		1	17	4	By C. Buxton Son & Sims Due to them		20	1	4
To Sill Bridges & Blount Bankers in their hands		3946	17	6	By John Edwin Due to him		12	10	0
To Casks Iron bands and Iron Hoops on hand		452	12	11	By Stock for Balance		20,000	0	0
To notes —— Sundrys not due		1431	1	8					
To Greenland house, purchase of ground Buildings there and at Blockhouse Copper utensills etc		1311	7	4					
To John Beowhall due from him		3	14	10					
To Ships Stores in Hand		96	10	2					
To Thomas Flindall due from him		4	0	0					
To Ship Pool Value & Outsett 1757 being 4th Voyage		5628	0	1					
To Ship Berry —do— being 4th Voyage		4709	6	11					
To Ship Ann Elizabeth — do— being 3rd Voyage		3334	5	10					
To old Casks for Oyl on hand		78	11	10					
	£	21,494	5	4		£	21,494	5	4
					Hull July 4th 1757				
					[Signed] Richard Martson				

Table 3. Details of the 14 voyages made by ships of the Hull Whale Fishery Company 1754–1757. The ships' tonnage figures are derived from Customs records held in the House of Lords (Stonehouse 2014). Crew numbers and dates of sailing and return are based on Hull Trinity House muster rolls held in Hull History Centre. *Ann Elizabeth* made her first voyage for the company in 1755: *Leviathan* disappeared from the record after the voyage of 1756.

	Ship and tonnage	*Leviathan* 436 tons	*Pool* 360 tons	*Berry* 315 tons	*Ann Elizabeth* 220 tons
1754	Master	John Greenshaw	James Davidson	Andrew Nicholson	
	No. of crew	57	56	46	
	Duration of voyage	25 Mar - 6 Aug	13 Mar - 28 Jun	6 Apr - 9 Jul	
	Days at sea	134	107	94	
	Sizeable fish	3	3	4	
	Undersized fish	0	0	0	
	Tuns of oil	18	29	45	
	Weight of bone (cwt)	25	39.2	52	
1755	Master	John Greenshaw	James Davidson	William Toms	John Pattison
	No. of crew	54	49	46	39
	Duration of voyage	13 Feb-14 Jul	30 Mar-24 Jul	1 Feb-26 Jul	13 Feb-26 Jul
	Days at sea	140	116	176	163
	Sizeable fish	3	2	7	3
	Undersized fish	0	0	0	0
	Tuns of oil	42	21	73	34
	Weight of bone (cwt)	48.8	23.4	91.2	36.4
1756	Master	John Greenshaw	James Davidson	William Toms	John Pattison
	No. of crew	59	51	45	37
	Duration of voyage	2 Feb-6 Aug	19 Feb-29 Jul	2 Feb-27 Jul	2 Feb-6 Aug
	Days at sea	185	160	175	185
	Sizeable fish	5	3	5	0
	Undersized fish	1	0	1	1
	Tuns of oil	54.75	25.5	39.25	2.75
	Weight of bone (cwt)	62.6	26.2	47	0.4
1757	Master		John Greenshaw	William Toms	James Davidson
	No. of crew		48	39	39
	Duration of voyage		24 Feb-3 Aug	1 Mar-2 Aug	1 Mar-7 Aug
	Days at sea		160	155	159
	Sizeable fish		2	4	0
	Undersized fish		0	0	0
	Tuns of oil		53.5	40	0
	Weight of bone (cwt)		?	?	0

insurance premiums required to cover them. Column 8 lists amounts set aside for repairs, which varied considerably between seasons, according to damage inflicted by ice and heavy weather. Column 9 totals all the outgoings listed in columns 3 and 4, and 6 to 8.

Columns 10–17 concern income and balance. In column 10 the upper figures show the value of provisions returned after the voyage, which is treated as income for accounting purposes. The lower figures show the amount of government bounty received, at a rate of £2 per shipton, less a small 'charge' (presumably a handling fee). Their sum is the year's income from sources other than sales of oil and baleen.

Columns 11–14 list the number of whale caught, their yields and resulting income. In column 11 'Number of fish' indicates the number of whales taken; 'Sizeable' and 'Undersize' refers to the length of whalebone recovered (see below). The 'tun' of oil in column 12 is a measure of volume: a tun was a standard wine cask of 216 imperial gallons. Column 14 shows the weight of baleen (also called whalebone or bone), in hundredweights, quarters and pounds avoirdupois. The amounts for which these items were sold appear in column 13.

The sums of columns 13 and 15 appear in column 16, and column 17 records whether each voyage yielded a profit, loss, or broke even. By this reckoning, of the 11 voyages completed, seven made small profits, two broke even and two resulted in losses. These assessments are examined further below.

Table 2 records the company's financial assets and liabilities up to 20 May 1757. The main assets were the three ships owned at the time with their working equipment, and a 'Greenland house' (a shoreside building with equipment for processing the blubber into oil and cleaning the rough baleen into a saleable product) with total value £14,983.00. Other stock included surplus casks and their components, unused ships stores, and office furniture, in total valued at £592.47. Three debtors owed the company a total of £9.62. Cash assets included a bank balance, notes and cash on hand, and sundries

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Table 4. Individual financial data for the ships in each of the years 1754–1757, and totals for each year, summarised from Table 1. Sums of money, entered originally in pounds, shillings and pence, are for convenience translated in decimal pounds; hundredweights (cwts), quarters (q) and pounds (lbs) of baleen, and tuns of oil, are similarly decimalised.

		Leviathan	*Pool*	*Berry*	*Ann Elizabeth*	Total
1754	Income from bounty	£861.45	£709.60	£621.95		£2,193.00
	Income from returned provisions	£114.47	£102.59	£83.12		£300.18
	Income from products	£608.03	£1,086.38	£1,451.10		£3,145.51
	Total income	£1,583.95	£1,898.57	£2,156.17		£5,638.69
	Expenditure	-£1,583.95	-£1,598.57	-£1,680.98		-£4,863.50
	Balance	£0.00	£300.00	£475.19		£775.19
	Balance excluding bounty	-£861.45	-£409.60	-£146.76		-£1,417.81
1755	Income from bounty	£861.42	£709.83	£622.16	£433.78	£2,627.19
	Income from returned provisions	£97.65	£57.84	£49.23	£63.66	£268.38
	Income from products	£1,493.28	£687.34	£1,838.14	£1,838.14	£5,856.90
	Total income	£2,452.35	£1,455.01	£2,509.53	£2,335.58	£8,752.47
	Expenditure	-£2,072.35	-£1,583.49	-£1,709.77	-£1,335.59	-£6,701.20
	Balance	£380.00	-£128.48	£799.76	£999.99	£2,051.27
	Balance excluding bounty	-£481.42	-£838.31	£177.60	£566.21	-£575.92
1756	Income from bounty	£861.38	£709.82	£622.16	£433.78	£2,627.14
	Income from returned provisions	£77.24	£51.84	£62.49	£57.19	£248.76
	Income from products	£2,066.06	£903.82	£1,371.64	£54.56	£4,396.08
	Total income	£3,004.68	£1,665.48	£2,056.29	£545.53	£7,271.98
	Expenditure	-£2,090.68	-£1,665.48	-£1,651.80	-£1,248.50	-£6,656.46
	Balance	£914.00	£0.00	£404.49	-£702.97	£615.52
	Balance excluding bounty	£52.62	-£709.82	-£217.67	-£1,136.75	-£2,011.62

Table 5. Insured values and insurance premiums for the company's ships, 1754–1757.

		Leviathan	*Pool*	*Berry*	*Ann Elizabeth*	Total
1754	Value of ship and stores	£4,521.23	£4,292.34	£3,705.18		£12,518.75
	Insured value	£5,316.00	£4,976.00	£4,342.00		£14,634.00
	Insurance premiums	£265.80	£248.80	£217.10		£731.70
1755	Value of ship and stores	£4,478.95	£4,099.87	£3,414.67	£2,418.47	£14,411.96
	Insured value	£5,264.00	£5,010.00	£4,152.00	£2,962.00	£17,388.00
	Insurance premiums	£386.99	£368.31	£305.25	£217.78	£1,278.33
1756	Value of ship and stores	£6,587.72	£6,697.72	£5,412.31	£3,431.02	£22,128.77
	Insured value	£5,726.00	£5,515.00	£4,734.00	£3,352.00	£19,327.00
	Insurance premiums	£420.85	£405.35	£347.95	£246.35	£1,420.50
1757	Value of ship and stores		£4,152.75	£3,467.85	£2,324.75	£9,945.35
	Insured value		£5,680.00	£4,800.00	£3,360.00	£13,840.00
	Insurance premiums		£596.40	£504.00	£352.77	£1,453.17

totalling £5,909.18. Outstanding debts of £1,485.73 were due mainly to unpaid insurance premiums – possibly still a subject of negotiation. To the original stock of £20,000 was added a small positive balance of £8.54. Though not specified as such, this represents the balance of profits remaining after payments of dividends to the shareholders in the first two years. Current reserves therefore amount to £20,008.54.

Ships and crews, voyages and catches

To help in interpreting the balance sheet, details of tonnages, masters, crews, lengths of voyages, catches and produce have been gathered from Customs and Excise records and Hull Trinity House muster rolls (Table 3). These include details of the three voyages of 1757 that were still at sea when the balance sheet was prepared.

Ships and crews

Table 3 presents the company's four ships in descending order of size. All would have been timber-built cargo vessels typical of their period, drawn from general cargo-carrying service, and 'fortified' – that is strengthened internally and externally – to counter pressure and abrasion from pack ice. Internal fortification would have reduced slightly their cargo space, but the ships would have remained fully employable for cargo runs between whaling voyages. Muster rolls show that, of the four ships, *Ann and Elizabeth* had previously sailed from Hull in 1748–1753 on non-whaling voyages to America and Europe. She had returned in early July 1754 from a trading voyage involving Virginia, Lisbon and London, commanded by Captain Robert Stephenson. In 1752 *Pool* had sailed from Hull with Captain James Davidson, though whether on a cargo run or whaling is not clear. In 1753 *Berry* had sailed

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with Captain Andrew Nicholson and a crew of 46 on what was clearly a whaling voyage, and was thus already a whaler when taken on by the company. I have found no records of earlier voyages from Hull by *Leviathan*.

The ships ranged in tonnage or burthen (an index of capacity based on external measurements) from 436 to 220 tons. On cargo runs all would have operated with crews of 10 to 24 men. On whaling voyages they carried larger crews, to man the whaleboats that were used in hunting, and also a surgeon: for details of manning see Evans (2005: 9). The muster rolls show *Leviathan* on her three voyages to have carried crews of 54–59. Based on tonnage, bounty regulations would have authorised her carrying six whale boats, each of which would have been crewed by of six or seven men including a harpooner, a line manager, a boat-steerer, and three or four oarsmen. *Poole* (359 tons) and *Berry* (315 tons) carried crews of 44–50, which could have manned five boats. *Ann Elizabeth*, crewed by 37–39, probably manned only four.

Scoresby's discussion of size in whaling ships (Scoresby 1820 II: 187–188), though written two generations later, is relevant in the present context:

> A vessel of 250 tons requires nearly the same number of men, the same quantity of provisions and stores, and the same expence of outfit, as a ship of 350 tons burden; while the difference in the cargoes of the two vessels, when filled . . . is . . . more than a compensation for the difference in the first expence. . . . We, therefore, conclude that a ship of intermediate size between 300 and 400 tons, is best adapted for the fishery. And, on the whole, perhaps, a roomy ship of 330 or 340 tons, possesses more advantages, with fewer disadvantages, than a vessel of similar build of any other capacity.

By Scoresby's standards *Leviathan* (436) tons was considerably larger than optimal, *Pool* and *Berry* were closer to the ideal. *Ann Elizabeth*, at only half the burthen of *Leviathan*, was smaller than optimal for an independently-operating ship, but may have been bought on a narrow budget to act as consort to the larger ships – for example fishing in partnership with *Berry* on the first voyage in 1775.

Regulations required masters, harpooners and a proportion of other key crew members to be British, and to have qualified for their roles aboard by whaling service in other ships. Immediately before the revival of the industry in the early 1750s only a few ships had been whaling annually from Britain, and those only from London. After the bounty increase, ship-owners in other ports, deciding to start whaling, would have had difficulty in finding crews that satisfied not only the bounty requirements, but also the common-sense requirement of being as experienced and effective as possible in a difficult and occasionally dangerous trade.

At that time the flourishing Dutch whaling industry employed '. . . many thousands of the most necessary and skilful hands' (Scoresby 1820 II: 107) from foreign countries including Scotland. Few of the muster rolls for the 14 voyages from Hull show full details of the origins of the crew members, their roles on previous voyages, or even their roles in the newly-forming teams. However, some of the masters and mates were recruited from London, some of the boats' crews had Dutch-sounding names, and crew members had been drawn in from England, Scotland, Scandinavia and America.

Duration of voyages

Whalers from Britain headed for either of two hunting grounds – 'Greenland', the sea area south and west of Svalbard (which at the time was thought to form an eastern extension of Greenland) and 'Davis Strait', the sea area between Greenland and North America. The Davis Strait ground was further from Britain, took longer to reach against prevailing westerly winds, and its ice conditions could prove more hazardous, but whales caught there were on average fatter (see below) and thus more valuable than those caught off Svalbard. There is no direct indication of where the Hull company ships hunted. Most British ships in early days of the bounty period favoured the Greenland ground. While *Berry*'s long voyages and outstanding catches in 1755 and 1756 might suggest visits to Davis Strait, successful hunting by an experienced master on the Greenland ground seems more likely.

Table 3 shows also the duration of each voyage, calculated from muster roll records of the dates when crew members were signed on and off. In later years it was usual for all the crew to be signed on simultaneously one or two days before sailing, usually in February or March, in an event called by Scoresby 'boiling the kettle'. In these early voyages, masters, mates and other key crew were taken on as early as November or December, and the rest were enlisted piecemeal before the voyages actually began. Thus the date when the ship actually left is not always clear. For the 14 voyages here considered, if not otherwise specified, the date of departure is taken as that on which the last crew-member signed on. The date of return is never in doubt: all signed off on the same day.

For these voyages the earliest starting date was 2 February, shared in 1756 by three of the four ships sailing together. This was almost certainly a defence against French privateers, which appear to have been operating in advance of the declaration of war. The shortest voyage was of 94 days (*Berry* in 1754). The mean length of all the voyages was 151 days, the longest 185 days by *Leviathan* and *Ann Elizabeth*, both in 1756. Crew received basic pay on a daily or weekly basis, with bonuses based on whales killed and blubber or oil returned. Regrettably the balance sheet provides no information on how or how much the crews were paid, but taking on members some weeks before sailing would inevitably have added to payroll costs. In the first year of sailing it might have allowed a period of preparation – for refitting ships and familiarising crews in their new roles.

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In later years, whaling ships after their return from the north were often deployed in coastal or continental cargo-voyages of two or three months – a useful and profitable way of employing the ship and part of the crew in late summer, autumn and early winter. There is no indication either in the balance sheet or in the muster rolls that the company's ships were so deployed in the years under review: a possible reason is the activities of the North Sea privateers. However, after returning from whaling on 7 August 1757 *Ann Elizabeth* left on 10 September for a voyage to Newcastle and London, which returned on 1 November. The master was Captain William Thoms, with a crew of 18. Similarly *Pool* was employed on non-whaling voyages after the 1758 and 1759 whaling seasons.

Whaling ships' crews, like all others in wartime, were subject to naval impressment. Masters, mates, harpooners, boat steerers and line managers were exempted, but deckhands were valued especially for their seamanship and indifference to bad weather, and were liable to be impressed either at sea or upon docking in their home port. Though providing a reserve of experienced seamen was one of the stated objectives of the bounty, the loss of trained deckhands into the navy must have added seriously to the problems of whaling ship masters in their efforts to maintain and increase efficiency. Masters sometimes managed to put at least some of their men ashore before reaching port. Jackson (1972: 175) reports that in 1757 members of *Pool*'s crew were set ashore at the Humberside hamlet of Paull, and some of *Ann Elizabeth*'s crew were landed in Lincolnshire. In that year only *Berry* arrived in Hull with a full complement.

Catches and products

Table 3 summarises also the numbers of whales caught by each ship, and the amounts of oil and baleen brought home. To whalers, a whale was a 'fish', and a 'sizeable' or 'size' fish was one whose longest plates of baleen or whalebone exceeded 6 ft (1.83 m). Because long baleen plates were thicker and more valuable, size whales were listed separately for accounting purposes. The plates, cut from the roof of the mouth, were bundled and stacked to be cleaned ashore. Suckling or juvenile whales yielded little or no baleen, but blubber enough to make their killing worth-while.

Blubber (the thick layer of fat under the skin), was stripped from the carcase and 'made-off' (cut up and packed into barrels) for transport home. There, in the 'Greenland house' noted as a company asset in Table 2, the blubber was boiled to release the oil. Thickness of blubber and amounts of oil derived from it varied considerably in adult whales. Having fed very little during the winter, in spring they were heading into areas of open water to replenish their fat by feeding on the plankton that proliferated when the ice broke up. Some whales caught early in the season tended to be thinner than those caught later, and Davis Strait whales tended to be fatter and more profitable than those caught east of Greenland. The balance sheet gives no indications of when in the season or where the whales were caught, and no logbooks for these voyages are known. In 1754 *Leviathan*'s three whales, though all recorded as 'size', clearly yielded far less oil and baleen than the three taken in the same season by *Pool*, and less again than the four taken by *Berry*.

The eleven voyages of 1754–1756 secured a total of 38 size whales (an average of 3.45 per voyage) and three undersize. In 1755 *Berry* and *Ann Elizabeth* hunted together. Little is known of the previous experience of masters other than Andrew Nicholson, but *Berry*'s whaling voyage in the year before the company started suggests an experienced captain and practised crew, sailing in company with a ship and crew new to the trade. Though their catches and products were recorded separately, the financial returns appear to have been pooled and divided equally between them.

In the first three seasons none of the ships returned 'clean', that is without any profitable cargo of blubber, baleen or sealskins. The smallest catch was *Ann Elizabeth*'s single undersize whale in 1756, yielding only 2.75 tuns of oil and a few pounds of baleen. *Berry*'s seven size whales in 1755 formed numerically the highest catch, yielding 73 tuns of oil and over 4.5 tons of baleen. The five whales caught by *Leviathan* in the following year yielded less of both, but earned slightly more due to the higher price of oil (see below), and possibly an overall higher quality of baleen. In the three seasons collectively *Berry* took the greatest number of size whales – 16 compared with *Leviathan*'s eleven and *Pool*'s eight. *Berry*'s consistent success, in both numbers of whales caught and yields of oil and baleen, again suggests a level of skill and experience above that of the other ships.

Leviathan disappeared from the balance sheet after 1756. From what little is known of the 1757 season, derived from other sources and included in Table 3, the three remaining ships showed poorer returns than in 1754–1756. *Pool*'s two size whales are unlikely to have covered costs. True to form, *Berry* caught four, which may have returned a small profit. *Ann Elizabeth* for the first time returned clean.

Financial returns

Whaling voyages drew income from two sources – the guaranteed government bounty, paid at a rate of 40 shillings (£2) per ship ton on completion of the voyage, and cash paid on sales of oil and baleen. In this balance sheet a further source – 'amount of provisions returned' (upper figures, Table 1, column 10) was treated as income for accounting purposes. In 1756 the value of returned gunpowder made a small addition for each of the four ships. Table 4 summarises the company's income, expenditure and balance for the three years in which voyages were completed.

Table 4's first three items for each of the three ships summarise income from the bounty and returned provisions (column 10 of Table 1) and from sales of products

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(column 13). Bounty payments varied only in pence from year to year. Income from returned provisions varied more widely, and income from oil and baleen was highly variable, depending not only on the size of catch, but also on supply and demand in the home port at the time of landing.

Writing of a slightly later period, Jackson (1972: 168) noted:

> The costs of whaling were heavy, but the profits were sometimes immense, though always unpredictable. A ship had to bring home at least thirty tons of oil and one and a half tons of bone (at £21 and £245 per ton respectively) to make a saving voyage. Since a small whale yielded about 19 tons of oil and a middling one about 22 tons, a whaler began to show a profit with two whales.

The balance sheet gives no indication of where the company found markets for its oil and bone. The company's figures show that oil earned about £16.30 per tun in 1754 and 1755, and slightly more at £18.75 in 1756, an increase possibly due to rising demand during the war. Baleen during the same period reached prices between £12 and £17 per cwt according to length and quality.

Table 4's fourth, fifth and sixth items provide the total income for each voyage, followed by the expenditure (column 9 of Table 1) and balance. Of the 11 voyages represented, two show negative balances and one breaks even, as recorded in the final column of the balance sheet. The seventh items in Table 4 indicate the balance for each voyage had the bounty not been available; without the bounty only two voyages in 1755 and one in 1756 would have shown profits.

Total values for all the ships appear in the final column of the table. The overall profits (including bounty payments) of £775.19 in 1754 and £2,051.28 in 1755, divided among 80 shares, respectively yielded the company's first and second dividends of £9.38 and £25.00 per share. There is no indication of a dividend arising from the smaller profit achieved in 1756, which was probably banked and included in the Table 2 balance held by Sill Bridges & Blount.

For all the 11 voyages completed, income from oil and baleen amounted to £13,398.58. Total expenditure amounted to £18,221.16, resulting in an overall deficit of £4,822.58. From this deficit may be subtracted £817.14, the total for 'provisions returned', leaving an accounting deficit of £4005.44. During the same period the bounty paid to all the ships totalled £7,447.33, enough to cover the deficit and provide a balance of £3441.89. From this sum was derived the first two years' dividends.

Data from Tables 3 and 4 combine to illustrate the variations in value of size whales, making clear the point that the number of whales caught, though often appearing as an indicator of success in whaling, is a poor indicator of catch value. The mean value of oil and bone from the 38 size whales taken in the three seasons was £348.55. However, *Leviathan*'s three whales caught in 1754 yielded on average only £202.57 each, while the three taken by the same ship in the following year yielded on average £497.76. For 1756, assuming that *Leviathan*'s single undersize whale matched the one caught by *Ann Elizabeth*, the five size whales making up the catch brought in £402.30 each.

Insurance

Among the items listed as expenses in Table 1, insurance was clearly a matter of special concern, meriting two columns to itself. Table 5 lists for each voyage the value of ships and stores (from Table 1, column 2), together with their insured values and the premiums paid (columns 5 and 6). In 1754 and 1755 insured values were set on average 16.9% and 20.6% higher than nominal values: in 1756 they were 12.6% lower, and in 1757 they were again raised, this time 39.2% higher. The second and third items reveal that premiums rose from 5% of insured value in 1754 to 7.3% in 1756, and 10.5% in 1757. In 1754 insurance costs took up 33.6% of the bounty, rising to absorb 82.2% in 1757.

There are no indications in the balance sheet of why premiums should have fallen in 1756 or risen substantially in the following year. In the early years of expansion underwriters would have had little information on which to base their risk estimates. Despite the possible hazards of taking ships into ice, there had as yet been no conspicuous losses, and the fall in 1756 might have indicated reassurance based on the safe return of increasing numbers of ships each year. The substantial increases in 1757 are likely to have reflected an overall rise in risks to shipping from enemy action, following the formal declaration of war.

Whaling from Bristol, Exeter and Dunbar

Almost at the same time as the Hull company started, similar enterprises began in the southwestern ports of Bristol and Exeter, and in several Scottish ports. Jones (1992: 115) gives a brief account of 'A Company for promoting the Greenland Whale Fishery' established by Bristol merchants in 1750. Though none of its records has survived, references in local newspapers indicate that the company sent two or three ships annually to the Arctic during the 1750s, bringing home enough blubber and bone to maintain operations, supply local markets and provide small dividends to shareholders. In wartime they were quick to take up privateering as a more profitable alternative. Bristol's last Arctic whaling ship sailed in 1760.

Dixon (1976: 225) examined a set of accounts of an 'Exeter Whale Fishery Company' that allow for more direct comparisons with the Hull record. He points out that, although Exeter had no previous experience of whaling, no trained personnel, and was a river port with difficult access and few facilities, nevertheless in 1754 a group of 32 Exeter merchants subscribed a total of £5,235 to found the Exeter Whale Fishery Company and

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engage in the Greenland trade. The company paid £2,150 in London for a second-hand ship of 346 tons, which they registered as *Exeter*, and acquired an experienced, mainly Scottish crew whose coach-fares had to be paid from London. *Exeter* sailed alone to the fishery in each year 1755–1758. In 1757 she was taken by a French privateer but later recovered. In that season she caught no whales, and brought home only 2.5 hogsheads of oil (about 0.5 of a ton, valued at £14.25) from a whale shared with another ship. In 1759 she sailed with a company-owned consort, *Worthy Shepherd* of 170 tons, which was lost in the ice of Davis Strait. *Exeter* stood by to save the men and recover what she could from the wreck, again catching no whales.

Dixon does not say where the ships hunted in years other than 1759. He records that six whales were taken in the first season, yielding on average 10.67 tuns of oil and 56.7 cwt of bone, with value per whale of £332.55 – comparable with Hull's overall mean of £348.55. Numbers of whales caught in other successful years are not known, though from yields of oil and bone Dixon assumes that five or six were caught in both the second and the fourth years. Oil sold for £17.36 per tun in 1755, £17.00 in 1756, and £24.50 in 1758; bone sold at prices between £15.50 and £18.00 per cwt. All figures were slightly higher than those of Hull, and like Hull's, showed a sharp wartime rise.

The total value of bone and oil for the three successful seasons was £6266.82, indicating mean values per whale of between £350 and £390. *Exeter* received a bounty of £693.18 in each of the four years 1755–1758, and £686.00 in 1758, bringing her total income for the five voyages to £9739.79. No figure for total expenses is given, but assuming *Exeter*'s costs to be similar to those of Hull's *Pool* or *Berry*, that is about £1650 per year, there would remain a profit of about £1490.

This amount was achieved by a single ship operating through five seasons, of which two provided virtually no financial return beyond the bounty. Yet Dixon reports that the Exeter Whale Fishery Company issued six dividend payments to its shareholders, amounting to a mean annual return of 24.45% on their investment. Little else appears to be known about the Company, but Exeter continued to send one ship to the arctic almost every year until 1785, and two ships in each of 1786–1788. A single ship made the final arctic whaling voyage from Exeter in 1789 (Stonehouse 2014).

Barrow (1989: Appendix 4), provides facsimilies of accounts of the expenses incurred by the East Lothian and Merse Whale Fishing Company of Dunbar, Scotland, in fitting out its ship *North Star* for a first whaling voyage in 1752. Expenses including buying, fortifying and part-provisioning the ship in London amounted to over £2340. Provisioning and equipment for the arctic voyage cost just over £1500. The number of whales caught does not appear, but oil and bone together yielded £1200, to which was added the bounty of £577 17 0d. This suggests a successful season with the bounty ensuring a moderate profit on the first year's hunting.

Discussion and conclusions

The Hull Whale Fishery Company balance sheet, together with background information on the creation of the company, gives strong indications of why Hull and several other ports simultaneously took up arctic whaling in the early 1750s. In the absence of an indigenous industry from ports other than London, most of Britain's needs of whale oil and baleen had for some time been imported from Europe and America. Supplies from both sources were threatened by the impending war, and all indications pointed to the need for a more substantial British industry, based on the provincial ports. Hull was already established as a flourishing port with a considerable continental trade and access to a substantial hinterland based on the navigable rivers flowing into the Humber estuary. Significantly, the prime movers in Hull were not ship-owners and master mariners seeking business opportunities, though both would no doubt have been involved as shareholders at an early stage. The initiative appears to have come from oil and bone merchants who foresaw trade shortages and were seeking remedies that would keep their own businesses viable.

Requiring facts more than the opinions of pamphleteers, they would have had available for reference the annual returns of the few British whalers currently operating from London. They would have known that whaling ships were heavily manned and required fortification against ice. The ships demanded also costly equipment including, boats, harpoons, whale-lines and casks, and undertook long voyages into hazardous waters where risks of damage and loss were considered likely to be high. Above all they required experienced crews, which were not immediately available in Britain, and would therefore require a period of learning, during which catches were unlikely to be profitable.

The entrepreneurs would have calculated that average catches of two or three whales – all that could be expected from ships in the first few years of their new enterprise – would barely cover the costs of the voyages. Nor would the initial bounty offer of 20 shillings per ship ton be enough to cover the deficit. The balance sheet shows them to have been wise in waiting. Bounties of 20 or 30 shillings per ship ton would have resulted in substantial losses. The bounty of 40 shillings, guaranteed initially for five years from 1749, would not cushion them completely against losses, but would quite possibly be sufficient to cover their investment against four or five initial seasons of low returns. In fact, at the end of the first five-year period, the 40 shilling bounty was renewed for a further five years, continuing to cushion losses through the pioneering decade of the new industry. This allowed time for the special skills of whaling to develop among masters and crews, and for expectations of profitable catches to increase season by season.

For reasons outlined by Jackson (1972) whaling from Hull remained on a small scale until 1770, but thereafter grew and flourished, outstripping London in the early 19th century. The early voyages may well have provided

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for local markets, with any annual surplus easily shipped for ready sale in London. By the 19th century Hull had developed its own industries, plus an extensive economic hinterland of river and canal ports in the industrial midlands, which kept the much larger and more effective whaling fleet in operation. Demand was sustained until the 1840s and 1850s, when coal gas and cheap vegetable oils priced whale oil out of the market. Hull's last Arctic whaler sailed in 1869 (Credland 1995: 97).

Concerning ship size: greater burthen and more boats imply increased capacity and hunting efficiency. However, the balance sheet shows that *Leviathan*, the largest ship (initially the most expensive to buy and seasonally the most costly to re-equip and operate) was neither the most successful nor the most profitable. Though John Greenshaw caught three size whales in each of the first two seasons, only in the third season did the ship return a substantial profit. Most crippling of its expenses were the high insurance premiums, which increased dramatically in wartime: a well-founded ship of 436 tons would have made an attractive prize for privateers.

The smallest ship, *Ann Elizabeth*, was also a financial failure, cheaper to buy and maintain but unable to operate profitably on its own with a relatively inexperienced crew. *Leviathan*'s disappearance from the balance sheet at the end of 1756, and *Ann Elizabeth's* disappearance a year later suggests that either or both may have been sold, or perhaps diverted to more profitable employment in the transport service.

The two most successful ships, *Berry* and *Pool*, were nearest to Scoresby's optimal size, but one at least held a more positive advantage. *Berry*, bought as a whaler with an experienced master and crew, returned with the greatest value of products overall, and was most consistently profitable. *Pool*, which may have been a whaler in 1753, was less successful throughout. While it may be unwise to base further comparisons on the records of four years' hunting, it is clear that in all these cases the 40 shilling bounty cushioned the losses and kept the Hull company from bankruptcy. In Exeter the newly-formed company's single ship – a well-equipped whaler with experienced crew – brought immediate profit to its shareholders; indeed it brought more profit than the four operating from Hull. However, *Exeter* too would not have enabled its own company to survive without the support of the 40 shilling bounty – its sole source of income during the two seasons in which it was unable to catch whales.

This early balance sheet of the Hull Whale Fishery Company thus illustrates some of the issues encountered by a group of 18th century businessmen during the first three-and-a-half years of their venture into arctic whaling. It underlines in particular the significance of the 40 shilling bounty in underwriting their enterprise, and providing the foundation from which a major industry developed.

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