Dedication

To my family, friends and to the cherished memory of my father William (Bill), a former wartime commanding officer in the Air Sea Rescue and holder of the Bronze Medal of the Royal Humane Society, whose lifelong love for the sea and respect for her moods was instilled in me from birth.

UNIVERSITY OF SOUTHAMPTON

THE HUMANITARIAN, TECHNICAL AND POLITICAL RESPONSE TO SHIPWRECK IN THE FIRST HALF OF THE NINETEENTH CENTURY: THE 1836 INQUIRY AND ITS AFTERMATH

by

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SUBMITTED FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

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ABSTRACT

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Shipwreck in the first half of the nineteenth century had been an on-going national tragedy. It was not officially quantified until the 1850's when it was found that 1025 ships a year on average were lost, the consequent destruction of life averaged 830 persons a year, with an annual loss to the country representing some £1.5m. There had been a devastating loss to the maritime strength of Britain since the close of the Napoleonic Wars.

The response to this on-going national disaster was slow but eventually emerged principally in three areas: humanitarian, technical and political. The humanitarian driven reform came from amongst other sources by way of incentives to inventors from the Royal Humane Society, the formation and establishment of a lifeboat service and a general up-swelling of opinion by exposure to pamphlets and newspapers against the evils of shipwreck. The technical response came as inventors and builders sought to find new forms of construction in ships, lifeboats, life-saving equipment and safety equipment amongst others. Politically, the increasing use of the select committee to bring facts before the public and parliament served as the basis of much reform in nineteenth century England, the 1836 Inquiry into the causes of shipwreck, the 1839 Inquiry into the losses of timber-laden ships and the 1843 Inquiry into the causes of shipwreck being the major exposers of malpractice. The object of this thesis and the major research question is to assess the principal strengths and directions of these responses as the climate of opinion changed and reforms albeit piecemeal came about. The work begins with an outline of the situation as it affected different parts of the coast and some of the localised responses to shipwreck. Using the 1836 Inquiry as the basis for establishing the causes of the problems, itself a new datum point in maritime history as it was the instigating basis for change, the nature of shipwreck and course of reform is traced through the following two decades up until the unifying 'great' Merchant Shipping Act of 1854.

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5(ii) 29th July 1836: Mr George Bayley, surveyor of shipping for *Lloyd's Register Society.*

5(iii) 2nd August 1836: Mr John Marshall, agent of the Emigration Committee and Shipowner; Mr Charles Parnell, dockmaster at Liverpool; Captain Edward Pelham Brenton RN, officer in His Majesty's Navy.

5(iv) 4th August 1836: Mr John Pym, shipping agent at Liverpool; Arthur Willis Esq., insurance broker and underwriter at *Lloyd's*; William Henry Phillips, teacher of mathematics and navigation; Captain George William Manby, barrack master at Yarmouth.

5(v) 5th August 1836: Mr John Walker of the East India Company, in charge of charts; Mr William Bush, surveyor and engineer; Mr Henry Trengrouse, inventor and innovator of rocket-based systems of maritime rescue; Mr John George Cooper employed in the secretary's office at *Lloyd's List*; Mr George Charlton, master mariner; Sir Edward Codrington, distinguished naval officer.

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Bibliography

I Primary Sources

1. Manuscript
2. Typescript
3. British Parliamentary Papers
4. Statutes
5. Parliamentary Debates
6. Published Letters and Memoirs
7. Newspapers and Periodicals
8. Journals (concerned with maritime affairs)
9. Contemporary (and near contemporary) printed sources - books
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Chapter One

Introduction - Shipwreck amongst Britannia's vessels

1(i) British commercial maritime interests after the French Wars: On June 18th 1815 Napoleon's attempt to subdue Western Europe ended at the Battle of Waterloo. The threat of invasion by France had ended at Trafalgar in 1805 but for the British Royal Naval fleet and the mercantile transports the war effort had to be sustained up to the final defeat of the French. For nearly thirty of the forty years between 1775 and 1815 Britain had been at war: with the French from 1783 to 1815 (with the exception of 1802-1803), the Spanish from 1796 to 1802 and 1804 to 1809, and with the Americans from 1812 to 1814, many of these wars were fought at sea.

With the need to trade and supply Britain's extensive colonies and to maintain a state of war for such a period the Royal Navy and mercantile fleets had reached a peak of development by 1815. The tonnage of merchant shipping at the close of the war with France was 2.5 million tons;[1] this figure would not be surpassed for another twenty years.[2] With the exception of *Lloyd's Register of Shipping* - maintained from 1764 in the interests of insurance underwriters[3] little or no accurate record of shipping numbers was kept until the Act of 1786, that enforced the registration of shipping. This at least gave numbers and tonnages,[4] but as yet no idea was available as to the condition of ships, their sea-worthiness or the condition of their crews. The Royal Naval records such as Admiralty Papers in the Public Record Office, publications of the Navy Records Society and so forth make the

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[1] Specifically 2,478,000 tons in 1815; B.R. Mitchell, *Abstract of Historical Statistics*, Cambridge (1962) p.217. (Source: Finance Accounts PRO)

[2] R. Hope, *A New History of British Shipping*, London (1990), p.263.

[3] See: Anon., *Annals of Lloyd's Register: Being a Sketch of the Origin, Constitution and Progress of Lloyd's Register of British and Foreign Shipping*, London, (1884), p.7.

[4] 26 Geo.III. cap.60

history of fighting ships and their crews far more accessible than the early history of the merchant fleet.

The 2.5 million tons registered merchant fleet in 1815 comprised some 21,869 ships. Nearly a thousand of these had been engaged by the British armed forces to transport supplies and troops. After 1815 these were now gradually redeployed into the merchant marine with consequent loss of work and earnings for those concerned. The prolonged state of war that Britain had endured had maintained jobs and production in part of the British economy whilst it lasted. Orders for the supply of uniforms and munitions amongst many other needs of the armed forces had kept many in work during this time. The cessation of hostilities caused orders to stop abruptly.[5] There was however a short and hectic boom as exports rushed to markets previously blockaded by the enemy fleets but by 1818 recession had set in. According to J.H. Clapham:

> Great Britain, though victorious suffered acutely. Mismanagement was largely responsible for her sufferings - mismanagement of or rather complete indifference to problems of demobilisation; mismanagement of taxes (the income-tax was abandoned at the clamour of interested parties, and the interest on the huge war dept paid mainly from indirect taxes which bore heavily on the poor): mismanagement of food supplies, by the imposition of the Corn Law and so on. But suffering due to international economic dislocation could not have been avoided by management however good.[6]

The slump brought a sharp fall in freight rates and a reduction in seamen's wages, seamen in Tyne and Wear went on strike, demanding an increase in wages and a return to the manning levels in use before the French wars. During the war many foreign seamen had been taken on to maintain manning levels and continued to be employed after the war at the expense of the "Geordie" seamen. The imprisonment of the strike leaders for six months brought an end to the strike. The economic decline in the country at large caused many thousands of seamen to suffer

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[5] See for example: P. Clements, *Marc Isambard Brunel*, (1970), pp.52-54. (Brunel was made bankrupt on the cessation of orders from the government for Army Boots having made a considerable investment in machinery).

[6] J.H. Clapham, "Europe after the Great Wars 1816-1820", *Economic Journal*, Vol. 30. (1920).

unemployment and distress.[7] Closure of works and factories was commonplace, added to which there were thousands of disbanded soldiers and sailors moving from place to place in search of work. The government had paid partly for the war with borrowed money, the national debt had multiplied ten times and interest rates had to be paid on monies which had been used to perpetuate the war. After 1815 the peace for many meant unemployment and high prices. This situation continued until the 1820's when slowly trade began to revive. World trade had contracted and world shipping of which Britain had by far the largest fleet had been in temporary decline.

Despite this grim scenario Britain was left as the strongest and most powerful country in the world. The British colonial empire was larger and more widespread than that of any other country; she had the largest navy in the world, and more merchant ships than any other country. These merchant ships carried more of the world's trade than the ships of any other country. British industry was the most developed in the world.

Maritime world trade at that time consisted chiefly of commodities - timber, cotton, coal, tobacco, grain etc. The emigrant trade had not really taken off but had begun in a small way by the 1820's with almost 98,000 people leaving the shores of the United Kingdom for a life abroad in the period 1815-1819. This was to increase to over one and a half million by 1850-1854,[8] a figure for emigration in excess of the rate at which population was growing. An Act of 1814 allowed the Post Office to use for the carriage of mail either men-of-war or merchant ships.[9]

Britain had maintained a policy of protectionism as far as the carrying of cargoes to her shores and colonies were concerned. Since 1651 the Navigation Acts had ensured a monopoly of trade on the high seas for British merchantmen. This mercantile policy slowly gave way to new *laissez-faire* ideas of government abstention from interference in commerce that came to dominate economic and political thought towards the middle of the nineteenth century. The Navigation

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[7]R. Hope, *op. cit.*, p.263.

[8]During which time the foundering emigrant ship became a classic theme of Victorian disaster. See Appendix A, also T. Coleman's *Passage to America*, Ch.8, "Washed away; Drowned Altogether", London (1972), p.119.

[9] 54 Geo III. cap.169 Also see R. Hope, *op. cit.*, p.247.

Laws demanded a predominant British involvement in the transportation of goods either by coastal trade or by export. Amongst other things:

> That no goods could be carried by coastal shipping from one part of Great Britain to another, or exported from Great Britain to any British possession in Asia, Africa or America (with one or two exceptions in the case of India), or carried from one British possession in Asia, Africa or America to another in any but British ships; that no foreign ships could trade with any British possession unless specially authorised to do so by Order-in-Council; that various consumption goods of European origin could only be imported into Great Britain in British ships or in ships of the country of origin, or in ships of the country from which they were normally imported; that no produce of Asia, Africa or America could be imported for consumption into Great Britain from Europe in any ships at all, and that it could only be imported from any other place in British ships or in ships of that country of origin.[10]

The Acts were extreme, even to the detail of appointing crews:

> Every British registered ship is required to be navigated in every part of the world, by a master who is a British subject, and by a crew whereof three-fourths, at least are British seamen; and if such ship be employed in a coasting voyage from one part of the United Kingdom to another, or in a voyage between the United Kingdom and the islands of Guernsey, Jersey, Alderney, Sark or Man, or from one of said islands to another of them, or from one part of either of them to another of the same, or be employed in fishing on the coasts of the United Kingdom, or any of the said islands, then the whole of the crew shall be British seamen.[11]

It had lead to trouble with the Dutch, Spanish, French and the American colonists. Protectionism had had its advocates but by the early nineteenth century changes in world trade patterns had created a disadvantageous situation for many people and reciprocity policy had eroded much of the former impact.[12]

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[10]HMSO, *Seafarers and their Ships*, London (1955), p.14.

[11]Navigation Act, 3 & 4 Will IV. cap.54 (quoted in R.A. Dana, *The Seaman's Manual*, (1841), p.194.)

[12]R. Hope, *op. cit.*, p.282.

The British not being compelled to compete outside their familiar maritime environment in which they had been sheltered by protectionist legislation lost the edge to new ideas emanating from North America. Shipbuilding in North America had undergone accelerated development due to industrialisation, and pressure on world markets had created a basis for rapid advance in marine technology.[13] It developed quickly, impelled by new ideas springing from new requirements.[14]

In this context the British merchant fleet after the Napoleonic Wars must be considered. It had reached 2.5 million tons by 1815 and subsequent demand for services did not induce any increase until *circa* 1840, at which time the growth of the British shipping tonnage began a steady upward trend, markedly steep by the middle of the century. Sailing vessels predominated, but even from the early part of the century onwards steam vessels gradually made inroads into the services previously dominated by sail.[15]

The physical condition of the vessels that were in existence at 1815 is of great interest for this study. Many of them were of course old and had been well used. It may be assumed that many would have been used in a fairly run-down condition, or at least had been much repaired. Of all the vessels in the merchant fleet the condition of the East Indiamen was among the best. The prestige of the Company's service which was as highly thought of as that of the Royal Navy left in shadow other vessels of the merchant marine. Indeed many regarded the East India service as a *corps d'elite*, far superior to the Royal Navy.[16]The life of these vessels was thought to be six voyages before they were in need of partial rebuild. At which point copper and wood sheathing were stripped off and the sides were "doubled" by a layer of oak plank some three inches thick, from above the waterline down to two feet below the heads of the floor timbers. Extra iron-riders, pillars and knees were

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[13] Between 1820 and 1860 remarkable design changes had led to increased tonnage and efficiency in North America. The first American or Baltimore clipper was the *Ann McKim* launched in 1832. R.M. Robertson & G.M. Walton, *History of the American Economy*, 4th Ed., New York (1979), p.186.

[14]T. Rigman & R. Brodefors, *The Commercial History of Shipping*, Goteborg (1983), p.20.

[15]See Appendix B, "The growth of merchant shipping during the first half of the nineteenth century"

fitted to strengthen the structure, and all this to make the vessel fit for two more voyages.[17]Formal surveys were carried out on the Company's vessels much as Royal Naval practice:

> Mr Snodgrass, the surveyor for the East India Company, did much to point out the use of iron to strengthen the inside of the frames and beam knees. His company has been driven to such courses owing to the shortage of timber for knees.... .[18]

Such care and attention to detail however was far from the case throughout the majority of the vessels in the merchant fleet at the beginning of the century.

Despite the Royal Navy's apparent resources manpower at all levels throughout the service remained short during the war. It took several years to train a good seaman and in time of war both the Royal Navy and merchant shipowners competed for his services. Competition for services to vessels ashore was equally rife. In Spencer Childers' *A Mariner of England* William Richardson describes an 18 gun brig named *Dispatch:*

> ....building by contract at Mr Simmond's yard near Falmouth, and as the contractor was doubtful of getting her ready for launching at the time appointed for want of men he applied to our captain, with whom he was acquainted for loan of our carpenters crew....[19]

Against a background of military, industrial and economic might on a world scale the loss of great numbers of the merchant fleet, its ships and men wrought great harm on the nation, for seafaring involved a far greater proportion of the population than today. In 1810 the merchant navy gave work to nearly 165,000 seamen,[20] whilst the Royal Navy had 142,000 men.[21] If one were to add the shore

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[16] See Sir Evan Cotton, *East Indiamen, The East India Company's Maritime Service*, Batchworth, London (1949), p.22.

[17]Sir W. Abell, *The Shipwright's Trade*, (1948), p.101.

[18]*Ibid.*, p.106.

[19]S. Childers, *A Mariner of England*, (1908), p.203.

[20]Sir W. Abell, *op. cit.*, p.100.

[21]C. Derrick, *Memoirs of the rise and progress of the Royal Navy*, (1806). Also, see PRO Adm 7/567. PP 5th April 1804; cited in C. Lloyd, *The British Seaman*, (1968), p.289.

based industries, the dockyards and the shipyards then well over a half million men had a direct interest in seafaring;[22] with families included then well over a million, and that figure does not take into account those involved in smaller non-registered boats such as coastal fishing. In a population of just over ten million persons in 1811[23] at least ten percent of the population had a direct concern with the seafaring trades. It is no surprise that against a background such as this, death and loss from shipwreck touched the concern of many when its occurrence began to increase dramatically during this period.

As the volume of trade and emigration slowly picked up and pressure on the country's limited shipping resources increased during the eighteen twenties and thirties so the problems of shortage in an essential service began to arise. Demand for ships that would carry ever larger and more profitable cargoes caused an eventual upsurge in shipbuilding.[24] In this developing situation of unprecedented demand there were effectively no safety regulations:

> ....any sufficiently powerful and persuasive merchant was free to insist that cargo space should be first priority and that seaworthiness should be left to look after itself. Safety took second place to cargo space and speed, and the crews' safety and efficiency often took third place to both other considerations.....[25]

In the years following the French Wars shipwrecks significantly increased. In 1816, 1817 and 1818 respectively, 343, 362 and 409 - a total of 1114 British ships, were either stranded or wrecked, and 2289 seamen were lost. In addition the numbers of vessels either missing or lost in those same years were 19, 40 and 30

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[22]See Sarah Palmer, *Politics, Shipping and the repeal of the Navigation Laws*, (1990) p.11; for maritime related occupations by 1841, taken from the 1841 Census of Population. See also BPP 1844 (587) XXVII.1., *Abstract Return Pursuant to Act for taking Account of Population of Great Britain, Occupation Abstract, Pt. I, England and Wales 1841.*

[23]Mitchell, *op.cit.*, in the 1811 census (May 26-27th): 10,164,000 persons in England and Wales. Also see *Comparative statement of population of Counties of Great Britain, 1801 and 1811.* BPP 1812 (12).

[24] It was not equalled in its intensity until the surge from 1862 to 1865. See Mitchell, *op. cit*, pp.217-218.

[25]*Seafarers and their Ships*, *op. cit.*, p.15.

respectively, a total of 89 ships.[26] By the years 1833, 1834 and 1835 these losses were 595, 454 and 524, a total of 1573 British ships that were stranded or wrecked. The numbers of vessels reported missing or lost for those same years were 56, 43 and 30 respectively, a total of some 129 ships.[27] The East India Company had lost only 91 ships in 98 years from 1702 until 1800, but during the first eighteen years of the nineteenth century it lost 33: evidence of how standards and circumstances had fallen even in a company famous for its well-found ships and wealth.[28]

By 1835 at the annual dinner of the Royal Humane Society Captain Heyland referred to the great loss of life at sea caused by shipmasters who were: "entirely ignorant of the use of the sextant or chronometer and who did not use the best instruments for taking depth soundings" and Parliament was petitioned to enquire into the causes.[29] The following year the Government appointed a Select Committee of the House of Commons "To enquire into the causes of shipwrecks, with a view to ascertain whether such improvements might not be made in the construction, equipment and navigation of merchant vessels as would greatly diminish the annual loss of life and property at sea.....".[30]

1(ii) An ill wind: The period under scrutiny spans a time of twenty years or so either side of the 1836 Shipwreck Report. In the interests of context therefore it may be revealing at this stage to look at weather patterns and the occurrence of storms in the first half of the nineteenth century. Shipwreck can occur in numerous ways but more often than not it is associated directly with storms, not necessarily a threat in itself, for ships could be built to withstand a storm, but a great exposer of any inherent weaknesses in the ship and the crew. The wrecks chart of 1855[31]

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[26]*Select Committee appointed to Inquire into the Causes of Shipwrecks*, BPP 1836 (567) XVII, Rep., p.iii, 1.

[27]*Ibid.*

[28]*Seafarers and their ships, op. cit.*, p.15.

[29]R. Hope, *op. cit.*, p.279.

[30]*S.C. Shipwrecks* (1836).

[31]*Wreck Chart of the British Isles, 1855*, BPP 1856 (2024-1) LI. 395; this is based upon Board of Trade returns during 1855 (between 1st January and the 31st December), and is therefore only an

shows the greatest concentrations of shipwrecks around the British Isles to be along the English North Sea coasts: the counties of Northumberland, Yorkshire, Lincolnshire, Norfolk, Suffolk and Essex. In 1850 for example there was a total of 681 wrecks[32] around the coast of the United Kingdom (including Ireland) - of that total 240 were on the north-east coast. The predominance of heavy commercial traffic along this coast, especially poorly manoeuvrable colliers that would have had to have anchored or run with the wind,[33] rather than attempt to beat into it, combined with one of the most notorious areas of storminess, experiencing some of the most frequent storm tracks of the northern hemisphere was a recipe for disaster on a grand scale.

Whilst the prevailing wind along the east coast is offshore the greatest danger exists for vessels along this coast in the situation of an easterly to north-easterly gale. Heavy sailing vessels attempting to make their way northward either had to turn and run with the wind, eventually to blow into some sheltered harbour or anchorage, or heave-to and anchor in an attempt to ride out the storm. This depended on the anchor cable and ground tackle holding sufficiently well to keep the ship on station. The majority of heavy sailing vessels could not sail all that close to the wind and in the case for example of a broken anchor cable or excessive leeway eastward shipwreck may soon have ensued.

According to Lamb's catalogue and descriptions of great storms reported in the North Sea and neighbouring regions,[34] during this period there were fifteen

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indication of circumstances that may have occurred in previous years. It is nevertheless significant as it represents the first quantifiable chart evidence of shipwreck.

[32]*Admiralty Register of Wrecks and other Casualties on Shores of UK, 1850 and 1851*, BPP 1852 (247) XLIX.503.

[33]See *Quarterly Review*, 104, July-October 1858, p.195. Also in R.H. Dana, *The Seaman's Friend*, (1845) mention is made of a "Flying Moor" or "Running Moor", not strictly in the context of a merchantman, but in describing anchoring to prevent further drift in a sea.

[34]H.H. Lamb, *Historical Storms of the North Sea, British Isles and N.W.Europe*, Cambridge (1991), for much of the information contained in: i - xv: Part II, pp.37-194, (specifically pp.116-135).

instances of exceptional storms of great wind-speed and coverage and infinitely more gales of lesser severity.[35]

(i) 12th-16th January 1822: mainly affecting Scotland and all Scottish coasts, by the night of 12-13th and on the 15th - the south-western coasts of England - by implication there must have been gales at various times in nearly every part of the North Sea, the Channel as well as the North Atlantic. Wind-speeds over the North Sea according to Lamb are said to have approached 100 knots from a westerly direction.

(ii) 11th March 1822: mainly affecting western Norway coasts and Denmark, Lamb suggests,[36] according to the reports from the lighthouse keeper at Skagen and ships in the vicinity that winds up to current Beaufort force ten had prevailed there since the 6th March. Despite the day beginning with a beautiful clear dawn and almost no cloud and no wind the wind began to rise rapidly after 9am. Fishing boats that had gone out despite a low barometer reading were all lost.

(iii) 2nd-5th February 1825: affected the whole of the North Sea area, the entire winter of 1824-1825 had been stormy but the peak was reached on the 2nd - 5th of February with 120 knot winds gusting locally up to 140 knots in north-east Scotland on the 1st February.[37]

(iv) 3rd-4th August 1829: affected north-east and central Scotland. Gales also in eastern England and all waters off Scotland's and England's north and east coasts.[38] The storm was noted chiefly for the accompanying rainfall and a "furious

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[35]It was not until the end of the period in question that the first state meteorological services were founded - initially the department of meteorology in the British Board of Trade, in 1855 under Admiral Fitzroy. These fifteen reports depend on many local sources e.g.: 1838 storm reports originated from the RNLI's Grace Darling museum at Bamburgh, Northumberland.

[36]Lamb, *op. cit.*, p.116.

[37]Documented in an article: "Zur grossen Sturmflut vom Februar 1825" by W. Schroder in the journal *Acta Hydrophysica*, Band XVII (Heft 1), Berlin: Institut fur Physikalische Hydrographie der Deutschen Akademie der Wissenschaften zu Berlin, Akademie Verlag, (1972); quoted in Lamb, *op. cit.*

[38]Storm reported by Sir Thomas. D. Lauder, (1830), *An Account of the Great Floods of August 1829 in the province of Moray and adjoining districts*, 3rd Ed., (1873). Elgin. M'Gillivray 350pp. Also, in *Blackwoods Magazine* issue for August 1830; quoted in Lamb *op. cit.*

north-east wind" which caused shipwrecks and the loss of Garmouth harbour (near Elgin).

(v) 14th October 1829: again the northern North Sea, many ships reported lost in a north-easterly and northerly gale.

(vi) 25th November 1829: affecting the coast of Scotland and all the North Sea coast of Britain on the 24th and 25th. Many ships reported wrecked. It is recorded[39] that a storm in November (thought to be this one by the weather map inferences) undermined the tower of the Spurn Head lighthouse.

(vii) 18th November 1835: a north-westerly gale reported at Aberdeen and in London a strong westerly wind.

(viii) 23rd and 27-29th November 1836: affecting the Channel, Southern England and the North Sea. A heavy westerly gale on the 23rd and from the 27th to the 29th continued heavy gales from the West. According to a collection of "early Greenwich Observations 1807-1840" in the library of the Royal Greenwich Observatory (and cited in Brazell's *London Weather* (1968)[40]) the gale on the 29th un-roofed houses and blew down trees. Winds in southern England may have approached 100 knots.

(ix) Winter 1837-38: affecting Orkney and northern North Sea, a prolonged north-easterly gale in Orkney that caused the sea to scour the beach laying bare an ancient forest floor which had been submerged and buried for some thousands of years.[41]

(x) 7th September 1838: northern North Sea, Northumberland and Scottish coasts. This storm made famous by the wreck of the passenger steam ship SS *Forfarshire* on the Faroe Islands off Northumberland and the rescue of nine of the passengers by the Farnes lightkeeper and his 23 year old daughter Grace Darling. (A factor in the eventual change of fortune brought about by the Duke of Northumberland in the affairs of the Shipwreck Institution that was to lead to the

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[39]G. De Boer, *A History of the Spurn Lighthouses*, York (East Yorkshire Local History Society) 72pp; quoted in Lamb *op. cit.*

[40]J. H. Brazell, *London Weather*, HMSO London (1968), 270pp.

[41]Reported by W. Trail, "On submarine forests and other remains of indigenous woods in Orkney", *Transactions of the Botanical Society of Edinburgh*, 9, (1868), pp.146-154.

founding of the Royal National Lifeboat Institution[42]) The observational coverage of storms in the 1830's according to Lamb[43] is not as satisfactory as earlier periods, however it would appear that a northerly or north-easterly storm of as much as 80 knots was raging at the time.

(xi) 6th-7th January 1839: affecting the Atlantic fringe of the British Isles especially western and northern Ireland. Also Scotland, north-west England and north Wales. This is considered the severest storm in Ireland of the whole record. One of the deepest depressions ever recorded so near the British Isles. The newly built Menai Bridge linking the island of Anglesey to North Wales was damaged. Damage to shipping and port structures in Limerick was estimated at £30,000, all the ships in Portaferry, Co. Down in north-west Ireland were driven from their moorings on to the shore. Many ships were wrecked at Lough Swilly, Co. Donegal in the extreme north of Ireland.[44] Winds reached as much as 100 knots.

(xii) 20th-21st October 1846: affecting Ireland, probably west and south coasts, the English Channel and on the 21st south-west England.

(xiii) 10th January 1849: a storm affecting the north-east coasts of Scotland. An easterly gale that washed away the heavy harbour defences at Peterhead in north-east Aberdeenshire.

(xiv) 28th December 1849: affecting North Sea coast and much of the western North Sea. A great storm that tore a 400 metre breach across the neck of the peninsular connecting Spurn Head at the mouth of the Humber. The gale was reported by the Spurn Head lighthouse keeper to be north-northwest with an exceptionally high tide.

(xv) 1st January 1855: affecting the southern half of the North Sea and adjacent lands. A great north-westerly storm on New Years day with wind speeds reaching about 100 knots, and over Norfolk and Suffolk stronger than that.

Although just out of the period in question the storm of 25th-27th October 1859 is worth mentioning - the "Royal Charter Storm". At this time no less than

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[42]See O. Warner, *The Lifeboat Service*, London (1974), pp.16-17.

[43]Lamb, *op. cit.*, p.131.

[44]See L. Shields, and D. Fitzgerald, "The Night of the Big Wind in Ireland, 6th-7th January 1839", *Irish Geography*, 22(1), (1989), pp.31-43.

195 ships including the iron-clad ship SS *Royal Charter* which founded off the north coast of Anglesey, having sailed around the world, with the loss of 459 lives, sank or were wrecked around the British coast in just one day. On the other side of the same depression there occurred the destruction of the pier at Brighton.[45]If any aspect of a ship or her crew are to be found wanting then it is especially at a time of storm that fault will become evident and fatality ensue. Ships were built to withstand almost any weather and had to survive all kinds of storms; many were driven onto a lee-shore by a storm, and were destroyed by rocks, such was the case of the SS *Royal Charter*. She had anchored (with lowered sails and steam shut off) off the north coast of Anglesey and driven on the rocks by a north-easterly gale, while other vessels under sail nearby were able to stand off to westward and largely escape damage.[46]

The case of SS *Forfarshire*, was again a failure of equipment and human judgement associated with a storm. She was built in 1834, an example of the early steamers with auxiliary sail of about 400 tons, not a particularly big vessel. The boilers and engine could produce around 190 horsepower to the two paddlewheels. According to D.A.Wheeler,[47] she had left Hull on schedule at 18.30 on the 5th September 1838 for Dundee. Northbound along the coast, with a south-easterly breeze and showery weather, she was off Flamborough Head after ten hours when one of the boilers was found to be leaking despite repairs which had been done before departure, and there was some loss of power. The ship nevertheless reached the Berwick area by dusk on the 6th. The weather had deteriorated with a stiff breeze and the sea getting up, but wind and tide still favoured the ships progress and

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[45]These incidents led to the introduction of gale warnings by the Meteorological Office.

[46]See Alexander Mckee (1988), *The Golden Wreck "The Tragedy of the Royal Charter"*. Also, "The Wrecking of the Royal Charter", *Illustrated London News* (1859). See also R. Fitzroy, (1860),"Notice of the *Royal Charter* Storm in October 1859", *Proceedings of the Royal Society*, X, pp.561-567, London. Also "Remarks on the late storms of October 25th-26th and Nov 1st 1859", Proceedings of the Royal Society, X, pp.222-224, London (1860).

[47] Quoted from information supplied by D.A. Wheeler, of Sunderland Polytechnic and Calderwood - curator of the RNLI's Grace Darling Museum at Bamburgh, Northumberland (Lamb *op. cit*,. p.131). See also, *Berwick Advertiser*, 15th Sept 1838; *The Times* 13th September 1838 and the *Morning Chronicle* of the 11th September 1838.

there seemed to have been no anxiety. But soon the wind changed sharply to north-northeast, of gale force, and the leak from the boiler worsened. At 01.00hrs on the 7th off St. Abb's head the engine stopped altogether. Sails were raised, but when the tide turned both wind and current carried the awkward hulk swiftly south till she struck the rocks of the outer Farnes at Big Harcar, the landward end of a reef marked by the lighthouse further to sea.

The survivors were taken off by a passing sloop from Montrose and landed safely at Shields, near Tynemouth. Another vessel the *Diana* of Newcastle, was also driven onto the rocks by the same storm, but is believed to have got off later. Nobody survived in the after section of the ship when it broke adrift behind the paddles, but those left onboard the bow section clambered onto a rock which was about a hundred yards wide and were mostly saved when daylight came. This sad account illuminates the possibility of disaster given the vulnerability of the vessel and the rapid, unexpected change of wind and weather that so many vessels befell at this time. Shipwreck, brought about by either sailing ability encumbered by carrying too much weight or mechanical ability subject to failure in design associated with weather deterioration was particularly evident at this time.

Being at the mercy of storms and gales was not by far the only cause of loss of life and shipwreck. Disease and individual accident amongst seamen (accidents often brought about drunkenness) accounted for far greater numbers of individual deaths than shipwreck.[48] Nevertheless the shipwreck toll was high and rising rapidly during the period when the seaways were re-opened after the Napoleonic Wars. Other contributors to shipwreck included fire, leaks and grounding. Fire on a wooden ship could soon prove fatal, the existence of flames could not be avoided, they were needed for cooking, lighting and sometimes heating. Moreover instances of lightning striking ships were frequent and the result was often fire, the *Quarterly Review* reports that between the years 1820 and 1858 a total of 33 merchant ships varying from 300 to 1000 tons were completely destroyed by lightning, and 45 greatly damaged.[49] Leaks were inevitable in wooden ships of the type of construction that existed in the first half of the nineteenth century, for while

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[48] M. Lewis, *Social History of the Navy*, (1960), p.442.

[49] *Quarterly Review*, 104, July-Aug 1858, p.179.

advances had been made in strength and the problem of back bowing resolved with Sir Robert Sebbings's system of construction[50] the essential technique as far as the skin was concerned consisted of wooden planks over frames held in place by a combination of metal bolts and wooden treenails, finally sealed by caulking from the outside with oakum and pitch. In time the working of the timbers gave rise to seepage and bilge water (bilge water to a limited extent was a desirable condition as it ensured that the hull timbers did not dry out but remained swelled and sealed). Leaks due to rotten or worm infested timbers or perhaps impact damaged sections of the hull caused by collision at sea were another matter. Grounding, the most common cause of which was navigational error was another reason for frequent shipwreck. Although not always disastrous - for vessels could use their boats to lay out kedge and stream anchors into deeper water and haul the ship off by means of the capstan winch - it often resulted in tragedy if the circumstances of wind and tide were not favourable.

Whatever the circumstance, however seemingly trivial, it was magnified many times in the context of storm and tempest. However the problem was not so much with shipwreck from what one might term "natural causes"; it was the human factor that far outweighed the physical. In 1833 for instance, out of some 800 shipwrecks that occurred it would appear that not more than 200-250 at most could have been fairly ascribed to natural causes, the remaining 550 to 600 shipwrecks were according to the *Edinburgh Review* "wholly owing to the absurd and vicious classification of our shipping; and to the ignorance, incapacity and carelessness of the masters".[51]

1(iii) Early Nineteenth century perception of shipwreck: Some of the most difficult qualities to judge in history must be those of attitude and perception. These

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[50] Sir Robert Seppings's system may have been the latest technique in 1811, but most ships of the day had been built with earlier methods and it did not receive widespread acclaim until after the war. Ship design in Britain remained essentially conservative until well after the first two decades of the nineteenth century. See Brian Lavery, *Nelson's Navy*, London (1989), Pt.III, p.66, p.43.

[51] For this criticism of *Lloyd's* classification and the absurdities of the system see *Edinburgh Review*, LX, (1834-35), p.353.

are not quantifiable qualities and understanding the fears in the minds of the day and their attitude toward sea travel is not an easy task. Indeed an article by T.R.S. Boase - "Shipwrecks in English Romantic Painting" in which he considered the social and intellectual context of this kind of image demonstrates why it should have seized the imaginations of its contemporary audience in a way the modern day enquirer could never approach, because sea travel was then often a perilous undertaking, with constant risk of shipwreck.[52] Early nineteenth century perception of shipwreck was one of apprehension and horror, consequently works of art as Turner's "Shipwreck" (1805) and the re-publication of William Falconer's epic poem "The Shipwreck" in 1804 would have had a far greater and different significance to early nineteenth century contemporary understanding than some modern scholars might give credit.[53] Early nineteenth century perception of shipwreck for the most part must have relied to a great extent upon the literature and the art of the time, as well as reports of the newspapers and seamen's tales in influencing attitudes. The work of the Royal Humane Society was well publicised, the instances of shipwreck were recorded in *Lloyd's List* and subsequently reported in *The Times* etc., pamphlets such as Sir William Hillary's "Appeal to the nation.... regarding the formation of a National Institution for the Preservation of Lives and Property from Shipwreck" were distributed; and in such works as Sir John Graham Dalyell's *Shipwrecks and Disasters at Sea*[54] and Cyrus Redding's *A History of Shipwrecks and Disasters at Sea*[55] the reading public were at least well informed of the perils of the deep. The perception was heightened by reports of the classic

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[52]*Journal of the Warburg and Courtauld Institutes*, Vol.XXII, (1959), pp. 332-346.

[53]See Barry Venning's "A Macabre Connoisseurship; Turner, Byron and the apprehension of shipwreck subjects in early nineteenth-century England", *Art History*, Vol.8, No.3, September 1985.

[54]Sir John Graham Dalyell, bart (1775-1851) wrote: *Shipwrecks and Disasters at sea; or historical narratives of the most noted calamities and providential deliverances which have resulted from maritime enterprise, with a sketch of various expedients for preserving the lives of mariners.* 3 Vols, Edinburgh and London. (1812), Printed by George Ramsey & Co. Ltd. (No.5323, Nineteenth Century Microfiche Collection, Hartley Library)

[55]Cyrus Redding, (1785-1870) wrote *A History of Shipwrecks and Disasters at Sea, from the most authentic sources*, in four volumes between 1833 and 1835. Whittaker, Treacher and Co. Ave Maria Lane, London. (No.5321, 19th Century Microfiche Collection, Hartley Library)

shipwrecks of the time, the loss of the *Halsewell* (Dorsetshire coast, January 6th 1786, lives lost 166); the *Earl of Abergavenny* (off Portland, February 5th 1805, lives lost 247); the *Kent* (Bay of Biscay, March 1st 1825, lives lost 81); the *Rothesay Castle* (Welsh coast, August 17th 1831, lives lost 130); the *Forfarshire* (Northumberland coast, 7th September 1838); the *Reliance* (English Channel,12th November 1842); *Ocean Monarch* (coast of N.Wales, August 24th 1848, lives lost 178); the *Amazon* (Bay of Biscay, June 4th 1852, lives lost 102); the *Royal Charter* (coast of Anglesea, 26th October 1859, lives lost 459) to name but a few of the appalling shipwrecks in the period that received widespread publicity.

At a time when ships relied almost entirely on windpower, rescue services were undeveloped or non-existent, the lifeboat being in its infancy, and many parts of the world were uncharted, shipwreck would have been commonplace enough. It had long formed the basis of much of English fiction since Daniel Defoe's *Robinson Crusoe* (1719) and Jonathan Swift's *Gulliver's Travels* (1726), both written by landsmen. The public were well aware of the perils and dangers of the sea, their perception often being shaped by stories such as these. Indeed English fiction in general at this time was very much in tune with the idea of the English romance with the sea and water metaphors run in a constant thread through the fabric of Victorian prose as well as poetry. According to Walter Houghton[56] the defining character of the age is summed up as being one of transition, destruction and reconstruction, and doubt in the minds of the populace brought about by the phenomenal rate of change. It gave rise to doubts concerning the nature of man, society and the universe against which there was an evangelical and puritan revival coupled with industrialisation on a scale never before witnessed. It is not surprising therefore that Houghton identifies an "overbalance" of commercial spirit endemic of the age[57] in which the headlong race for riches and wealth had little regard for lesser mortals along the way. In this context and against this sort of background it might be argued that incidence of shipwreck as far as shipowners and maritime

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[56]W.E. Houghton, *The Victorian Frame of Mind*, London (1957).

[57]*Ibid.*, he states that the best revelation of this commercial spirit in Victorian society is to be found in three novels of George Elliot's: *The Mill on the Floss* (1860), *Felix Holt* (1866), and especially *Middlemarch* (1872), Ch. 8, p.183.

entrepreneurs were concerned, the danger to life and property, may have been of little consequence so long as it did not interfere with or too seriously damage their commercial interests in the pursuit of profit.

All of this has to be seen in the context of attitudes to other contemporary labour practices of the early nineteenth century, which were for the most part profit oriented with little or no regard for working class lives and welfare.[58] At a time when women and children were employed in factories[59] and were going underground in the coalmines and Royal Navy offenders could be flogged to death, the lot of the merchant seaman with its own particular dangers and hazards was equally as harsh. If the dangers of the deep, the spartan conditions aboard ship and the constant danger of shipwreck were not enough to "harrow up the soul",[60] then the reception ashore must surely qualify them as in need of some sort of remedial and humanitarian acts of reform. An article in the *Original* for 1835 reads:

> ....There is no class of men who meet with such treatment from their fellow creatures as sailors. After suffering the hardships of the sea, and toiling with unconquerable labour, they are beset on their return from each voyage by the most villainous and the most profligate of species, for the purpose of robbing them of their hard earned wages; whilst those who should step forward to protect them, leave them to their fate, or even hold that they are capable of nothing better. When a vessel arrives from a long voyage, the crimps or

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[58]There were of course many notable exceptions, Robert Owen recognised that even parliamentary decisions affecting social and economic change contained an important truth: given the vote and the secret ballot, it did not necessarily follow that the standard of living or the quality of life of the working classes would improve. (See J. Butt & I.F. Clark *The Victorians and Social Protest*, (1973), p.13.) This is the gist of part of the Memorial of Robert Owen ("Late of New Lanark") to the Right Honorable the Lords of Her Majesty's Treasury, presented in January 1858., from *A Supplementary Appendix to the First Volume of the Life of Robert Owen*, Vol.IA (1858), XXI-XXII.

[59]Part of a famous article at the time denouncing factory conditions reads: "....Thousands of our fellow creatures....both male and female...are at this moment existing in a state of slavery, more horrid than the victims of that hellish system "colonial slavery"....", R. Oastler, "Yorkshire Slavery", *Leeds Mercury*, 16th October 1830.

[60]William Shakespeare, quoted in a letter to the *Gentleman's Magazine*, February 1802, to describe the reaction to shipwreck due to a sudden spate of storms at that time. *Gentleman's Magazine*, February 1802, Vol.II, Pt.72, p.131.

> keepers of sailors' lodging houses are on the alert to get as many of the crew into their power as possible. Boats are sent to fetch men ashore, and the watermen receive a fee from each crimp for every sailor they bring. The sailors leave the vessel, often I believe half drunk, without money and with nothing but their chest upon which the crimps advance them money till they receive their wages. Every temptation is put their way....[61]

Until the Merchant Shipping Act of 1854, reform was to come slowly and piecemeal; largely through the agency of human sentiment and localised individual initiatives, the work of churchmen and sympathetic philanthropists.

J.M.W. Turner's "The Shipwreck" reached a wide audience by virtue of his namesake Charles Turner making a large mezzotint of the composition at his own expense - "the first engraving ever presented to the public from any of William Turner's pictures".[62] J.M.W. Turner did as much as anyone of his time to make people visually aware of the facts of shipwreck.[63] The critic and social theorist John Ruskin wrote of him in *Harbours of England:*

> ....I am perfectly certain that Turner had seen a shipwreck, and moreover one of that horrible kind - a ship dashed to pieces in deep water at the foot of an inaccessible cliff. Having seen this, I perceive also that the image of it could not be effaced from his mind. It taught him two great facts, which he never afterwards forgot; namely, that both ships and sea were things that broke to pieces. He had.... heard what a storm gust sounded like that had taken up with it, in its swirl of a moment, the last breaths of a ships crew. He never forgot either the sight or the sound....[64]

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[61] *Original*, (1835), pp.211-212 and pp.218-221.

[62]A. Whitman, *Charles Turner*, London (1907), p.268 ; in which Whitman reproduces the prospectus in its entirety. Quoted in Venning *op.cit.*

[63]His picture "Life-boat and Manby Rocket Apparatus Going to a Stranded Vessel Making a Signal of Distress" (1827), was very much illustrative of the latest techniques in early nineteenth century sea rescue.

[64]J. Ruskin, *Harbours of England*. His first work *Modern Painters* (5 Vols. between 1843-1860), began as a defence of J.M.W. Turner holding that art is a "universal language" based on national and individualistic integrity and morality.

According to Venning,[65] Lord Byron was the most famous shipwreck connoisseur "a voracious reader of shipwreck narratives", and that Byron's verses about shipwreck would therefore have had a compelling familiarity due to the perceived detail - "presenting the terrors of the scene in the most direct and comprehensible manner". Charles Dickens in *David Copperfield*[66] leaves an account of a shipwreck on Yarmouth Beach, based upon the actual event of the destruction of the brig *Hammond* in 1829.

> ....A wreck! Close by!....Numbers of people were there before me, all running in one direction, to the beach....One mast was broken short off, six or eight feet from the deck, and lay over the side, entangled in a maze of sail and rigging... The second mast was yet standing, with rags of rent sail, and a wild confusion of broken cordage flapping to and fro...and then she lifted in and struck again...as she sprung wildly over and turned towards the sea, the bell rang; and its sound, the death knell of those unhappy men, was borne towards us on the wind....the lifeboat had been bravely manned an hour ago and we could do nothing...Another cry arose on shore; and looking to the wreck, we saw the cruel sail, with blow on blow, beat off the lower of the two men, and fly up in triumph round the active figure left alone upon the mast...The wreck was breaking up...Ham watched the sea...the rope was made fast round his body...and now he made for the wreck...The distance was nothing, but the power of the sea and the wind made the strife deadly...They drew him to my very feet...insensible...dead....

Again in *Bleak House,*[67] Dickens leaves a vivid perception of the condition of fog as it would have only too frequently pervaded the smoky air around coal burning industrial London adding to the potential of shipwreck due to collision at sea in the approaches to the River Thames.

> ....Fog everywhere. Fog up the river, where it flows among the green aits and meadows. Fog down the river, where it rolls defiled among the tiers of

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[65]Venning, *op. cit.*, p.308.

[66]C. Dickens, *The personal history of David Copperfield,* (written 1857) London (1971), Ch.LV "Tempest", pp.791-795.

[67]C. Dickens, *Bleak House*, (written 1853) London (1971), Ch.I "In Chancery", p.1.

> shipping, and the waterside pollutions of a great (and dirty) city. Fog on the Essex marshes, fog on the Kentish heights. Fog creeping into the cabooses of the collier brigs; fog lying out on the yards, and hovering in the rigging of great ships; fog drooping on the gunwales of barges and small boats....

Later in the century Hopkins' poem *The Wreck of the Deutschland*[68] according to Behrman "uses the circumstance of nautical disaster to exemplify the majesty and wisdom of God, and the sea represents both the suffering of mankind and the source of his ultimate redemption".[69] She sees the particular circumstance of Victorian England as an island nation and dependent upon the sea for its livelihood and commerce giving rise at this time to a special significance, indeed special myth in the minds of the British. Contemporary writers such as Marryat, who in his navy service during the early years of the nineteenth century had devised a code of signals for merchant ships which gained wide acceptance (he also had designed a lifeboat, a model of which he presented to the Royal Humane Society whose life-saving medal he had won at sea) reinforced the idea of the myth in generations of early Victorians.[70] Fulweiler sees Victorian society as increasingly "disconnected", a fundamental change in the way human beings perceived the world around them. Again, in response to this societal change four strains of sentiment come to sum up the Victorian attitude to life: patriotism, anxious revival of religion, interest in the non-material significance of nature and finally the Victorian fixation on family, children and especially women. He sees in Hopkins' *Wreck of the Deutschland* these four strains of Victorian sentiment coming together in a flood of tears: the idea of the shipwreck summoning a deep emotive response.[71]

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[68]P.M. Martin, *Mastery and mercy*: a study of two religious poems - "The wreck of the Deutschland" by G.M. Hopkins and "Ash Wednesday" by T.S. Elliot, Oxford (1957). Also see S. Street, *The Wreck of the Deutschland*, with introduction by C. Tomlinson, Budleigh Salterton (1987), for a background to this extraordinary poem.

[69]C.F. Behrman, *Victorian myths of the sea*, (1977), p.13.

[70]F. Marryat, his 24 years of service in the Royal Navy provided background for his thrilling tales of sea adventure (e.g.: *Peter Simple* (1834) and *Mr Midshipman Easy* (1836)).

[71]Howard Fulweiler, "Why, tears! Is it? Tears: Gerald Manley Hopkins and Victorian sentimentality", *Thought*, Vol.65, No.259, December 1990.

By the end of the eighteenth century and certainly in the early years of the nineteenth century a humanitarian response was gaining ground. The publicised sufferings of human experience in the form of the novel, poetry, newspapers, pamphlets, medical reports and more especially the parliamentary enquiry: by the early nineteenth century had created a new awareness.[72] Indeed according to Laqueur the very word "humanitarianism" had come into use by the middle of the nineteenth century, although its use was almost exclusively a term of contempt describing the moral perversion of caring more for those at a distance than those near.[73] Laqueur had described humanitarian narratives such as those listed above as a process of arousing "sympathetic passion".[74] David Hume in 1739, *A Treatise of Human Nature* [75]had suggested a mechanism by which such narratives may work: in that an object be it an animal or landscape, because it does not belong to us may not inspire pride or vanity; yet whenever these external objects acquire a relation to ourselves they engage the emotions. Laqueur sees ownership as the means by which Hume associates emotional involvement and states that "humanitarians" do implicitly claim an interest in those they help. Laqueur sees Hume's argument as moral concern and action being engendered not by the intimacy of a relationship between human beings but by the pain of a stranger crying out, as if the pain were one's own or that of someone near.[76]

The Victorian perception of shipwreck would of course have varied enormously between different sectors of the community around the country. Whilst

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[72]See T.W. Laqueur, "Bodies, Details, and the Humanitarian Narrative", *The New Cultural History*, University of California Press (1989) for a more extensive discourse. "....beginning in the early nineteenth century variously constituted committees and commissions produced an extraordinary number of hitherto untold stories of human suffering....". Laqueur goes on to cite the *Report of the Select Committee of the House of Commons on Accidents in Mines, together with the minutes of evidence*, BPP 1835 (603), XX, p.V.

[73]*Ibid.*, p.203.

[74] *Ibid.*, pp.179-79.

[75] D. Hume, *A Treatise of Human Nature*, Ed. L.A. Selby-Bigge, 2nd Ed., Oxford (1978) Book II, Ch.IX, p.303.

[76]Laqueur, *op. cit.*, p.180.

shipowners and merchants in Liverpool or London may have looked to their balance sheets, inhabitants of coastal communities around the country may have seen shipwreck as opportunity, a right to plunder, and in some cases the close passage of merchant vessels inshore gave rise to deliberate attempts at wrecking for the sake of plunder - little sentiment here.[77] Even as late as 1874 the Rev. John Gilmore summed up the general attitude thus:

> People seemed then to have no strong objection to other people being drowned, just as they had no strong prejudice against others suffering tortures of miserable prisons, the worst asylums, or any of the many horrors which a more enlightened age has sought with some degree of success to lessen or remove.[78]

All in all it did not bode well for the shipwrecked mariner in the early part of the nineteenth century, despite the many new concepts in thought and initiatives taking place, especially the work of the Royal Humane Society and the newly founded Shipwreck Institute. Shipowners were for the most part indifferent to their plight; given the appropriate kind of circumstance (more often than not in remote places) wrecking was still very much in evidence right into the nineteenth century. And whilst humanitarian and philanthropical movements were afoot to relieve the fate of many, it would not be until the middle of the century that any real progress was made and public attitude sufficiently hardened against the evils of shipwreck that parliamentary legislation would result in an all embracing Merchant Shipping Act that made significant inroads into the problem.

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[77] In "Wrecking and Coastal Plunder", J.G. Rule gives examples of cases of wreck and coastal plunder well into the nineteenth century. Rule does not think deliberate wrecking was significant. J.G. Rule, in *Albion's Fatal Tree - Crime and Society in Eighteenth-Century England*, Penguin (1975). Eds. D. Hay, E.P. Thompson and P. Linebaugh, pp.167-188.

[78] J. Gilmore, *Storm Warriors or Life-Boat work on the Goodwin Sands*, London (1874), pp.20-21.

Chapter Two

Aspects of the nineteenth century British coastline

This chapter seeks to isolate and summarise aspects of shipwreck in the first half of the nineteenth century in specific regional contexts. While acknowledging physical limits to navigation it mainly seeks to identify key measures that occurred during the period in question from human responses to shipwreck such as the stationing and manning of lifeboats.

2(i) The North-East Coast: Taking the north-east coast as that part of the coastline of England that stretches between the Wash in the south and Berwick in the north, its chief centres of interest are the great estuaries of the Humber, Tees, Tyne and Wear Rivers - giving rise to the ports of Hull, Teeside, Newcastle and Shields. From medieval days "sea cole" was brought south by ever expanding fleets of sailing colliers. Those vessels that carried coal emerged as Britain's first group of specialised sailing vessels. The amount of coal coming to London at the beginning of the nineteenth century was just short of one million tons; by the eighteen fifties it was nearly four million tons and predominantly brought by sailing vessels with wooden hulls.[1]

This north-eastern coastline and the east coast as far south as the Thames bore the brunt of shipwreck and maritime disaster in the nineteenth century due to the phenomenal amount of commerce along it and the unpredictability of weather conditions with the subsequent effect upon sailing ships. Nearly one third of all the shipping casualties by the mid-nineteenth century had taken place along the east coast of Great Britain,[2] and the larger part of these occurred within some seventy

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[1] See Mitchell op. cit., pp.110-111. Also R. Finch, *Coals from Newcastle*, Lavenham (1973).

[2] See *Wreck Chart of the British Isles, 1855*, BPP 1856, (2024-1), LI.399; despite being based upon comparatively recent returns the *Wreck Chart of the British Isles* provides a comparative insight into the amount and place of shipwreck at the mid-century.

miles of coast: essentially that coastline between Flamborough Head and the Tyne. Because of this exceptionally heavy traffic in coastal shipping, it was proposed that there should be a harbour of refuge along this coast in the vicinity of the coal ports. The losses of loaded colliers due to shipwreck were in the proportion of 5:1 against unloaded vessels.[3] The need for a harbour of refuge became paramount in regard to these cumbersome vessels. As with the east coast it was not until the advent of steam and more stringent maritime laws that the incidence of disaster abated. It was due to the frequent incidence of disaster as an incentive to action that many of the developments and initiatives to prevent loss of life at sea occurred along this coast. As early as the eighteenth century in the vicinity of Bamborough Castle in Northumberland, Nathaniel Lord Crew, Bishop of Durham (d.1721) provided by his posthumous munificence, at Bamborough Castle, a comprehensive system of warning and relief to seafarers called the Crew Trust which may have served as a great example to others. The account of signals used in cases of vessels perceived in distress, and of the institution established there for their assistance and relief goes to some detail. It includes the firing of a cannon upon the occurrence of wreck, the patrolling of the coast during times of storm by men on horseback, flags hoisted as acknowledgement of vessels seen to be in distress, premiums given for vessels providing assistance, the use of bells for signalling, the provision of a weather cock, the provision of a large speaking trumpet and an observatory or watch tower. Assistance was then to be rendered by way of shelter and food for shipwrecked mariners, stores for safe-keeping of wrecked goods as they came ashore, cellars for the keeping of wines and liquors from shipwrecked vessels, all manner of equipment offered for the raising and repair of stranded ships, even the provision of coffins *gratis* and funeral expenses. In all an immensely Christian and humanitarian provision that may certainly have helped to provide an example of philanthropic activity for others to follow.[4]

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[3] See *Quarterly Review*, 104, July-October 1858, p.195.

[4]See "Directions for Navigating In and Throughout the North Sea"...,
London, (1816). Reproduced in *For those in Peril*, section VII, HMSO (1963).

The birth of the lifeboat came about along this coast. Archdeacon Sharp concerned with the administration of the Crew Trust had ordered in 1786 from the inventor Lionel Lukin a conversion of a fishing coble into an unsinkable "lifeboat," the first known. At the mouth of the River Tyne, William Wouldhave and Henry Greathead of South Shields both contributed to the design of the *Original*, built by Greathead which saved hundreds of lives between 1790 and 1830. The Dukes of Northumberland were keenly interested in the design of lifeboats and their establishment on that coast. The then Duke of Northumberland funded a second lifeboat for the Tyne Lifeboat Association the *Northumberland* which made its first rescue in 1798 saving six lives from the *Edinburgh* aground on Herd Sands. Henry Greathead built 35 lifeboats between 1798 and 1810 with other vessels being built under licence. The same problems as had happened at the mouth of the Tyne also had occurred at the entrance to the River Wear where in 1799 Sunderland had formed its own lifeboat committee after one more terrible shipwreck. By 1811 the Sunderland Committee had also experimented with airtight compartments in an effort to increase the buoyancy of the vessel.

At the inception of the National Society for the Preservation of Life from Shipwreck in 1824 many of the lifeboat associations remained independent of the national body including the Tyne Lifeboat Institute. After the loss of the *Original* at the scene of the wreck of the *Gratton* (she had been driven ashore by a wave, while taking crew off the stranded *Gratton*, and dragged across the Black Middens where the back of the boat was broken) the Port of Tyne branch of the national society offered to help finance a new boat and bring its operations under its auspices. The offer was refused and a new lifeboat *Tyne* was put on station by the efforts of local fund-raising in 1833, the *Tyne* was the South Shields lifeboat until 1894 and saved 1028 lives.

On the 4th December 1849 the loss of a Tyne lifeboat became national news. The disaster gave rise to pledges of support for lifeboats as people reacted to shock. Ironically it was to be the newly formed national body of the Society for the Preservation of Life from Shipwreck that benefited the most rather than the local Tyne Lifeboat Institute who had suffered the loss of the vessel. In the incident the lifeboat *Providence* had been launched in heavy seas to the assistance of the vessel *Betsy* of Littlehampton aground on Herd Sands. The *Providence* was overturned in

the rescue attempt as she lay alongside the *Betsy* and a large wave ran between the two vessels. One of the lifeboat men was pulled to safety by the crew of the *Betsy*, but another three remained on the upturned lifeboat. The onlookers soon launched the *Tyne* and after bringing the crew of the *Betsy* and four lifeboatmen ashore the *Tyne* joined the *Northumberland* in searching for the *Providence* and her remaining crew. The *Providence* was found completely empty with 20 out of 24 crewmen drowned.

The great upswell of sentiment and support toward the lifeboat service as a result of the loss of the *Providence* led to reorganisation of the service by the new secretary Richard Lewis. In 1851 the Duke of Northumberland became President of the National Society. A prize of one hundred guineas was offered by the Duke for the design of a new lifeboat. Again, due to local tragedy along the north-east coast innovation in lifeboat building and design crept forward; the committee were mindful of the loss of the *Providence* through capsize and for this reason favoured a vessel that would have had a self-righting capability. They received thirty of the 280 entries for the competition from the north-east, from builders and innovators on the Tyne and Wear. The resulting winning design emerged on the basis of the awarding of points for various qualities such as its capability as a rowing boat in all weathers, power of self-righting etc., in all some fifteen categories and led to a boat which became the standard RNLI lifeboat for the remainder of the century.[5] The oldest lifeboat in the world, the *Zetland*, was stationed at Redcar in the north-east from 1802 to 1864 during which time she saved 500 lives. At Tynemouth the first Volunteer Life Brigade was started in 1864 to cooperate in life-saving under the Coast Guard.

For all the early initiatives that had taken place along this coast none provided such controversy and inspiration for further action than the exploits of William Darling and his daughter Grace in the saving of the survivors of the steamer

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[5] See R. Kipling, *Rescue by Sail and Oar, Lifeboats before the days of engine power*, (published in conjunction with the RNLI, 1982)

Forfarshire in 1838.[6] This action off the coast of Northumberland with its consequent publicity did much to arouse widespread public interest and elevate the cause of the existing societies such as: the Royal Humane Society, The Royal National Institution for the Preservation of Life from Shipwreck and the Newcastle Shipwreck Society. The rescue of the survivors of the *Forfarshire* also attracted much commercial endeavour. Painters especially wanted to capture the event, theatrical proprietors tried to induce Grace to appear, poets were stimulated into verse, books and press articles appeared, artefacts were produced (jugs and mugs were popular). All this adulation helped to spread awareness of the cause of the shipwrecked mariners.[7]

Especially controversial on the coastline of north-east England was the question of a harbour of refuge. Due to the intense amount of trade along the north-east coast between the Rivers Humber and Tees especially a harbour of refuge had been proposed at Redcar. In three different gales which occurred in the years 1821, 1824 and 1829 there were 169 vessels lost in this area alone of which 93 were wrecked on the rocks off Redcar.[8] Had there been a harbour of refuge as proposed by William Cubitt in 1835[9] and argued for by many others over the years[10] the losses might have been considerably less. Whilst there were difficulties and objections to the plan to make Redcar a harbour of refuge[11] as far as the north-east

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[6]For an account of Grace Darling and the wreck of the *Forfarshire* see W.M. Phipps Hornby, "Grace Horseley Darling, 1815-1842, Northumbrian Heroine", *Mariner's Mirror*, Vol.54, No.1, February 1968, p.55.

[7] *Ibid.*, pp.66-67.

[8] See *Select Committee appointed to Inquire into the Causes of Shipwrecks*, BPP 1836 (567) XVII, Mins. of evidence, Q.968-973, p.65; Lieut. Robert Wall.

[9] See *Ibid.*, App. No. 9: William Cubitt's plan for an asylum harbour at Redcar "Port William".

[10] See *Ibid.*, Q.869, p.59; Mr James Ballingall. Also, see *Select Committee appointed to Inquire into Shipwrecks of British Vessels, and the Means of Preserving the Lives and Property of Shipwrecked Persons*, BPP 1843, (549) IX, Mins. of evidence, Q.1074, p.68; Joseph Somes Esq.: Shipowner. Also, *Ibid.*, Q.1573-77, p.100; Captain John Washington, RN.

[11] *Ibid.*, Q.5989, p.378; Sir John Rennie: Civil Engineer. Also, *Ibid.*, Q.2439, p.160; Joseph Straker Esq.: Shipowner, dockowner and shipbuilder.

coast generally was concerned the concept received much support whenever it was broached.

An interesting regional feature seemingly particularly prevalent in the north-east was a method of insurance. Insurance associations or "clubs" existed where the shipowners banded together to cover the potential risk of loss in the case of a vessel being shipwrecked.[12] They went about this in a number of different ways according to the particular constitution of the club concerned. In some e.g. the Liberal Premium Association, ships were entered for voyages or passages and a premium, regulated at the annual general meeting was charged on the members of the association. In the case of the Hope Association, there was no premium paid initially but partial losses and total losses were equally divided upon the capital put up by the shipowners. Essentially it meant that the shipowners themselves carried the burden of risk, in this respect the system was quite different from that of the underwriters at *Lloyd's Registry* - there were no underwriters as such and therefore it was absolutely in the interests of the clubs that shipwrecks were minimised. To this end they had their own stringent ideas concerning survey and risk, all the members of these societies were common members in a common cause. The difference being summed up thus: "....if ships were not lost at all, and all risk could be done away with, it would be highly beneficial to those who insure at Newcastle; but would it not follow that if there was no risk at all, the business of underwriting at *Lloyd's* would be done away with....".[13]

2(ii) Shipwreck on the East Coast: If one considers as a broad definition the east coast of England as that coastline between the Thames Estuary and the Wash then the principal ports were: Colchester, Harwich, Felixstowe, Ipswich, Yarmouth,

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[12] See Wellington Papers, 2/239/110 for an example of club membership. John Hobbs master of the brig *Stagshaco* of Sunderland (burthen 258 tons) bound from Sunderland to Constantinople with a cargo of coals struck the Goodwin Sands, eventually to be hauled off and make Ramsgate Harbour. In his deposition John Hobbs stated that he was insured with the Star, Wear and Ocean Clubs at Sunderland.

[13] *S. C. Shipwrecks* (1836), Q.1762, p.113; Mr John Anderson: Secretary to two shipping mutual assurance associations.

Lowestoft, Cromer and King's Lynn. Smaller coastal towns between the main ports included: Maldon, Aldeburgh, Southwold, Kessingland, Hopton-on-Sea, Gorleston-on-Sea, Caister-on-Sea, California, Winterton-on-Sea, Sea Palling, Happisburgh, Walcott, Keswick, Bacton, Mundesley, Overstrand, Sheringham, Wells-next-the-Sea and Hunstanton.

This coastline is essentially that of Norfolk, Suffolk and Essex and has been constantly re-shaped by the sea. Between Cromer and Aldeburgh is an alternating succession of soft clay cliffs and low lying areas of marran-covered sand dunes. The loss of material from these cliff areas has resulted in deposits of sand in the form of projecting spits, (locally referred to as a "ness") and off-shore sandbanks, both of great danger to shipping. Whilst these offshore sandbanks had been of great danger to mariners, with constant incidents of grounding and shipwreck during bad weather, they enclosed the only relatively safe anchorage between the Tyne and the Thames - Yarmouth and Lowestoft Roads.

Fishing had been of great importance along this coast since earliest times, although the advent of trawling for bottom-feeding fish did not occur until the mid-nineteenth century. The simplest form of fishing consisted of longshoring from a small punt, launched through the breakers from the beach. Fishing from the coastal towns was for mackerel from mid-May to mid-July and the more important herring fishery from September to December. Smuggling had been carried out along this coast since time immemorial, the sandbanks helped to enable skilled pilots to elude capture while the geographical advantages for the importation of gin from the Low Countries were considerable. By far the most significant and economically important activity associated with the incident of maritime disaster along the east coast was the salvaging work of the beach companies,[14] originally as longshore fishermen who had to band together in small groups to help each other with boat launching and recovery. During the two and a half centuries that preceded the Second World War beachmen (beachmen in Norfolk and Suffolk, smacksmen in Essex) all along this coast had supplemented fishing activities with salvage work.

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[14]See D. Higgins, *The Beachmen*, Terence Dalton, (1987). This book together with R. Maltster, *Saved from the Sea*, is a definitive work on the subject of salvaging and life-saving along the wreck strewn east coast of Norfolk and Suffolk in the early nineteenth century.

This work became more and more intensive with the increase of industrial activity and consequent shipping movements in the first half of the nineteenth century. Beachmen despite their interest in salvage work and the income derived were first and foremost fishermen. Work created by the fate of sailing ships negotiating the treacherous sandbanks became a bonus to them, although at Yarmouth the beachmen were fundamentally concerned with salvage. Although the title "beach company" had existed since the middle of the eighteenth century, they were not companies in the strict sense of the word but loose associations. Before the advent of steamships and other factors that were to limit their activities by the end of the nineteenth century, there were at their heyday some 1500 beachmen belonging to 31 companies.

It would seem clear from the wrecks chart of 1855[15]that the east coast of England, at least during the middle years of the nineteenth century had been the scene of some of the most intensive and extensive maritime disasters. During the eighteenth and nineteenth centuries and certainly in the twenty years either side of the 1836 "Inquiry into the causes of shipwreck....." the east coast of England had witnessed some of the greatest losses in merchant shipping history. It had been, during the first half of the nineteenth century the main area of activity in newly industrialising England for the coasting trade. Before the age of the railway[16] and due to the absence of efficient road links and the nature of commodity cargoes, all heavy and bulky goods were most effectively carried by sea, especially coal. The collier brigs of the coasting trade fuelled the factories and workshops of London, for until the later phases of the Industrial Revolution really took hold and the midlands and north of England became the manufacturing heartland, London was Britain's industrial manufacturing capital.[17] With its population of 980,000 in 1801 increasing to 2 million by 1841, a doubling within forty years, London demanded

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[15] *Wrecks Chart, 1855*, (1856)

[16]Railways did not really expand until the boom of the mid 1840's; "....by 1838 five hundred miles of railway were in operation, by 1843 the mileage had risen to 1900 and by 1848 to 4,600....", J.D. Chambers, *Workshop of the World*, 2nd Ed., (1979), p.36.

[17]See Anne de Courcey, "When London was so dirty even the grass refused to grow", *Daily Mail*, November 8th 1994.

coal for its industries.[18] Major shipbuilding took place in the capital, as did the manufacture of pottery and porcelain. Almost every factory was powered by coal as well as it being the main source of heat in private homes, and that coal came from the north-east of England in sailing collier brigs down the east coast.

The English coasting trade that had existed since at least 1600 was to be rapidly eclipsed by the coming of the railways. The *Nautical Magazine* observed in 1866 that "....the coasting trade of Britain is about to be destroyed and 45,000 seamen discharged....". This gives some idea of the size and importance of the coasting trade, not that anything like all of this figure worked the east coast, but a considerable amount of it did. Of the extensive coasting trade employed along the east coast the collier's dominance of the east coast seaways had lasted some 300 years. In 1844 about three quarters of the sailing coaster fleets were employed carrying coals and ten thousand seamen were at work bringing two and a half million tons from the north to London alone. Eight thousand colliers arrived in London annually according to Benham.[19] Such was the extent and concentration that a report in 1838 stated "....in October 1838 there were nearly 2000 vessels lying windbound in Yarmouth Roads. They got underway on November 1st, and were followed by another 1000 from the southward; in all 3000 sail went through the Roads in five hours, so that the sea could hardly be seen for ships....".[20] As

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[18] See Wellington Papers, 2/239/23. Many examples exist from the trade from the north-east coal ports to London; William Evans master of the snow *Thomas Gales* (225 tons burthen) Seaham to London belonging to Port of Stockton, County Durham on the 23rd January 1847 ran aground on Gunfleet Sands off the Essex coast within the limits and jurisdiction of the Cinque ports. In order to re-float her 70 tons of coal was jettisoned and despite making seven inches of water per hour in the bilges she eventually arrived in Harwich harbour. London was not the eventual destination in all cases, in the case of the schooner *Mary Ann* (62 tons burthen) (Wellington Papers, 2/239/24) the deposition of Thomas Fordes stated that she was bound from Stockton to Emsworth with a cargo of coal and on 23rd January 1847 had her main mast carried away in storm-force winds, eventually to take a pilot on board and arrive safely at Dover.

[19]H. Benham, *Once upon a Tide*, p.62.

[20]November 1838, *Norwich Mercury*, also quoted in Benham, *op cit.*, p.63. And see Major E.R. Cooper, "East Coast Brigs", *Mariner's Mirror*, July 1945, p.152.

incredible as these figures appear fleets of a hundred or at least fifty in company were commonplace.

The presence of so many ships sheltering from easterly gales provided much of the work for the beachmen: victualling, pilot services, ferrying and anchor retrieval. In bad weather, especially north-easterly and south-easterly storms, ships seeking shelter in the Roads often dragged their anchors, if the cables broke, or if the captain felt the necessity to release his cables and run before the wind the ship would almost inevitably finish up on shore or on a sandbank. Working from shore based "company" boathouses and the like with high look-out towers the beachmen could bargain for services to the masters of vessels in trouble. Shipwreck was common enough and here was a way of life based upon securing the most satisfactory outcome for vessels in trouble. Wreck casualties were located either by observation from the shore towers or by mounting a seeking voyage in times of bad weather. Masters of vessels not familiar with the hazards of the sandbanks and in obvious trouble would be "told the tale" by the principal beachman, trying to convince the captain that his vessel was in grave danger, and that only by employing the services of the beachmen could the vessel and lives of the crew be saved. Nearly all of the towns and coastal villages mentioned earlier had their own beach companies by the mid-nineteenth century enabling the entire coast to be covered by salvage enterprises. Their greatest extent was around 1865. As well as direct salvage work from vessels aground or storm damaged, there was considerable work to be done in recovering anchors, especially during the latter part of the winter months when there was no fishing. Items relating to anchors, recovered by the beachmen in sweeping the sea with a line trawl between two boats, account for at least seventy-five percent of all entries in the Admiralty Court records.

Getting to a stranded vessel first and salvaging anything saleable was often only the first stage of what could be a long drawn out process for the beach companies, for they may have had to prove the right of salvage in the Admiralty Courts. The highest income came from the provision of direct salvage services to vessels in trouble, where a payment might have been agreed between the beach companies and the ship's master for services (pumping/towing etc.) to enable rescue. Beach companies on the east coast flourished in the nineteenth century because of three interrelated factors: the shifting sandbanks which became the basis

of groundings and consequent shipwreck; the dependence upon windpower by vessels which were largely unmanageable in all but perfect weather conditions (especially heavily laden colliers); and a virtual monopoly in salvage work. The first two of these factors led to many shipwrecks despite the work of Trinity House (since the sixteenth century) and private lighthouses. By 1836 private lighthouses were abolished and marking the coast became the sole responsibility of Trinity House.[21] Since the seventeenth century Yarmouth Roads had been marked by buoys, by the nineteenth century a number of lightships were established throughout the sandbank system: Newarp (1791), Haisborough Sand (1832), St. Nicholas Gat (1837), Shipwash (1837), Cockle Gat (1844) and others followed. Despite the attempt to lessen the dangers of shipwreck the number of vessels in trouble was still huge while sail dominated. It was the introduction of steam power (steam tugs working out of Yarmouth and Lowestoft provided serious competition for the beachmen) from the early nineteenth century and the mid-century Merchant Shipping Acts that drastically reduced the amounts of shipwreck occurring, and consequently spelt the death knell of the beach companies.

From the beginning of the nineteenth century there were serious attempts by wealthy philanthropists appalled by the frequent and heavy loss of life due to shipwreck to provide specially built lifeboats along the coasts. Local lifesaving societies were formed to provide both the funding and planning needed: The Suffolk Humane Society (1806), Norfolk Association for Saving the Lives of Shipwrecked Mariners (1823)[22] and Suffolk Association for Saving the Lives of Shipwrecked Seamen (1824). It was the beachmen who made up the lifeboat crews and until well into the nineteenth century preferred to use their own yawls rather than the lifeboat provided, which was seen to be of last resort.[23] Any conflict of

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[21]By an Act of 13th August 1836: 6 & 7 Will.IV cap. 79. Also see N. Long, *Lights of East Anglia*, Terence Dalton, (1983).

[22]"Norfolk Shipwreck Association": the first county organization formed for the specific purpose of saving life from shipwreck, in 1858 the Royal National Lifeboat Institution accepted responsibility for the Norfolk lifeboat stations.

[23]Originally the lifeboats were designed and built in the north to the designs of Henry Greathead. This type of boat was not deemed the most suitable design for this part of the coast, as was to prove

interest amongst the beachmen that there may have been between saving lives or property was dealt with by a system of rewards instigated by the life saving societies. In February 1831 for example awards were made by the Norfolk Association to various men for their life saving exploits, the Secretary stated:

> ....In each of these cases it must be evident that the prospect of pecuniary remuneration operates as a powerful stimulus to the exertions of coastguard and beachmen and though the humanity and bravery of these hardy men in saving lives of shipwrecked mariners is beknown and acknowledged, there can be no doubt but that they were acted upon by the same motive as the rest of mankind and that the hope of substantial reward had its influence together with higher motives....[24]

2(iii) The South-East Coast: The greatest significance of the south-east coast stems from its being the northern parameter of the English Channel in an area where thousands of ships passed annually through a gradually narrowing bottleneck strewn with sandbanks and shoals and subject to the vagaries of the prevailing south-westerly winds. In this context the Cinque Ports along the south coast of Sussex and Kent, especially that of Dover; physical features such as the many channels of the Thames estuary, the notorious Goodwin Sands and Varn Ridge are the key concern. Incidence of shipwreck along this coast often arose from the sheer density of vessels attempting to negotiate these physical features, invariably in order to enter the Thames for the Port of London. Together with these physical limitations to navigation, human limitations combined to create common occurrence of shipwreck.[25]

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the case with "chosen designs" (such as Lukin's, Pellow Plenty's or Manby's) in many other locations where local conditions influenced the choice of boat used; many lifeboatmen preferring to use their own vessels. Many of these purpose built lifeboats were declared to be of such heavy construction, that very much of their usefulness was sacrificed, see J. Gilmore, *Storm Warriors or Life-Boat work on the Goodwin Sands*, London (1874).

[24]*Norfolk Mercury*, 19th February 1831, quoted in *The Beachmen, op. cit.*

[25] See Wellington Papers: 234 (the salvage of a wreck on the Girdler Sands), 237 (salvage cases), 239 and 240 (copies of depositions taken from masters and owners of vessels under the Wreck and Salvage Act 1846, 8th October 1846 to 29th September 1848 and 5th January 1849 to 23rd of

In Dover a system of pilotage existed under the jurisdiction of the Lord Warden of the Cinque Ports (the Duke of Wellington was appointed on the 27th January 1829, in succession to the Earl of Liverpool) that was designed to enable vessels approaching the Thames estuary to take on a pilot quickly and effectively. As trade increased through the first half of the nineteenth century the system was stretched to the point that the licensed pilots could not always be found and the lack of pilots was considered by some to be a potential cause of shipwreck and against the interests of commerce by the time of the 1843 Shipwreck Inquiry.[26]

Another controversial issue was the argument for the construction of a harbour of refuge at Dover. As an extension to the already existing arrangements for the harbour at Dover was a proposal to increase the area within the breakwater so creating a safe haven for vessels caught in stormy conditions in the surrounding sea areas. In the Wellington Papers there is a report[27] on the proposed construction of the harbour of refuge from James Walker to the Honourable Secretary of the Admiralty describing the ideas of several of the leading engineers of the day including Rennie, Cubitt, Rendal and Brunel. The greatest controversy concerning the south-east coast and the sea area opposite Kent and Sussex was over the question of navigating the sandbanks safely - the question of how to mark the banks and their respective channels. By far the most

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May 1853 respectively). 239 contains in excess of a hundred depositions over a two year period indicating a high level of shipwreck and associated marine disasters. Many of these vessels had run aground or were stranded on sands, or had been involved in collisions. For example the deposition of John Darling (2/239/5) master of the barque *Aerial* (burthen 302 tons); that on the 25th October 1846 grounded on the Gunfleet Sand off the Essex coast. He had engaged local smacksmen to attempt to heave her off by means of a kedge anchor, they eventually succeeded in floating off the waterlogged ship and bringing her to Harwich, having to run her aground off the River Ooze to ensure her not sinking. Despite bringing her to safety the back of the ship and several of her beams had been broken.

[26] *S.C. Shipwrecks* (1843), Q.1262, p.77; Edward Boys Esq.; Commander in the Royal Navy.

[27] See Wellington Papers 233/12 (29pp). Also see *Commission on Harbours of Refuge*, BPP 1845 (611).

dangerous and infamous of these was the Goodwin Sands.[28] The Goodwin Sands had been a setting for shipwrecks dating back as far as men had attempted to navigate the waters of the English Channel. Four miles offshore from Deal in Kent, this series of sandbanks maintains a reputation among seafarers the world over.[29] In the first half of the nineteenth century the Goodwins were marked by Trinity House with lightships that were frequently blown away; three lightships were moored to denote the channel through the Downs. One of the vessels, the Gull Lightvessel,[30] had been twice removed from her first station and taken westward due to the movement of the sands.[31] Various suggestions had been forthcoming to replace the idea of a lightship with a more permanent beacon[32] possibly a caisson built lighthouse, but the notion that the sands shifted had made the idea implausible in the long run.[33] A permanent beacon had been placed in the middle of the sands in 1840 by Capt. F. Bullock, composed of a wooden jib boom of a frigate that had stood there for three winters unharmed except for the

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[28] J. Gilmore's book *Storm Warriors*, *op. cit.*, outlines the particular dangers and hazards of the Goodwin Sands and the work done to aid those in peril.

[29] In the Wellington Papers alone between 8th October 1846 and 29th Sept 1848 numerous examples of groundings occur. In Wellington Papers 2/239/1 the brig *Emma* (216 tons burthen) at one o'clock in the morning had been sailing in ballast when "she got onshore on the Goodwin Sands", she was pulled off by means of a kedge anchor and warp and despite having fourteen inches of water in her bilges upon being examined at Ramsgate was found to be sound but strained and requiring caulking.

[30] Established in 1809 for the benefit of His Majesty's Cruisers. *Report of Select Committee on Lighthouses*, BPP 1834 (590) p.vii.

[31] *Ibid.*, Q.5998, p.378; Sir John Rennie: Civil Engineer.

[32] *S.C. Shipwrecks* (1836), Q.3827-45, pp.248-9; Mr William Bush: surveyor and engineer. Also see *Ibid.*, App. No.11, p.383: "Description of the lighthouse proposed to be erected on the North End of Goodwin Sands".

[33] *S.C. Shipwrecks* (1843), Q.1351, p.81; Edward Boys Esq. Also see *Ibid.*, Q.4123, p.267; William Cubitt Esq: engineer and surveyor.

abrasive action of the sand and was thought by some to have proved an effective form of warning.[34]

As well as for creating permanent lights on the sands there was also a plan to create a harbour of refuge in the midst of the sands in an area known as Trinity Bay. The underlying problem with these schemes was the nature of the sands, considered to partially shift about, and the uncertainty regarding the bedrock upon which they lay. Sir John Rennie (civil engineer) had attempted to establish the nature of the bedrock with respects to the building of a harbour of refuge but could not state with any certainty whether it was chalk or otherwise past 27 feet.[35] The question for a harbour of refuge was more a case of where to site it than whether it was needed. The need was evidenced by the use of the Downs as an anchorage but the Downs anchorage did not favour all weathers. The idea of a harbour of refuge in Trinity Bay was received with enthusiasm for the principle but a certain degree of pessimism in some quarters over its financial viability[36] and its ability to withstand the shifting sands by which its very presence could have been adversely modified.[37]

Due to an exceptionally low tide in August of 1854 the Goodwin Sands became the venue for a game of cricket between the crew of the Deal lugger *Sparten* and the Gentlemen of Walmer. The *Illustrated London News* described the occasion thus: "A sad association of ideas crowded the minds of the cricketers

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[34] *Ibid.*, Q.1348, p.81; Edward Boys Esq. Also see *Ibid.*, Q.6000-1, pp.378-79; Sir John Rennie. Also see *Ibid.*, Q.5266, p.332; His Grace the Duke of Wellington: Lord warden of the Cinque ports.

[35] He had carried out an experimental bore, see *Ibid.*, Q.5958, p.375; Sir John Rennie.

[36] *Ibid.*, Q.1896-7, p.120; Capt. Alexander Bridport Becher RN. Also, *Ibid.*, Q.2910-23, p.188; Mr William Bush and see especially the plan of William Bush for "The Prince of Wales's Harbour of Refuge", facing *Ibid.*, p.182. (Who also had experimented with a cast iron caisson built lighthouse, see evidence of Mr William Bush to the 1843 Shipwreck Committee, p.182).

[37] *Ibid.*, Q.6001, p.379; Sir John Rennie.

when they arrived on this awfully melancholy place. Here thousands of gallant fellows have been entombed. Here millions of property engulfed....".[38]

2(iv)The South Coast including the Isle of Wight: The Wrecks Chart of 1855[39] indicates that the coast between Beachy Head in Sussex and Start Point in Devon was the least susceptible to shipwreck of the coastal regions of Great Britain. The Wrecks Chart is limited however to the Board of Trade returns from the 1st of January to the 31st December 1855 but still gives a useful indication of the relative intensities of incidences of shipwreck along the coasts. The south coast especially Selsea Bill in Sussex; Portland and the Chesil Beach, Dorset and the back of the Isle of Wight bore its share of tragedy, if not on the same scale as the eastern seaboard.

For vessels navigating along the Channel, the southern extremity of the Isle of Wight represented a major hazard especially because the prevailing wind direction was south-west and carried with it the prospect of being wrecked upon a lee shore between the Needles and St. Catherine's Point.[40] Of all the hazards along this particular shore, and there are many, Atherfield Ledge has claimed innumerable ships over the years. The coast is notorious for blinding fogs, a steady ocean swell and south-westerly storms driven in by a long fetch extending out across the Atlantic Ocean. For most of the 18 mile stretch of the Island between the Needles and St. Catherine's Point there are high cliffs towering to 300ft in places that make access to the shoreline extremely difficult. Such was the case at the wreck of the *Clarendon* at Blackgang Chine in 1836 when only a cliff path led to the scene. John Wheeler, a local fisherman saved the only three

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[38] *Illustrated London News*, August 26th 1854, p.176.

[39] *Wrecks Chart 1855* (1856).

[40] Dr G.C. Dunning wrote of St. Catherine's Point: "St. Catherine's Point has sterner moods when the wind howls round the old Oratory Tower up the hill, and the sea boils like the cauldrons of hell then this corner of the Island speaks of its past, and the voice is eloquent of the history of England", *History of Niton*, (1951).

survivors of the *Clarendon* with the aid of the Holdens (father and son).[41] It was one of the Wheeler's, James Wheeler who recorded in his logbook an account of wrecks along the Island coast from 1746 to 1808, a unique account as no official figures or records were kept. In the opening years of the nineteenth century Wheeler recorded seven wrecks up until 1808 including the *East Countryman* a sloop lost on Atherfield rocks.[42] Further wrecks have been recorded, the records being handed down from one generation of islanders to another as detailed in F. Mew, *Back of the Wight.*[43] These include the *Henry Addington*, Bembridge, 1798; *Three Sisters*, St. Lawrence, January 31st 1799; *Le Courier,* Chale, December 17th 1823; *Carnbrae Castle*, Brook, July 1829; *Diane Faur*, February 1830; *Crosique,* Chale Bay, December 17th 1832; *Charles II*, Sandbanks, December 25th 1832 (cargo fruit); *Hero* (brig), off Sandrock Spring, October 21st 1833 and many many more. Long before the advent of the lifeboat along this exposed island coast (the first lifeboats were at Brook and Brighstone Grange Chines simultaneously, but not until the summer of 1860) the coastguard and military were the prime presence on the coast, and several cases existed of whole ship's crews being saved under extraordinary conditions by the coastguard.[44] Lt. William Viccary was commander of the coastguard station at St. Catherine's Point from about 1830 during which time he had been involved with a total of 24 vessels wrecked mainly to the west of St. Catherine's, many of which had been attended to by the use of Dennet's rockets and Manby's mortars. A feature of many of the wrecks on the remote south-west shore of the Island had been wreck

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[41] In the 1890's the account of Mr Holden one of the last living eye witnesses was recorded by Stanley Cotton: "The sea was runnen' mountains in the Bay....(the ship) was a'most her beam ends an' zimmen likely to capsize as each sea struck her", quoted in *Shipwrecks of the Wight*, J.C. Medland, p.20.

[42] Quoted in *Back of the Wight*, F. Mew, p.62. The original log is now the property of Mr W. Green, Whitewell, a descendent of James Walker and is kept in Carisbrook Castle Museum IOW.

[43] *Ibid.*

[44] *S.C. Shipwrecks* (1843), Q.3307, p.29; Capt. Samual Sparshott: Commander of the Navy and deputy Comptroller of the Coastguard.

plunder, made all the easier due to the remoteness of the area in relation to any form of authority. Again the coastguard were the principal authority to help prevent such occurrences.

In Sussex as well the coastguard were very important in the responsibility for wrecks. There had been a spate to the west of Beachy Head from 1840 to which the presence of the light at Beachy Head may have contributed. Vessels were said to have got too close inshore, possibly through navigating by the shore lights and in the case of being caught out by a sudden gale were then driven ashore below the cliffs. No specific single reason could account for these wrecks, which some put down to the negligence in the use of the lead line in causing vessels to come too near the land when navigating up the Channel.[45] Some had argued for a harbour of refuge to the west of Beachy Head and that this coast had been a problem one for shipwreck may be illustrated by the need for the Brighton branch of the Humane Society to build a cliff crane specifically to recover life and property from the base of its precipitous cliffs.[46]

Further west along the south coast in Dorset the wreck of the 1200 ton East Indiaman *Earl of Abergavenny* one and a half miles out in Weymouth Bay on February 5th 1805 with the loss of 261 of the 402 persons on board hastened the placing of a lifeboat along that coast.[47] Several natural features of the Dorset coast often gave rise to wreck, among these were extensive cliffs and tidal ledges - most notorious of all the Portland tidal Race. The Portland Race is caused by the combination of tides from West Bay and Weymouth Bay meeting off the Bill. The tide from West Bay reaches up to seven knots in speed as it runs over the ledges for nine hours out of every twelve; where the tide from West Bay meets the tide from Weymouth Bay about a mile off the Bill, there the Portland Race is formed. *Lloyd's List* between 1789 and 1824 shows two hundred casualties in the Portland and Weymouth area. It was on the Shambles Bank to the south-east of

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[45] *Ibid.*, Q.1743-52, pp.109-10; Capt. William Cole: Agent to *Lloyd's* at Newhaven.

[46] See extensive descriptions and diagrams facing *Ibid.*, p.114.

[47] An extensive account of the wreck of the *Earl of Abergavenny* can be found in S. Draper, *Shipwrecks*, National Maritime Museum Publication, Maritime Collection Series (1992).

the Bill that the *Earl of Abergavenny* foundered in 1805. Other wrecks include the East India "Country Ship" *Alexander* on the night of March 26th 1815 driven ashore near Wyke, nearly all abroad perished; the *Vigilant* December 14th 1825 wrecked at Lulworth; and the Royal Mail Steam packet *Meteor*, February 23rd 1830 that ran onto rocks at Church Hope, Portland. In the closing days of November 1838 a great storm lashed the Weymouth area, the whole Portland beach nearly to Bridport "was one continued scene of distress and misery, it was strewn with broken boxes, furniture, fragments of clothes, utensils, trunks and pieces of wreck".[48]

In order to aid shipping, the high and low Portland lighthouses were built in 1789. Spurred on by the havoc caused during a hurricane on the night of November 22-23rd 1824 the Dorset Branch of the Lifeboat Institution took delivery of the first lifeboat along that coast in 1826 coincident with the supply of Manby mortar apparatus at Lulworth Cove, Osmington, Chesil Cove, Fleet and Abbotsbury. Unfortunately as with other areas the presence of a lifeboat did not ensure its usage and the locals perhaps preferred to use their own boats. The Branch deteriorated and by 1850 the lifeboat had become so neglected that she was sold off to the highest bidder, not to be replaced until 1869 when the Weymouth lifeboat *Agnes Harriet* was inaugurated.

2(v) The West Country: From a purely physical aspect the coasts of Devon and especially Cornwall must have seemed some of the most rocky, desolate and dangerous coasts in the whole of England to the early nineteenth century mariner. Subjected to the full Atlantic onslaught of the prevailing south-westerly winds they have been a graveyard for ships from earliest times. Added to the physical dangers there is also a history of human activity that includes wrecking and coastal plunder. On the west coast between Land's End and the south coast of Wales shelter was sorely needed in the early years of the nineteenth century. The trade of the Irish Sea: vessels bound to and from Liverpool, Glasgow, Newport and Belfast to the south, also the then great and increasing traffic along the Bristol Channel bound for Bristol and Gloucester were all exposed to great dangers along

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[48] See G. Farr, *Wreck and Rescue on the Dorset coast*, p.38.

this coast. The north coast of Cornwall, Devon and Somerset provided little or no shelter in case of sudden storm. By the time of the Shipwreck Inquiry of 1843 there had never been a light between the Longships and Lundy, a direct distance of approximately 100 miles, with considerable more distance in coastline, a situation unprecedented anywhere on the English coast. Lights had been opposed along the north-west coast of Cornwall by the Bristol shipping interest on the grounds of the extra dues they would have incurred. As a result some considered that coast to have been unique in all England in terms of the wrecks of coasters along it.[49] Capt. Samuel Sparshott, comptroller of the coastguard stated that north Cornwall had received many more than the usual amount of shipwrecks.[50]

Some of the wrecks along these coasts have been well documented: the frigate *Anson* at Mount's Bay in 1807 was beached deliberately after losing three anchors and capsized with the loss of almost 100 officers and men. In October 1823, 14 ships and 19 fishing vessels were wrecked on the north Cornish coast due to a shift of wind that caused them to be cast upon a lee shore.[51] In October 1859 a similar gale wrecked 24 ships. According to Clive Carter the north Cornish coast alone accounted for the loss of 800 small sailing vessels, 200 large sailing ships, 100 fishing boats and 94 steamers between 1800 and 1920.[52] Whilst others have come to light through personal recollections stored as memoirs, in an *Account of Shipwrecks on the North coast of Cornwall* - written "at the request of a gentleman of Cornwall" - and covering the years 1759 to 1830 John Bray left an account of 37 wrecks all of which occurred between Millook and Morwenstow in the neighbourhood of Bude.[53] Those recorded

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[49] *S.C. Shipwrecks* (1843), Q.4847, p.304; Mr David Williams: inspecting commander of the coastguard station at Padstow, Cornwall. Also see *Ibid.*, Q.5504-5, p.347; Mr William Chino: Master of a coasting vessel.

[50] *Ibid.*, Q.3373-5, p.223; Capt. Samual Sparshott. Also see *Ibid.*, Q.4866, p.305; Mr David Williams.

[51] C. Carter, *Cornish Shipwrecks*, Vol. II, Newton Abbot (1970), p.11.

[52] *Ibid.*, p.12.

[53] "An Account of Wrecks (1759 - 1830) on the north coast of Cornwall" by John Bray, edited and transcribed by A.K. Hamilton Jenkin (1975). From British Museum Add. MS. 37826.

instances of wreck for the early nineteenth century all involved vessels being driven ashore and in many cases immediately breaking up, suggesting perhaps some inherent weaknesses in the construction or subsequent rot.[54] In the diary of a resident of St. Ives[55] made during the years 1806-48 mention is made of wrecks and instances of bravery by the local population, who whilst deemed capable of striking a bargain concerning salvage after the crises was over could be observed in the utmost attempt to preserve life at the time of the disaster often at great risk to their own lives. "...By a most daring attempt, however on the part of two local fishermen - Sam Uren jr. and R. Welch jr. - who swam out to the vessel through the sea a line was eventually got on board...". This theme seems to thread though many accounts of Cornish shipwreck, counteracting tales of deliberate wrecking. Plundering, without suggestion of deliberate wrecking was commonplace and considered the right of the country people.[56]

The county of Devon had several commercial harbours: Barnstaple, Ilfracombe, Exmouth, Salcombe and Appledore with Plymouth and Dartmouth essentially naval bases. One of the largest projects of its kind at the time was the building of the breakwater at Plymouth Sound, which although it was instigated as a measure to protect naval vessels (Plymouth had been chosen by the Admiralty to be a major naval base in 1690) also served to protect merchantmen. The elements had contributed to most of Plymouth's wrecks but those due to collisions within the crowded roadstead were considerable. The gale of February

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[54] *Ibid.*, See: case 19 "...greatly damaged, side broke in...", p.30; case 21 "...broke all to shatters...", p. 32; case 24 "...when the hoble bote with the hands on board towed the mass at Bude, it was not worth above two guineas, quite rotten...", p.34; case 27 "...the sloop was torn to scrips and sold to the country people perhapps part for fyering (firewood)...", p.35; case 31 "...The ship was very old and soon broke all to shatters...", p.37; case 33 "...The ship broke all to shatters...", p.40.

[55] Diary in the possession of Col. T.J. Chellow, St. Ives. Quoted on pp.128-30 of *Cornish Seafarers*, A.K. Hamilton Jenkin (1932).

[56] For a discussion of wrecking see J.G. Rule "Wrecking and Coastal Plunder," in *Albion's Fatal Tree - Crime and Society in Eighteenth Century England,* p.16, Ed's D. Hay, E.P. Thompson and P. Linebaugh, Penguin (1975).

1799 was said by *Gentleman's Magazine* as being the most severe hurricane ever remembered at Plymouth[57] and as the nineteenth century progressed there was "...never a winter went by without the Sound being strewn with ships timbers and rigging...".[58] Plymouth was one of the first locations in the West Country for a lifeboat, with a Greathead boat built at South Shields installed on 20th July 1803, a second lifeboat appeared in service in April 1826. The breakwater was completed in 1841 at the cost of £1.5m after 4.5 million tons of limestone and granite had been deposited. On the north Devon coast at the time of the Shipwreck Institution[59] in 1824 there were no lifeboats on record of any sort in the Bristol Channel. Bideford was the first station, its lifeboat being delivered at the end of February 1825 built to a plan of Pellow Plenty at Newbury, and served until 1856. Named the *Volunteer*, she was donated by the joint funds of the Shipwreck Institution and a local committee of the men of Bideford (later from 1831 the North Devon Humane Society). In 1831 the *Volunteer* was joined by the *Assistance*, which served until 1848. There were then three boats in use in the estuary of the Rivers Taw and Torridge by the late 1830's, at Ilfracombe a local committee purchased a lifeboat in 1828 and in 1836 Bridgewater, its river heavily used by shipping was given a lifeboat which was stationed at Burnham-on-Sea to serve the entrance to the River Parrett.[60] One of the notable disasters along this coast was at Clovelly in October 1821 when a number of Clovelly men who earned their living by pilotage and fishing in hobbling vessels were overtaken by a gale which within a few minutes had compelled sixty boats to abandon their nets and make for the shore. Forty of them were smashed on rocks and 35 men

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[57] *Gentleman's Magazine*, 1799, p.159. His Majesty's sloop of war *Weazle* was lost off the coast of Devon.

[58] Richard Larn, *Devon Shipwrecks*, Newton Abbot (1974), p.39.

[59] National Institution for the Preservation of Life from Shipwreck (formed 1824), popularly called the Shipwreck Institution.

[60] See G. Farr, *Wreck and Rescue in the Bristol Channel - the story of the English Life-boats*, (1966).

drowned. A similar incident occurred in 1838 when 14 boats were wrecked and 21 men drowned.[61]

Harbours of refuge along Cornwall's rugged coastline were few and far between. Mount's Bay or St. Ives Bay may have served as shelter from northerly or southerly storms respectively, but a sudden shift in wind direction could have turned what may have appeared to have been a place of refuge into a formidable lee shore. Indeed Mount's Bay which takes the full force of the prevailing westerlies has a long catalogue of disaster victims, piers at Newlyn and St. Michael's mount were periodically washed away. May 1814 witnessed the opening of a dry dock at Penzance to enable storm battered ships to undergo repair. One of the main problems for navigation around the Cornish coasts had been the similarity of headlands prior to the erection of lighthouses and beacons. Falmouth served as a large natural harbour, however it was still disaster prone with Black Rock constituting a major navigational hazard right at the harbour entrance. Fowey reputedly of easy access was without a harbour light during the mid-nineteenth century the *West Briton* is quoted as reporting:

> ....Fowey harbour undoubtedly blind; Blind by nature, blind by art, a vexatious defect, involving, doubtless, the loss of much profitable custom by ocean wayfarers, who would look in, and storm driven ships seeking shelter, but find it not, for this barbaric, inhospitable, and impolite neglect....[62]

Padstow was adapted as a port of refuge by cutting back large sections of rock at Stepper Point following a public meeting in 1845 brought about by the huge number of shipwrecks on adjacent coasts. Life-saving in Cornwall had been the province of local fishermen, boatmen and coastguards who bravely manned the lifeboats. Henry Trengrouse a great contributor to the cause of life-saving and inventor of the rocket assisted life saving apparatus came from Helson and began his experiments across the mouth of the Porthleven harbour. Lifeboats of the

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[61] *Devon Shipwrecks, op. cit.*, p.171.

[62] The *West Briton*, March 1864, and quoted in *Mayday - Preserving Life from Shipwreck off Cornwall*, Sheila Bird (1991).

Shipwreck Institution were placed in Cornwall at Penzance 1826, Padstow 1827, Bude and St. Mary's (Isles of Scilly) 1837, St. Ives 1840, Sennen Cove 1853, and Lizard and Polkerris (Fowey) in 1859.

Of all the fearful West Country wreck locations, the Scilly Islands were the most revered, especially amongst the masters of sailing ships.[63] Few coasts around the world may have borne witness to such a phenomenal catalogue of shipwrecks as have occurred over the years in this area of rocks, shoals and reefs, conflicting tides, currents and storms. The first lifeboat at St. Mary's, Isles of Scilly was established in 1837 and only remained for three years to be followed on March 20th 1840 by another of the Plenty type, her only recorded service was to the aid of the steam packet *Thames* on January 4th 1841. As with many other lifeboats around the coast the men who had to man them often preferred their own type of vessel for various reasons often connected with local conditions. To this extent the lifeboat at the Scilly Isles was effectively abandoned having fallen into neglect until the re-establishment of the lifeboat station in 1874 following the wreck of the *Delaware* and the four masted barque *Minnehaha* that struck Jolly Rock in January 1874.[64]

2(vi) Wales and the West Coast: Like the Cornish coast the coast of west Wales was along the track of the traffic of the Irish Sea for Liverpool and the Clyde. The opening lines of the "Sailing Directions for the Bristol Channel" dated 1868 concerning the Welsh coast reads:

> ....Mariners navigating the Bristol and St. George's channels, should always pay the greatest attention to the velocity and direction of the tides; for there is commonly a northerly indraught, which, setting obliquely towards the shores of Wales, particularly between Hartland Point and Holyhead, frequently drives a vessel out of her regular course, and occasions most fatal accidents. The direction and force of

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[63] An extensive list of wrecks that have occurred around the Isles of Scilly has been prepared from records compiled by Charlotte Dorrien Smith, Mr C.J. Davies and Mrs Noel Jenkins as: Isles of Scilly Museum Publication No.3, "Shipwrecks around the Isles of Scilly" (1950).

[64] For an account of the lifeboat service at St. Mary's, Isles of Scilly see *Mayday, op. cit.*, p.66.

> the current will materially depend on the wind and tide; and the mariner navigating from Land's End towards Dublin, will find himself insensibly carried towards the eastward.... vessels, therefore, when off the coast of Wales, particularly in dark and foggy weather, and with westerly winds, cannot be too careful in shaping their respective courses; for should they neglect such precaution, they will incur the danger of being wrecked....[65]

This extraordinary tidal set was just one of many contributing causes of shipwreck around the coast of Wales. The coast was essentially a rugged one with few harbours of refuge. In the second week of 1819 the western seaboard of Wales bore the brunt of a ferocious west-south-west gale that sent many ships to their end all along the coast. On January 9th *Ranger* (Belfast to London) was driven on shore close to Holyhead, on the 11th January the *Betsy* (Waterford to Bristol) was wrecked with the loss of three passengers and her Master when she hit Traith Bar near Carmarthen, then that same day the entire crew except for the chief mate was lost from the *Friendschaft* (Liverpool to Havre) as she was driven on Malldraeth sands in Ynys Mon. In the same storm the *John & Catherine* (Teignmouth to Glasgow) foundered off the Smalls and the *Venerable* loaded with West African palm oil and ivory was driven ashore at Newport. Along this coast it appeared that stranding, either by hitting the coast or being marooned on sand-bars for whatever reason (navigation, equipment failure etc.) was by far the most common form of shipping casualty, followed by collisions, fire and foundering. The *City of Bristol* was a victim of such stranding on November 18th 1840 when having passed Caldy Island and mistaken Worms Head for Barry Holmes she drove into Rhossili Beach. In an attempt to prevent shipwreck at Nash Sands near Porthcawl, Glamorgan two lighthouses were completed by 1832 at Nash Point, designed by James Walter, the Engineer-in-Chief of Trinity House. As with most advances in the prevention of shipwreck it necessitated a disaster to bring about change. The disaster that finally prompted the building of

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[65] "Sailing Directions for the Bristol & St. George's Channels, 1868", quoted in T. Bennett, *Shipwrecks around Wales*, Vol.I, p.8, Newport (1987).

the lighthouses on Nash Point was the loss of the paddle steamer *Frolic* and those on board, about 55 people in all on March 16th 1831.[66] These lighthouses carried fixed white lights, which if kept in line lead ships safely to the south of Nash Sands. By a similar twist of fate the wreck of the *Rothsay Castle* on August 18th 1831 had brought about the establishment of the Pennion Lifeboat Station in 1832 and the Pennion Lighthouse in 1837.[67] Other notable shipwrecks along the Welsh coast that moved the nation to grief and public outcry during this period were the loss of the *Royal Charter* on October 26th 1859 in one hundred mile per hour winds against the lee shore of Moelfre, Anglesey;[68] the *Olinda*, one of the finest liners of her day wrecked nine months from her launch on January 26th 1854 on rocks due to pilot error, again Anglesey at Harry Furlough's Reef, Cemlyn; and the *Ocean Monarch* by fire off Orm's Head on August 26th 1848 with the loss of 178 lives.[69]

Again, as with Cornwall, the Isle of Wight and Kent plunder from wrecked vessels was a feature of the north-west coast, particularly the Wirral peninsular of Cheshire where ships bound in and out of Liverpool often came to grief and the inhabitants of this area were considered to largely live from the proceeds of wrecking. Evidence collected in 1839 contains many derogatory statements about them, Holylake in particular: "They are all wreckers"; "....a wreck takes place, and the wreckers unless prevented by the assistance of the police from Liverpool, plunder and do as they please"; "....the men live entirely upon the plunder of the

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[66] An account of the building of the Nash lighthouses and the loss of the *Frolic* is given in *Shipwrecks around Wales, op. cit.*, pp.42-43.

[67] For an account of the loss of the *Rothesay Castle* see *Ibid.*, pp.88-89. Also see Appendix C; and for an intensive near contemporary account see *Notable Shipwrecks - being tales of Disaster and Heroism at Sea*, re-told by Uncle Hardy, London (1879), Ch.VI, pp.82-97.

[68] For an account of the loss of the *Royal Charter* see A. McKee, *The Golden Wreck, "Tragedy of the Royal Charter"*. Also for a near contemporary account see *op cit., Notable Shipwrecks...*, Ch.XV, pp.221-233.

[69] For an account of the loss of the *Ocean Monarch* see *The Times*, August 26th 1848. Also see *op cit., Notable Shipwrecks....*, Ch.VIII, pp.116-125.

wrecks....".[70] These statements were considered by many to be equally the case for the Lancashire and Welsh coasts. As regards Cheshire in particular the following statement may illustrate the depth of depravity of the Wirral wreckers:

> ....about three or four years since the *Grecian*, Capt. Salisbury was wrecked off the Cheshire coast; Capt. Salisbury was drowned, and when his body was found it was stripped of everything, and whilst on the shore waiting to be conveyed to some house for holding an inquest his finger was cut off to secure his ring. The body of a female was washed on shore, when a woman at Moreton (a village in the neighbourhood) was proved to have bitten off the ears to obtain the earrings.... .[71]

Whilst the activities of wreckers prevailed along these coasts there also existed a more humanitarian initiative toward the incidence of wreck. Liverpool Bay had some of the earliest lifeboat stations, not entirely because of humanitarian urges but also due to the rapid growth and economic expansion of Liverpool.[72]

2(vii) Scotland: The coasts of Scotland were said to be in need of deep-water harbours of refuge as on the east coast from Pentland Firth south to Cromarty (approx. 100 miles) there existed nothing but small harbours that were mostly

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[70] *First Report of the Commissioners appointed to inquire as to the best means of establishing an efficient Constabulary Force in the Counties of England and Wales*, BPP 1839 (169), Vol.XIX, pp.56-58.

[71] *Ibid.*, p.59.

[72] See G. Farr, *British Lifeboat Stations - A Historical and Geographical List*, Bristol (1979), in which it is stated: There was a boat set aside at Formby, provided by the Docks Committee of Liverpool Corporation in 1776. This was documented by a note at the foot of P.L. Burdett's "Chart of the Harbour of Liverpool" - not the first edition of 1771, but on that corrected to 1776, this reads:

> N.B. On the Strand about a Mile below FORMBY Lower Land Mark there is a Boat House, and a Boat kept ready to save lives from Vessels forced on Shore on that Coast, and a Guinea, or more, Reward is paid by the Corporation for every human Life that is Saved by means of this Boat, & c.

Also N. Leach "Early Life-boats in Liverpool Bay", *Mariner's Mirror*, Vol.81, No.1 (February 1995), pp.21-31.

inaccessible for twelve hours of every twenty four. A similar situation was said to exist from Moray Firth round by Peterhead to the Firth of Forth, excluding the Tay. Despite the lack of harbours of refuge it was along this coast that the majority of the Baltic trade and all the Greenland, Archangel, Davis Strait, and much of the Canadian and United States trades had to pass. As well as this foreign trade there was a thriving herring fishery with 250 fishing boats at Peterhead, in excess of 400 vessels at Fraserburgh and Buckie, and further north off the coast of Caithness more than 1200 fishing boats manned by 6000 men.[73] It was for the safety of all these vessels that some form of harbours of refuge were required. On the west coast of Scotland there hardly existed any charted lights for virtually the entire west coast and islands with the exception of Scalpa lighthouse between the Isles of Harris and Lewis, Barra Head (south of Barra), Stornaway in the islands and Lismore Isle to the east of Mull (in Loch Linnie) with Cape Wrath in the north. For an area of outstanding danger to shipping regarding rocks and headlands this was the alarming situation in 1845.[74] Shipping losses around Orkney and Shetland were particularly bad in the winter of 1847-8 when a large number of ships were wrecked or severely disabled by heavy weather including the barquentine *Humber* of Hull on 18th December 1847 wrecked at Howabister Nestling with a cargo of cotton goods on board. Later shipping losses were said to have lessened in some measure after the winter of 1847-8 due to the slowly expanding network of coastal lights. Nevertheless the wreck of the *Exmouth* in 1847 and later the *Anna Jane* in 1853 maintained the notoriety of the west coast of Scotland as one of the most dangerous in the British Isles. On Sunday April 25th 1847 there occurred one of the most disastrous of Scots shipwrecks of the mid-century. An emigrant ship the *Exmouth* (320 tons) had left Londonderry with 240 Irish emigrants, mainly small farmers and tradesmen on-board hoping to start a new life in Canada. Shortly having left Ireland the wind had gradually freshened, going from the west to the north, by Sunday night it had grown into a

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[73] See "Shipwrecks", *Quarterly Review*, 104, July-Oct 1858, p.195.

[74] See *Chart exhibiting the lighthouses and lightvessels on the coasts of Great Britain and Ireland, 1845*, in *Report from Select Committee on Lighthouses*, BPP 1845 (607).

full gale that lasted throughout Monday and into Tuesday. On the Tuesday, having shipped heavy seas, had the ship's boats washed away and the sails torn to pieces one of the crew glimpsed a light as the brig rose to the top of a wave. The brig was steered towards the light that was mistakenly thought to emanate from an island off the north-west coast of Ireland - instead the ship was being directed to the rocks of Islay and 251 people perished leaving only 3 to tell the tale.

Again in another classic incidence of shipwreck the *Anna Jane* of Liverpool it too an emigrant ship, this time with 450 passengers was wrecked on 29th September 1853 on Barra Island further north in the same group of Western Islands. She was bound for Quebec and Montreal with Irish emigrant families, some progress had been made in crossing the Atlantic but had eventually lost her mast and had to run before the wind. For three days she ran before the wind before land was sighted on the lee bow, this was ascertained to be Barra Head in the south of the Hebrides group. Having managed to negotiate the head from which the lighthouse rose 680ft she got into a large bay and was eventually driven ashore and was broken up by an overpowering sea, 393 people either beaten to death or drowned, there were 102 survivors. In these cases the lack of coastal lights would probably have made little difference, these vessels were essentially at the mercy of a driving sea that put them into danger as soon as land appeared in their lee. Only the possession of a powerful auxiliary engine which was to come later in the century, as steam engines became more widespread, could have produced a different outcome.

The north and east coast of Scotland gave rise to some of Britain's earliest lifeboat stations amongst which were: St. Andrews (to the south of the Firth of Tay) 1800, the forth oldest station in the UK; Montrose 1801; Sunderland North 1801; Aberdeen 1803; Arbroath 1804; Fraserburgh 1809; Dunbar 1808; and Sunderland South 1809. Their existence reflected local plentiful supply of men to man the lifeboats from fishing and shipping trades. Their foundation was associated with ship owners, concerned groups and philanthropy. On the west coast lifeboat stations came into being adjacent to areas of need, Ardrossan for example (1801) in the way of the Clyde estuary.

In the Report to the Commissioners of Northern Lighthouses on the harbours of Scotland, 15th March 1848, complaint had been mentioned of the

insufficient number of lighthouses and the inadequacy of beaconage and buoyage. The Committee considered this to be founded upon misconception. Nevertheless several suggestions were made to increase the lights and bouyage e.g.: A light to be placed upon Little Head, Thurso; a small harbour light at Hestan; proper lights to lead up to anchorage at Stromness in the Orkney Isles; the need of a bell-bouy in the Solway Firth and most necessary the removal of wrecks from fairways etc. Whilst much had been done to aid navigation the report suggested a multitude of other measures that could be taken.[75]

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[75] *Report by Committee of House of Commons of Northern Lighthouses relative to Rep. by the Examining Comm. on Harbours of Scotland*, BPP 1847-48 (171).

Chapter Three

The human response to tragedy

3(i) Humanitarian sentiments and the development of the lifeboat: For centuries Britain's coastal waters had been a graveyard for ships. Lying in the path of some of the worst weather in the world, Britain's western coasts present an uncompromising lee shore to the prevailing south-westerly winds. The North Sea with its banks is a relatively shallow and hence choppy area and can produce waves of up to sixty feet during winter storms. The English Channel is bounded by many areas of rock, with an extremely busy Dover Strait. Given the physical limitations to navigation especially when set against poor visibility due to storm or fog and the very real possibilities of human error, it may appear inevitable that shipwreck would occur as frequently as it did. Coastal communities and seafaring men everywhere were constantly aware of the horrors of shipwreck. It was from this awareness and association with local tragedy that sentiment evolved into action. By the last quarter of the eighteenth century sentiment began to bring about change and initiatives were instigated to attempt the rescue of shipwrecked mariners.

As with many other areas of political and social change it was not through direct government legislation - identifying a problem area and offering an initiative toward a solution - the solution came largely from public sentiment, people aware of a localised and grave injustice to their fellow kind and motivated to do something about it. The biggest problem initially as far as shipwreck was concerned was that there did not exist the means to turn this sentiment into action. Until the late eighteenth century there had been no suitable boat designs, safety equipment (such as life-jackets) or rescue techniques developed. Often, as Dickens had described in *David Copperfield*,[1] crowds just stood and watched the tragedy unfold before them, knowing that they were powerless to intervene, that is until perhaps some very

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[1] *The Personal History of David Copperfield*, Charles Dickens, Ch.LV "Tempest", pp.791-795, London (1971).

motivated onlooker may have attempted a desperate act of heroism. Rescue at sea is often a spontaneous act, and despite records of wreckers in action all along the coasts as late as the early nineteenth century there are also numerous authenticated records of rescues going far back into the eighteenth century, some of which were carried out by the very boatmen whose livelihood may have depended on the proceeds of shipwreck. In this respect the humanitarian aspect of rescue from drowning at sea seems indomitable; it was the lack of suitable equipment and organisation that prevented more widespread saving of life until well into the nineteenth century with the formation of the "Shipwreck Institution" in 1824.

By 1800 there existed, albeit in somewhat embryonic form the basis for many of the institutions that were to help change the fate of shipwrecked seamen by the middle of the nineteenth century. Trinity House the earliest official presence on the coast can trace its origin at least back to 1514 when on the 20th May, King Henry VIII granted them a Charter to establish a Guild of Mariners - "The Corporation of Trinity House of Deptford Strond". The purpose of the Guild was stated to be the consideration of matters concerning maritime science and the art of mariners. By the reign of Elizabeth I, according to Langmaid[2] the connection between Trinity House and the national requirements for coastal navigation had began in earnest when Parliament enacted that the Corporation might set up:

> ....such many and so many Beacons, marks signs for the sea in such a place or places of the sea-shores and uplands near the seacoasts or forelands of the sea whereby the dangers may be avoided and escaped and ships the better come unto their ports without peril....

This Act was of vital importance, as from it the association between Trinity House and the management of lighthouses was established. Also during the Elizabethan era the rights to ballastage in the River Thames and of buoyage and beaconage around the coast was transferred to Trinity House. Most of the records of Trinity House were destroyed by fire in 1714; nevertheless by the turn of the nineteenth

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[2] K. Langmaid, *The Sea,Thine Enemy; A Survey of Coastal Lights and Lifeboat Services*, Jarrolds (1966).

century an extensive national system of lighthouses, lightships and buoyage existed enabling some degree of safety and ability concerning offshore navigation.[3]

The Coastguard formally came into being in January 1822, prior to which it had existed as the Preventive Water Guard from 1809. Riding Officers of the Customs and Excise that patrolled the coast (and inland) had been formed in 1688 and were not officially disbanded until 1865. The war with Napoleon and the information given to him by the smugglers caused the British government to overhaul and strengthen its preventive forces. From 1809 the Preventive Water Guard effectively divided the English coast into three divisions: Carlisle to Land's End, Land's End to North Foreland (north-east tip of Kent) and North Foreland to Berwick. Naval Officers were appointed and given the title "Inspecting Captains". Their orders were to sail up and down the coasts of their respective divisions and to check on the boats and cruisers under their command. There were 10 cruisers and 13 boats on the western coast, 23 cruisers and 42 boats on the southern coasts and 9 cruisers and 13 boats on the east coast. Thus smugglers had a triple cordon around the coasts to prevent their activities: Revenue cruisers out at sea, the Preventive Water Guard in coastal waters and the Riding Officers.[4]

Although initially set up to prevent the running of contraband[5] the Preventive Water Guard was made responsible for giving every assistance to save life when a ship was wrecked.

> ....The Guard was given full instructions as to what it should do, even down to establishing an order of preference for those in authority at the scene of the wreck. The master of the wrecked ship and representatives of the owners of

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[3] See *The Sea, Thine Enemy*, *op. cit.*, Ch.3. Also, *A Chart exhibiting the Lighthouses and Lightvessels on the Coasts of Great Britain and Ireland; and also those on the N.W. Coasts of Europe....*, Published January 1st 1863, By Order of the Honble. The Corporation of Trinity House, constructed by A.G. Findlay, quoted in *For Those in Peril*, National Maritime Museum. HMSO (1963). Also, *Bill for vesting Lighthouses on Coast of UK in Corporation of Trinity House and for making provisions respecting Tolls and Duties*, BPP 1835 (398), III.333.

[4] For a full account of the history of the coastguard see, W. Webb, *An Official history of HM Coastguard*, HMSO (1976); especially Ch. 2 on the early history.

[5] It was the vast increase in customs duty on such items as tea, spirits, tobacco, silk etc. - authorized in an Act of William III that made it very profitable to "import" these goods without paying the duty.

> the vessel always took priority. In their absence it would be a Customs officer, an Excise officer or an official of a civil authority.... .[6]

The first formal initiatives that can be described as aiding the alleviation of distress due to shipwreck would appear to have come from "The Institution for affording immediate relief to persons apparently dead from drowning", later "The Society for the recovery of persons apparently drowned" - by 1776 "The Humane Society" and by 1787 it had acquired the prefix "Royal" on the grant of royal patronage from King George III. The joint founders Dr William Hawes (1736-1806) and Dr Thomas Cogen (1736-1818) convened a meeting on the 18th April 1774 at the Chapter Coffee House, St. Paul's Churchyard, London at which they each invited 16 of their friends to assist them in founding an institution "for the immediate relief of persons apparently dead from drowning". It is clear from the earliest initiatives that their interests in resuscitation extended into spheres far wider than purely loss of life by drowning. At this time there had been initiatives for the treatment of apparently drowned persons at many places where the proximity of water constituted a danger to life. A Society had been formed in Amsterdam in 1767. In 1768 the Magistrates of Milan and Venice issued orders for the treatment of drowned persons, Hamburg had passed an ordinance in 1769 which provided for the reading in churches of notices concerning assistance to the drowned etc. Paris had founded a similar institution in 1771 and this was followed by the creation of societies in St. Petersburg and London in 1774. Dr William Hawes had been personally rewarding rescuers that had brought ashore bodies recovered from the River Thames[7] (between Westminster and London Bridges) and had practised the methods of the Dutch Society prior to the inception of the new Society. The presentation of awards for rescue - acknowledgement of an humanitarian act was therefore taken over by the new Society.[8]

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[6] *An Official history of HM Coastguard, op. cit.*, p.16.

[7] Much as is depicted in C. Dickens, *Our Mutual Friend*, where in the first chapter "On the Look-Out" Jesse Hexam ("Gaffer") and his devoted daughter Lizzie are looking for and removing bodies from the Thames. Oxford (1952)

[8] See P.J. Bishop, *A short history of the Royal Humane Society - to mark its 200th anniversary*, London (1974), pp.1-5.

Humanitarian initiatives directly concerned with shipwreck and the rescue of shipwrecked mariners from the stricken vessel began largely as localised attempts to prevent recurrent loss of life in areas of intense shipping activity where frequent tragedy motivated local people to act. Such action inevitably occurred in the vicinity of the nation's great river estuaries; at the expanding ports, essentially as the result of economic demands where the shipping industry was flourishing during the early stages of industrialisation. Humanitarian acts were often rewarded and encouraged by local societies and initiatives, such was the case outlined in a letter of John Angus to his sister concerning his jumping into the London Dock on a dark night to save a woman who had fallen in during December 1865. Captain Bevis RN, an agent for the Humane Society was instrumental in awarding to Angus "a valuable pair of ship's glasses".[9]

The location of Britain's first lifeboat station was for a long time acknowledged to be on the north-east coast in the vicinity of Bamburgh, Northumberland:[10]

> ....A document dated Christmas Eve 1771 described an elaborate organisation in Bamburgh Castle for warning ships of danger and for helping shipwrecked

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[9] Letter of John Angus to his sister from SS *Great Britain* in the River Mersey February 16th 1866. Also in the archives of the SS *Great Britain* for instance a seaman's diary makes mention of a rescue at the time of the wreck of the *Royal Charter*. (Diary of Thomas Melling Down, referring to the actions of Joseph Rodgers). And again on the theme of reward there is an earlier recorded instance of rescue concerning John Angus, where in a letter to his father it refers to him saving the life of a shipmate in the South Seas by heroically jumping overboard while the vessel was underway to rescue Joseph Mallet. He was subsequently awarded the silver medal of the Shipwrecked Fishermen and Mariners Benevolent Society and passengers contributed a telescope as a mark of their admiration of his noble and humane act. Archives of SS *Great Britain.*

[10] The claim began to be disputed from the late 1970's when Mrs Barbara Yorke a native of Formby in Lancashire assisted by her husband Dr Reginald Yorke began to investigate certain municipal records in Liverpool In a council minute dated 5th March 1777 - predating Lukin's coble at Bamburgh by almost ten years - it gave instructions for repairs to be carried out to "the boat which was formerly ordered to be built and kept at Formby, in readiness to fetch any shipwrecked persons from the banks". See, Barbara and Reginald Yorke, *Britain's first Lifeboat Station*, Formby (1982). Also, "Early Life-boats in Liverpool Bay", N. Leach, *Mariner's Mirror*, Vol.81, No.1, February 1995, pp.21-31.

> mariners. Two horsemen were instructed to patrol the coast from sunset to sunrise during periods of storms, and a large "speaking trumpet" was provided for communicating with ships.... .[11]

Dr John Sharp, Archdeacon of Northumberland and perpetual curate of Bamburgh was the chief administrator of the trust known as the Crewe Trust that controlled the activities of Bamburgh Castle. It was Sharp who first heard of the work of Lionel Lukin an inventive coach builder whom it was said to have been experimenting with "an improvement in the construction of boats.....which will neither overset in violent gales, nor sink if they should be filled with water".

In 1784 Lukin converted a 20ft Norwegian yawl, adding a cork belt projecting from the gunwales covered in a protective sheath. The vessel called *Experiment* had inside watertight containers at bow and stern and cork blocks to increase buoyancy. To keep the craft upright a cast-iron keel was added. The *Experiment* successfully completed trials on the River Thames. On the 2nd November 1785 Lukin obtained a patent for his invention and having unsuccessfully attempted to interest the Royal Navy he lent the *Experiment* to a Ramsgate pilot for rough weather testing - never to see it again. He constructed another boat *Witch* that impressed many with its sea-keeping qualities, but again he failed to attract commercial interest. Archdeacon John Sharp asked him to convert a coble according to his new principles for sea rescue at Bamburgh. The arrival in 1786 of a converted coble to be used exclusively for life saving established Bamburgh's claim to be the world's first lifeboat station.

Lukin is now generally acknowledged to have been the inventor of the lifeboat, but he did not receive the credit due to him at the time. Several others made claim to the title of lifeboat inventor. In 1765 a Frenchman, M. de Berniers, the French Controller-General of Bridges and Embankments had a boat fitted with air cases at stem and stern that could right itself quickly when overturned. Despite having conducted successful experiments with this boat culminating in trials before a distinguished gathering at the gate of the Invalides in Paris, in August 1777, there was no evidence that the boat was ever used for lifesaving. The first true purpose

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[11]See P. Howarth, *Lifeboat in Danger's Hour*, Hamlyn, London (1981).

built lifeboat, a vessel designed from the outset for that one specific task is generally considered to be the *Original* of Henry Greathead.

The wreck of the *Adventure*[12] at the mouth of the Tyne in March 1789 was a particularly frustrating and horrifying sight for those on the shore as her crew could clearly be seen dropping helplessly from the rigging into the sea. This incident motivated local interests - "Subscribers to the News-room, at the Law-House South Shields"[13] - the Gentlemen of the Law House to offer a prize of two guineas for the best designed life preserving craft. William Wouldhave won, though the adjudicating committee only saw fit to award him one guinea. Two members of the committee - Rockwood and Fairles modified Wouldhave's design. Another competitor Henry Greathead was then commissioned to construct a boat that combined Wouldhave's modified design and his own. Completed in 1790 Greathead's lifeboat *Original* served for over fifty years.[14] The success of the *Original* in saving life over its 50 years of service earned Henry Greathead £1200 from the House of Commons, on the basis of a report of a Select Committee appointed in February 1802 to enquire into the originality of the invention.[15] The

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[12]*Lloyd's List* for March 1789 reads: "The *Adventure* Stachen from London to Shields is lost near Shields," in the Marine List of *Lloyd's List*, No.2076, Friday 27th March 1789.

[13]Archives of the Royal Humane Society, Annual Report for 1802, p.51.

[14]See *Ibid.*, referring to the *Original:* "....inevitably attending vessels and their crews coming on the sand at the south entrance of Tynmouth Haven.....the first boat for that purpose, with a house for the preservation (which serves as a depot for ship's material saved), were built at the expense of the ship owners of that port; and on the 30th January 1790 her utility was first experienced when she exceeded the most sanguine expectations: so much so, that the Cork jackets that bought for the persons going off in her, are now never used"..... "The boat is about thirty feet long overall, and ten feet broad, built in a slaunching manner, REPRESENTED in the Cut and decked at the Floor Heads, ROWS TWELVE OARS, fixed with Grummets on Iron Pins, is steered by one, and covered with Cork on the outside two or three strokes down from the Gunwale, will carry 30 people well, and live in a most tremendous broken-head sea....".

[15]See *Select Committee of Petition of Henry Greathead relating to his Lifeboat.* Rep., App. BPP 1801-2 (37), II.169. To this Select Committee Rowland Burdon Esq. MP presented a petition on behalf of Mr H. Greathead: "A ship-builder at Durham invented a model, which was adopted, and according to which lifeboats used at Scarborough, Lowestoft etc. on the coast were built. He had a petition from that person, praying compensation, as the discovery was not of that kind which could

Royal Society of Arts awarded a gold medal and fifty guineas, one hundred guineas was given by the Trinity Corporation and a hundred guineas from the subscribers of *Lloyd's* (who also voted £2000 for encouraging the building of lifeboats on different parts of the coast), the Empress of Russia gave an elegant diamond ring. Besides the material benefits Henry Greathead had earned widespread recognition.[16]

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reward him by sale, as he had in fact humanely given away a model to every person who applied for one, when it was considered that no fewer than 700 lives had been already saved by LIFEBOATS constructed on this model; that there was no instance in which they were not successful; and that an extensive use of them must be productive of incalculable advantage; he had no doubt that the House would attend to the prayer of the petition....". Archives of the Royal Humane Society, Annual Report (1802), p.49.

The Select Committee were further convinced of the authenticity of Henry Greathead's invention of the lifeboat by his own testimony before them in which he describes conceiving the idea as from the properties of a spheroid: "....if divided into quarters, each quarter is elliptical, and nearly resembles the half of a wooden bowl, having a curvature with projecting ends: this, thrown into the sea, or broken water, cannot be upset, nor lie with the bottom upwards....This was confirmed by Mr Hinderwell a shipowner of Scarborough....The peculiar nature of the curvature of the keel of the Life Boat, is the foundation and basis of its excellence....".

Also, James Court writing on behalf of the Elder Brethren of Trinity House to back Rowland Bardon's petition: "....having received repeated testimonies of the utility of the Life Boat invented by Mr Henry Greathead of South Shields, in saving the lives of shipwrecked mariners, are of the opinion, that the invention is of such national importance as to merit every possible encouragement.....". Archives of the Royal Humane Society, Annual Report (1802), pp.48-49.

[16]It would appear that Henry Greathead was not motivated by any material gain - but to produce a solution to the then seemingly helpless plight of the shipwrecked, referring to Henry Greathead's boat: "....The wreck was approached in spite of the elements; and the wretched crew, equally affected with astonishment and ecstasy, beheld the Life Boat alongside their shattered vessel, and offering refuge from the tremendous abyss, that was going up to swallow them for ever - Restored to life and hope, they were removed and conveyed to land to the unspeakable joy of the benevolent proprietors of the plan....".

From the same article it suggests that Henry Greathead was not at all profit or fame motivated, but that his main concern was for the preservation of life: "....For several years, the ingenuity and labour of Mr Greathead was not sufficiently remunerated; for waving the idea of exclusive profit, when the preservation of life was the object, he neglected to secure his invention by patent, and even furnished plans and models from which the Life Boat might be constructed by others....". Archives of the Royal Humane Society, Annual Report 1802, p.69.

Wouldhave's tombstone proclaims him to be the inventor of the lifeboat as does Lukin's who might be credited with being the first who built a "Life Boat", but it was Greathead who reaped the praise and benefits of the many designs at this time.

Humanitarian sentiment coupled with philanthropic interest and motivated by real tragedy, encouraged by the arrangement of competitions and prizes for life saving inventions had by the early years of the nineteenth century started to bring about a real change in the lot of the shipwrecked mariner and aided the alleviation of suffering. It is in the context of the rapid economic changes in commerce and the merchant service, that occurred during the last quarter of the eighteenth century that this response may be best understood.

By the closing years of the eighteenth century the Royal Humane Society had instigated a competition that was eventually extended to the third week in March 1803[17] in which an honorary gold medal was offered as a first prize followed by prizes of 2nd, honorary silver medal, 3rd ten guineas, 4th five guineas, 5th three guineas; for an essay, models and drawings that best answer the following questions:

I. What are the best means of preventing shipwreck?

II. What will be the most probable means of keeping vessels afloat if they spring a leak or are otherwise in extreme danger?

III. The most certain methods of conveying assistance from shore to vessels in distress within a certain distance of land, and when boats dare not venture to their aid?

It would appear that by May 1801 such models and drawings that had been submitted were not judged to be of sufficient significance, and that the date was

[17] *Ibid.*, p.46.

extended in the hope that some better ideas would be forthcoming.[18] If it did not produce any revolutionary new plans at the time the competition did at least suffice to generate public attention and response to the problem. The idea of action, the possibility realised that shipwrecked mariners could be saved and that death was not inevitable started a wave of sentiment that ultimately resulted in the formation of the National Institution for the Preservation of Life from Shipwreck.[19]

Further incentives followed. Anthony Fothergill, M.D., F.R.S. and member of several learned societies, in his will dated 1810, bequested as follows:

> "To the following societies in Trust - £500 each, the interest of which is to be laid out in Gold Medals or Honorary Premiums for promoting Medical Knowledge and other useful arts" (*inter alia*):

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[18]Archives of the Royal Humane Society - letter from the Elder Brethren of Trinity House, London, May 21st 1801, from James Court: "....I have their commands to acquaint you that they are of the opinion, that they are not worthy of the Honorary Premiums....".

[19]In a letter to the Royal Humane Society (Archives of RHS) dated February 1800 it reads: "THE FREQUENCY OF SHIPWRECKS on our coasts and the number of lives that are hence lost, are serious subjects of regret - It seemed, therefore well imagined by the HUMANE SOCIETY, to endeavour to excite men of genius to contrive machines, etc. either to enable vessels to support themselves longer or better at sea during a storm, or, when foundered, to assist in preserving the lives of the persons on board".

Such incentives as the prize competitions attracted all sorts of ideas, for example in a letter from Lord Henniker to Doctor Hawes (Archives of RHS - dated December 8th 1801, Thornton Hall near Twaite): "....A Life Boat all over England would be a very good thing indeed; and I should be ready to join, by my voice or by my purse, to promote such an undertaking: but in many places where that is not to be had, a LIFE-BUOY may be purchased, and always ready....". He goes on in some detail to describe the "man saver".

The work and influence of the Royal Humane Society extended abroad as the following (from the archives of the RHS - J.D. Herhold & C.G. Rafn, Copenhagen, 1800) contests (translated from the Danish): "....Among A VARIETY OF SUBJECTS, none appeared to us more important than the cause of death of drowned persons and the means of restoring life. - Nothing could affect us more than the fate of such persons in our native country".... "O! THAT OUR ESSAY, though imperfect, might in some respect contribute to inspire the minds of our opulent fellow - citizens with such benevolence, as may induce them once to consider an Institution of this nature....".

> Firstly, To the Royal Humane Society of London £500 the produce of which is to constitute an annual or biennial Medal for the best essay or discovery on the following subjects:
>
> 1st "On the Prevention of Shipwreck".
>
> 2nd "On the Preservation of Shipwrecked Mariners or other circumstances left to the societies discretion".

At the end of the bequests are the words "The above to be varied at the Societies discretion".[20]

The Fothergill Medal acted as yet another incentive to inventors and men of vision concerned with the loss of life due to shipwreck, although only three medals were ever awarded and none concerned shipwreck directly. Among those nineteen essays

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[20]Archives of the Royal Humane Society - Anthony Fothergill's bequest. Dr Fothergill had been a Life Director of the Royal Humane Society and in instigating the essay "On the Preservation of Shipwrecked Mariners" he may be seen as the prime mover within the RHS concerning the fate of shipwrecked mariners. He originally proposed in a paper the subject for a prize question - the means of preserving the lives of shipwrecked mariners, in a letter addressed to the Managers and signed "A Life Director". *Vide* Annual Report for 1800, p.7.

Referring to Dr Fothergill's essay, a letter in *Gentleman's Magazine*, February 1802, Vol.I, Pt.72, p.131. reads: "....The dreadful consequences of the late storms at sea on the British coasts are enough as Shakespeare expresses it, "to harrow up the soul". Near 200 trading vessels, it seems have been wrecked, and many of the poor sufferers have perished within sight of various spectators on shore. If such a scene never fails to force tears and lamentations from ordinary spectators, what must be the heart rending sensations of widows and orphans of the devoted victims! What greatly aggravates our compassion in contemplating such tragical events, is the idea that many, very many of the late sufferers might by suitable means be rescued. I was lead to this train of thinking by having lately perused Dr A. Fothergill's Essay "On the Preservation of Shipwrecked Mariners", a work highly interesting to this maritime country, and which, as the Reviewers admonish ought to be universally read. The author appears entitled to the sole merit of having brought the subject before the Royal Humane Society and consequently before the public in order to call the attention of the Admiralty to the preservation of British seamen".

"....On whom can the CIVIC CROWN be more properly bestowed than on active individuals who, through mechanical ingenuity, or personal bravery, rescue their fellow creatures from the disasters of the deep, and restore them to their friends, and to their country...." Essay, "On the Preservation of Shipwrecked Mariners" - Dr A. Fothergill.

entered between 1812 and 1840 for the RHS Fothergill Medal that did concern themselves with shipwreck directly were those from: Capt. George W. Manby (1823), Capt. H. Evans (1825) and Henry Trengrouse (1826).

Having lost out on the big prizes, Lionel Lukin carried on as inventor and designer; he supervised the building of a 40ft boat for the Suffolk Humane Society. The boat, the *Frances Ann* was launched in November 1807 and performed well in all weather. She had three masts, lug sails plus three short oars. This was the first sailing lifeboat to be built and it saved 300 lives during 42 years service at Lowestoft.[21] In the first quarter of the nineteenth century many lifeboats were brought into service in Britain and elsewhere as the Suffolk example above. Many were paid for by *Lloyd's* and other shipping interests. One of the earliest lifeboat stations was established at Douglas, Isle of Man in 1802.

3(ii) The founding of the Royal National Lifeboat Institution: One who served in the Douglas lifeboat was Sir William Hillary who was to become the principal founder of the body which became known as the Royal National Lifeboat Institution.[22] In 1823 Hillary published in Douglas a pamphlet entitled "An Appeal to the British Nation on the Humanity and Policy of forming a National Institution for the Preservation of Lives and Property from Shipwreck". In Hillary's appeal, published through a number of sources he wrote:

> ....In the nineteenth century, surrounded by every improvement and institution which the benevolent can suggest, or the art of man accomplish for the mitigation or prevention of human ills, will it for a moment be capable of belief, that there does not in all our great and generous land exist one National Institution which has for its direct object the rescue of human life from shipwreck.... .[23]

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[21]R. Sharp, *The Life Boat*, (Spring 1991).

[22]See George F. Shee, "Sir William Hillary, founder of the institution", *THE LIFE-BOAT* (Journal of the Royal National Lifeboat Institution), May 1921, Vol.XXIV, No.273, p.159.

[23]Sir W. Hillary, "An Appeal to the British Nation on the Humanity and Policy of Forming a National Institution for the Preservation of Lives and Property from Shipwreck", *Pamphleteer*, London (1824), p.484. Also published by Whittaker, London (1824), *et al.*

The pamphlet came to the attention of James Wilson, a Member of Parliament for the City of London, and largely through Wilson's efforts an inaugural meeting was held at the City of London Tavern on the 12th February 1824. At the meeting the Archbishop of Canterbury, Dr Manners Sutton took the chair. The Bishops of London and Chester were present as were William Wilberforce, Captain G. W. Manby and many distinguished naval officers and Members of Parliament. Among the resolutions passed was one calling for an organisation to be brought into being named the National Institution for the Preservation of Life from Shipwreck - later to become popularly known as the Shipwreck Institution - ultimately by 1854 as the Royal National Lifeboat Institution.[24]

Sir William Hillary's former associations, his contacts and friendships enabled the appeal to the nation for a lifeboat service to get off to a flying start. By March 4th 1824 King George IV had consented to become Patron. The Prime Minister Lord Liverpool had been persuaded to become President and five Royal Dukes to become vice-presidents. Support was promised from the Archbishops of Canterbury and York, and from the Bishops of London, Durham, Bath & Wells, Chester and Bristol - no effort had been spared to enlist the most illustrious people. Hillary had succeeded in drawing to the nation's attention the plight of the shipwrecked mariner and organising the response of many of the country's concerned vested interests. In the first year £9,706, 6 shillings and sixpence was raised in subscriptions, with considerable sums paid from Trinity House and *Lloyd's.*

The appeal had acknowledged the "recompenses voluntarily given by the liberal institution of *Lloyd's*"[25] and "the very few associations scattered thinly on the coasts, and the valuable inventions and gallant efforts of those brave and enlightened officers who do honour to their country".[26] Hillary expressed "in bringing this deeply interesting subject before the public, it is my ardent hope that it

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[24]For the early history of Lifeboats see: P. Howarth, *Lifeboat in Danger's hour (RNLI)*, Hamlyn (1981), pp.7-13. A fuller account of the basis of the Shipwreck Institution may be found in: O. Warner, *The Lifeboat Service - A history of the RNLI 1824-1974*, Cassel, London (1974), pp.1-18.

[25]Sir W. Hillary, *op. cit.*, "An Appeal....", p.484.

[26]*Ibid.*

may call forth the attention of those better qualified to bring to perfection so important a work. Let this great national object but once again engage the attention of the public mind, and not any thing can arrest its course".[27] Also "that a national institution should be formed, equally worthy of Great Britain, important to humanity, and beneficial to the naval and commercial interests of the United Empire; having for its objects....".[28] Hillary then went on to list six principal aims the essential detail of which was:

> First....preservation of human life from shipwreck.
>
> Secondly....assistance to vessels in distress.
>
> Thirdly....preservation of vessels and property.
>
> Fourthly....prevention of plunder and depredations in case of shipwreck.
>
> Fifthly....succour and support of those persons who may be rescued.
>
> Sixthly....bestowing of suitable rewards on those who rescue the lives of others from shipwreck.[29]

The appeal which contains more than 7000 words detailed the problem and extent of the dangers, what should be done to alleviate them, the objects of the Institution, proposals concerning administration and finance, proposals concerning boats, equipment and volunteers, incentives and medals - indeed every conceivable aspect of a public body to administer a lifeboat service.

Besides being the instigator in achieving a national lifeboat service, Hillary had many other more directly technical ideas for aiding shipwrecked mariners. Shortly after his national appeal, in 1824 he published "A Plan for the Construction of a Steam Life-boat, also for the Extinguishment of Fire at Sea".[30] This was indeed pioneering and far sighted as steam was very much in its infancy where maritime applications were concerned.

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[27] *Ibid.*, p.485.

[28] *Ibid.*

[29] *Ibid.*, pp.485-486.

[30] Whittaker, London., (1824). (original manuscript now in the RNLI archives)

3(iii) The early evolution of rocket powered maritime rescue apparatus: By 1824 several other inventions had been developed and used successfully. Many of these had been if not motivated by, then helped along by incentives and prize competitions such as that of the Royal Humane Society. But no greater incentive could be given to a humanitarian motivation as by the actual witnessing of a tragedy. On February 18th 1807 Captain G.W. Manby had witnessed the loss of the gun brig *Snipe* at Yarmouth.[31] Manby, concerned at the needless loss of life close inshore, turned an inventive mind to the problem of bridging the dreadful gap between a stranded ship and the shore. He was a tireless experimenter in life-saving apparatus writing widely on the subject. He had devised a means of rescue whereby a mortar gun was used to convey a rope to the stranded vessel.[32] The attributes of the system had been discussed in parliament following extensive demonstrations and trials of the equipment, and by 28th May 1816 a list of mortar stations and their respective stores had been published in order to put Manby's plans into action. Ninety-seven stations, principally along the east and south coasts were established under the jurisdiction of the Water Guard (later the Coastguard).[33] By 1821 Manby

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[31]Capt. G.W. Manby, *Reflections on Shipwreck*, Yarmouth (1837): "....the effecting of the communication by means of a rope or line from the shore to the ship is impossible, and the agonized crew are seeking refuge in the rigging, to which they lash themselves as a protection from the overwhelming surge which is breaking over them, imploring that aid which you are unable to give. Such heart rending scenes were not unusual formerly: a most fearful one the narrator of this detail was doomed to witness on the 18th February 1807 at the back of Yarmouth Pier, on which occasion every effort, by the methods then in use, was tried, and every exertion in fruitless attempt was made to convey a line aboard, although the distance from the shore to the wreck did not exceed fifty yards. In this instance, the distressing sight of sixty-seven fellow creatures perishing, was an appeal to the heart, forcibly demanding the production of other plans more efficient, that would have rescued the unfortunate sufferers, and been the means of preventing a recurrence of similar disasters....". Quoted in *For Those in Peril*, National Maritime Museum, HMSO (1963).

[32]Extensive descriptions of Capt. Manby's methods were published in the *Gentleman's Magazine* - Vol.XCI, Pt. II, (1821), pp.161-167 (August) & pp.257-261, pp.356-360 (September). Extracted from: *Papers relating to Captain Manby's Plan for Relief in Cases of Shipwreck*, BPP 1816 (409), XIX.193.

[33]See, *Ibid.*, XIX.213.

was said by parliament to have been awarded a total of £6000.[34] By 1823 he applied to the Royal Humane Society to be considered for the Fothergill Medal in respect of this method of rescue.[35] The method of rescue had been developed from an earlier idea of some twenty years before by a Sergeant Bell whose object was to cast a shot from a mortar prepared onboard; whereas Manby's method was the reverse.[36] Manby stated:

> ....An iron mortar cast on its bed, and weighing with its bed two and a quarter hundredweight (which may be removed from place to place by two men on a hand barrow with ease) will propel a 24lb shot, with an inch and a half rope attached to it, 250 yards, or a deep-sea line, 320 yards, against the utmost power of the wind.... .[37]

There still remains some controversy as to the original inventor of the system as John Carey had claimed it as early as 1803 - although he was nothing like the innovator that Manby was.[38] In an extensive report of 7000 words, with engravings designed by himself and executed "at considerable expense by Mr Berryman", Manby covered all the technical detail of varying shot and rope techniques including methods of rescue "once communication had been effected". He had devised a "cot" to run on pulleys beneath the large hawser that was to have been pulled out connected to the thin mortar line once it had contacted the ship. He also mentioned a lighter more easily transportable mortar that could be carried by a single man and was shown before a Committee of the House of Commons on 14th

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[34]Although he claims to have only actually received £4000 from the government by that date, see *Gentleman's Magazine*, Pt. II, Vol.XCI (1821), p.360.

[35]Archives of the Royal Humane Society - letter from Capt. G.W. Manby to John Martin (Secretary), sent Yarmouth, August 29th 1823.

[36]See attribute to Lieutenant Bell in: *Report of Committee of Artillery Officers at Woolwich on Captain Manby's Invention for Saving Lives of Shipwrecked Mariners*, BPP 1810-11 (215) XI.111. Also, petition of Bell's daughter in: *Papers relating to Capt. Manby's Plan for Saving the Lives of Shipwrecked Mariners*, BPP 1813-14 (309), III.347.

[37]See *Papers ....in cases of Shipwreck* (1816), XIX.193.

[38]In *Gentleman's Magazine*, Pt.II, Vol.XCI (1821), p.360; Dr John Carey has extracts published from the *Monthly Magazine* for November 1803 describing a system of mortar cannon with wooden coloured balls and line - much as Manby's equipment.

May 1814.[39] He also made mention of other ingenious devices and ideas for the rescue of lives and property from wrecked vessels. He concluded by criticism of the then current lifeboat designs, which he had seen whilst undertaking "a survey of the coast under the command of the Government with a view to the establishment of a system of escape from shipwreck".[40]Manby considered them too large and cumbersome to have easily conveyed assistance where it was needed. He stated "These and other causes have not only thrown the Life Boat into disuse, but have produced such a neglect of it, that, in some places I found it decaying, and, in others actually gone to decay and falling to pieces".[41]

In the same year 1807, as Manby had witnessed the wreck of the *Snipe*, a Cornishman Henry Trengrouse had witnessed that of the *Anson* in Mount's Bay, in December:

> ....The tide had ebbed about an hour when she struck; on taking the ground she broached to with her broadside to the beach, and most happily heeled into the shore; had she, on the contrary, heeled off, not a soul would have escaped alive. Now commenced a most heart-rending scene to some hundreds of spectators, who exerted themselves to the utmost, at the imminent risk of their lives, to save those of their drowning fellow men.... .[42]

The scene caused him to vow to find a means of getting the survivors ashore. Trengrouse developed a rocket system based upon the work of Sir William

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[39]See *Papers relating to Capt. Manby's Plan for saving the Lives of Shipwrecked Mariners*, BPP 1813-14 (48), XI.415.

[40]Manby had surveyed the coasts on the basis of an agreement entered into between himself and the then Secretary of State for the Home Department - Lord Sidmouth. See *Papers relating to Capt. Manby's Plan for Saving Lives of Shipwrecked Mariners*, BPP 1813-14 (48), XI.417.

[41]*Ibid.*, Manby's observations at this time were well before the inception of the Shipwreck Institution in 1824 and could well have added momentum to the call for a national institution as he carried out his survey on behalf of the government and was also present at the inaugural meeting held under the chairmanship of the Archbishop of Canterbury.

[42]T. Tegg, *The Loss of the Anson*, (1808). Quoted in *For those in Peril*, Ch.XII, National Maritime Museum, HMSO (1963).

Congreve to carry a line to or from a wreck.[43] His proposal was awarded a large silver medal and thirty guineas in 1820 by the "Society ...For the Encouragement of Arts, Manufactures and Commerce". The apparatus included: a chest containing eight to twelve half-pound rockets; a musket and holder for directing and igniting them; a coil of small line for hauling on-board a hawser; a small light chair and a "life spencer of cork and canvas". There were two rollers to carry the chair (the forerunner of the Breeches buoy) which was hauled ashore by a light cord of which various thicknesses were carried, also powder, flints etc. The use of the Trengrouse equipment was tried with success by Rear Admiral Spranger in Yarmouth Roads during 1821 who describes:

> ....It consisted in throwing, by a rocket, a line from the ship to the shore, and when the communication is once established binding to that a deep-sea line, or any of the running rigging; and when these reach the shore, a larger rope, sufficiently strong to bear four men in a chair, which is pulled on shore by means of a small rope and returned empty to the ship for a fresh cargo. The chair was on shore in five minutes after firing the rocket....[44]

Referring to the problem of bridging the gap between the stricken vessel and the shore a contemporary report reads:

> ....Many inventions have already been brought into practice for this purpose; but having been brought into practice either very partially, or not at all, having failed of producing the benefits anticipated by too sanguine benevolence of their authors. Capt. Manby's apparatus, although resembling Mr

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[43]Many years earlier Sir W. Congreve had invented rockets for a military offensive purpose that had seen active service at Boulogne (1806), Copenhagen (1807) and Waterloo (1814). Since Congreve's invention in 1804 the use of rockets as weapons of war gradually became commonplace. See Sir W. Congreve (1772-1871), *Dictionary of National Biography*, Vol.XII, p.9.

Also, "The Details of the Rocket System Shewing the Various Applications of this Weapon both for Sea and Land Service, and its different uses in the Field and in Seiges", Colonel Congreve, London (1814).

[44]*Gentleman's Magazine*, Vol.XCI, Pt.II, (1821), p.361.

> Trengrouse's in some particulars, is both less portable and less likely to succeed in actual practice....[45]

Although Trengrouse had developed his system of rescue and proved it in demonstrations to all manner of influential interested parties,[46] by the time of the Shipwreck Committee of 1836 he had still not commenced serious manufacture and although some systems had been put into use it was not yet available for commercial distribution, at the same time other inventors were developing rescue systems that were to overhaul Trengrouse's efforts. The loss of the *Bainbridge* off the Isle of Wight in 1832[47] presented the opportunity to prove a rocket system, having failed with several attempts using the Manby mortar. It was not Trengouse's rockets but those of John Dennett[48] that proved the effectiveness of a rocket-based system and started a slow transformation of rescue practices in favour of the rocket. Dennett's apparatus was ultimately taken up by the government, much to Trengrouse's dismay.[49]With the development later in the nineteenth century of the Congreve rocket system by Colonel Boxer as a tandem rocket[50] the efficiency of the system was much improved.

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[45]From *Transactions of the Society.....for the Encouragement of Arts*, Vol.XXXVIII, London (1822). Quoted in *For those in Peril*, National Maritime Museum, HMSO (1963).

[46]See *Letter reporting result of inspection of Henry Trengrouse's invention*, BPP 1825 (415), XXI.363. Also *Report of Committee of Pilotage on the invention of Henry Trengrouse*, BPP 1825 (489), XXI.363.

[47] *Lloyd's List*, No. 6784, London, Tuesday October 9th 1832: Cowes 8th October, "The *Bainbridge*, Miller, from Halifax to London, was driven early this morning on Atherfield Rocks: all three masts have been cut away. It is expected the crew will be landed at low water."

[48]John Dennett (1790-1852). See *Dictionary of National Biography*, Vol.XIV, pp.367-8.

[49]See W.B.C. Probert, "The evolution of rocket-based maritime rescue systems in the first half of the nineteenth century," *Mariner's Mirror*, Vol.83, No.4 (November 1997), pp.434-449.

[50]See *Cornhill Magazine*, Vol.XXVII July-Dec 1873, pp.72-87, for a clear expose on Colonel Boxer's rocket system.

In Trengrouse's correspondence to the Royal Humane Society he states when referring to the aims of the society to save the "lives of hundreds perhaps thousands at once":[51]

> ....This would indeed be glorious work! I do assure you Sir, that I clearly feel the most heartfelt solid pleasure in anticipating the good that is about to be rendered my fellow creatures, through my instrumentality in the hands of providence. To be wholly employed in prosecuting this work, and in establishing a wreck police all along upon the coasts for the preservation of Lives and Property in case of shipwreck (and which may be done without any standing expense to Government) would be the highest of my ambition.... .[52]

This letter written on April 13th 1818 expressed a sentiment that would have appeared to have been gathering pace for several years against the "horrors of tempest and shipwreck".[53] In some of its detail and certainly in its vision it pre-dates the essential demand of Sir William Hillary's "Appeal.....from Shipwreck" by five years in calling for the notion of a nationally organised body funded by public subscription rather than a government legislated service; as such it expresses the feelings and intent of many contributors to the cause of the alleviation of suffering due to shipwreck. However, it was the work and social connections of Sir William Hillary that finally brought the problem before the nation and enabled the conduit of money, power and expertise that was to result in a national lifeboat service.[54] The underlying fact in all this was that by 1830 national awareness of the problem of

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[51]Archives of the Royal Humane Society - letter from Henry Trengrouse at No 2, Villiers Street, Strand. April 13th 1818 to T.J. Pettigrew Esq., Secretary to the Royal Humane Society, p.3.

[52]*Ibid.*

[53]*Ibid.*, p.2.

[54]As well as the Shipwreck Institute in the 1830's, there came into being in 1839 the "Shipwrecked Fishermen and Mariners Royal Benevolent Society". Between 1841 and 1850 the Shipwreck Institute went through a low period due to lack of funds. The Shipwrecked Fishermen and Mariners Royal Benevolent Society, as well as helping families also provided funds for a few lifeboats at this time and it looked as if the services were in danger of being duplicated, until the 1850's when the Shipwreck Institute was completely re-organized and became the RNLI. The Shipwrecked Fishermen and Mariners Royal Benevolent Society has also remained in existence to this day and is concerned with the provision of welfare to those that have survived maritime disaster.

shipwreck was such that concern did not any longer have to be confined to helplessly watching its horrors but could be turned into action.

3(iv) The role of the Register Societies: State intervention in mercantile marine conditions during the first half of the nineteenth century eventually culminated in the great Merchant Shipping Act of 1854 - "The Act". It is quite conceivable that this Act had more effect on the everyday life of seamen than any other single event in the history of the sea. But like most great reforms it started with public opinion refusing to tolerate any longer a state of affairs which in this case had both outraged national conscience and harmed the nation's financial resources.

The only real means of quantifying the losses was by way of *Lloyd's List* (in existence from 1737) as no accurate and continuous official record even of wrecks happening on our own coasts appeared until 1856, when the Board of Trade for the first time published its return[55]despite there being an Admiralty Register of wrecks from 1850.[56] There was no official record of wrecks of British ships in other parts of the world until 1865. The record therefore until the year 1856 would seem too unreliable to allow other than an approximate comparison.[57]

Lloyd's Register of Shipping although deriving from Edward Lloyd's coffee house was a separate concern to *Lloyd's List* and had been maintained since 1834 in the interests of underwriters to tell them something of the nature, condition and whereabouts of ships that were their concern, its prime source of information being derived from the surveyors.[58] However *Lloyd's Register* - as the Register Society (Green Book) prior to 1834 underwent major changes in its rules and classification

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[55]See *Abstract Returns of Wrecks and Casualties on the Coasts of the UK, 1855*, BPP 1856 (2024) LI.395. The *Wrecks Register* of the Board of Trade was initiated in 1855 although *Lloyd's List* had began to print lists of ship casualties from 1854.

[56] See *Admiralty Register of Wrecks and other Casualties on Shores of UK 1850 & 1851*, BPP1852 (247) XLIX.503.

[57]See W.S. Lindsay, *A History of Merchant Shipping*, (1875), p.468.

[58]Originally founded in the eighteenth century (oldest copy bears the date 1764-65-66). The Register Society was formally founded in 1760. This registry was latterly known as the "Underwriter's Register" or the Green Book.

system - causing much consternation with regard to the consequent operations and voyages of the ships on the *Register*.

The *Register* since 1760 (and the 1764-65-66 copy shows) began to list the essential characteristics of vessels: former and present names, owners, masters, the ports between which the vessels traded, tonnage, crew numbers, guns, port and year of build, together with a general description in the form of notation i.e.: "Sd" for single deck, "SdB" for single deck with a tier of beams and so forth. Classes were assigned to vessels designated by the letters A, E, I, O and U which referred to the vessel's hull condition, while the letters G, M and B meaning "good", "middling" and "bad" - related to the equipment. Thus AG denoted a first class ship with a good outfit whereas UB would denote the lowest class with a bad outfit.[59]

The next *Register* preserved from 1768-69 differs considerably in terms of form and arrangement in that it also contains references to the vessel's rigs and gives information concerning repairs. The most significant difference is in the use of the lettering to denote condition of vessels. Now lower case letters a, b and c are used for describing condition whereas numerals 1, 2, 3 and 4 are now adopted to describe the condition of the equipment. A first class vessel with first class equipment being "a1" in the *Register*. "It will thus be seen that between the years 1764 and 1768 a change had been made from "AG" to "a1" in the direction of the designation "A1"".[60]

The third earliest *Register* preserved is dated 1775-76 which followed the form of the previous one but uses Roman capitals to classify the hull, the familiar "A1" for first class hull and rig appears at this time.

The *Register* (previously the sole concern of the Underwriters) for 1797-98 contained a new style of classification that was to arouse feelings of considerable dissatisfaction, ultimately leading to the formation of a rival register - the *Shipowner's Register* or "Red Book". The shipowners at this time, because of bad feelings brought about by the new style of classification "being scarcely equitable in

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[59]Anon., *Annals of Lloyd's Register: Being a sketch of the Origin, Constitution and Progress of Lloyd's Register of British and Foreign Shipping*, London (1884), p.7.

[60]*Ibid.*, p.8.

its operation, aroused feelings of considerable dissatisfaction"[61] had responded by setting up an alternative register, the upshot of which neither publication gained general confidence and both ran at a loss until John Marshall's initiative towards amalgamation.

Up to this point there had not been any written rules and regulations as to how a ship should be surveyed and how to classify the condition found. Surveyors were employed on an *ad hoc* basis, as and when needed. Many were retired sea captains, they were not necessarily expert in the art of ship surveying, the Register Society had to rely on men's judgement. By 1797 the Register Society decided that they needed defined rules to guide their surveyors, unfortunately the method chosen was equally as bad if not worse than the one that they had abandoned. The Underwriter's Register Society ("Green Book") and the alternative Shipowner's Register Society ("Red Book") co-existed for some thirty-six years; it was during this period that the most incalculable damage was done to the ship-building and ship-owning fraternities through the survey classification systems. By 1823 widespread dissatisfaction at the concurrent existence of the two Registers, yearly gaining strength resulted in a committee of inquiry by 1826. Largely through the endeavours of Mr John Marshall, a shipowner of London, the meetings were instigated that were to eventually lead to the amalgamation of the Register Societies - and the formation of *Lloyd's Register of Shipping* in 1834 - the ongoing basis of classification using qualified surveyors.

Lloyd's List a separate concern[62] was published twice weekly - on Tuesdays and Fridays from 1737 and daily after 1837 - it provided vital and exclusive information based on a network of correspondents world-wide, that allowed business decisions to be taken. "In that sense it was permeated with insurance news from the first issue. Every overdue vessel, each damaged cargo or dead slave, the

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[61] *Op. cit., Annals of Lloyd's Register*, (1884), p.14.

[62] "Many years were to pass before the Corporation of Lloyd's (the great insurance corporation) and *Lloyd's Register of Shipping* (the majority of whose members were underwriters) were to become separate concerns, but when the man-in-the-street uses the locution "A1 at *Lloyd's*" without fully realising the fact - he means that the Corporation of Lloyd's, as underwriters, are guaranteed a first class risk as defined by the surveyors, *Lloyd's Register of Shipping*." *Lloyd's Register of Shipping, 1760-1960*, p.4.

anonymous wrecks and early arrivals, the litany of groundings, fires and sinkings" these were the stuff of insurance coverage from 1734.[63]

The classification system that was to exist in the "Green Book" from 1797 until 1834 - "laid disproportionate stress on age and place of building, giving undue preference to Thames-built ships and penalising older vessels even when kept in good repair",[64] a vessel built on the River Thames for example remaining in the highest class for longer than a vessel built on the River Clyde. This classification change caused the Underwriter's Register Society to be held partly to blame for the dramatic increase in shipwrecks. From 1797 their classification was based on age and port of construction, no matter how built or equipped. A ship was entered as first class until she was from six to twelve years old depending on the place of construction; London built vessels were thus given a distinct advantage at this point irrespective of the materials of construction, the method of construction or the quality of construction. Ship owners were thus induced to build a cheap ship, no mention was made of say timber quality, it could have been English Oak but equally Larch[65] would have met the classification criteria. If the ship was however sold after the allotted time period for a first class ship it lapsed into second class:

> ....Amongst the evils of this system, complaint was made that it served to create and perpetuate an amount of tonnage for which the country was unable to find remunerative employment. Age being the great standard of classification, the effect was that when a ship had outlived her first character the Owner was induced to sell her, from the impossibility in many trades of employing any vessel to the name of which the "talismanic" charm of A1 was not appended. The owner would then substitute a new ship, thus increasing the previously existing glut: whereas, if classification had been based upon

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[63]*Lloyd's List, 1734-1984, 250th Anniversary Supplement,* (1984), p.105.

[64]*Lloyd's List*, 1984, p.254.

[65]The best ships were made with Teak or English Oak. Oak has a long life both wet and dry and a weight of 850Kg/m3 whereas an inferior timber equally good for the purposes of classification may have been Larch - again a reasonable life dry but not so good wet - it has a far lighter weight of 560 Kg/m3.

> intrinsic merit, the owner in many cases would have effectually repaired the vessel, which would have remained on the first class.... .[66]

The new owners of the second class ship could operate with much less capital. It was not considered possible by the new classification rules to repair and restore the ship so as to meet first class requirements (and attract better cargoes) once the allotted first class time span was up. Hence there was little incentive to adequate repair and equipment replacement.

Contemporary comment directed at *Lloyd's* viewed this method of ascertaining the condition of ships - by age and place of construction - as directly contributing to the incidence of shipwreck:

> It is not, however, merely true, that the means hitherto adopted in Great Britain for the attainment of this object have been utterly ineffectual; it is farther true, that they have contributed, in a far greater degree than any thing else, to deteriorate our shipping, and consequently to multiply shipwrecks and disasters at sea.[67]

The *Edinburgh Review* made the case for inspection at periodic intervals by persons of competent knowledge where planks could be removed and a thorough examination of the hull and rigging carried out. The idea that the ship-builders might adhere to uniformity in ship construction was plainly idealistic and quite absurd as changes and interpretations of requirements could produce any amount of

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[66] *Op. cit., Annals of Lloyd's Register*, (1884), p.31.

[67] "On the Frequency of Shipwrecks", *Edinburgh Review*, LX Jan 1834 -35, p.342. In citing the *Edinburgh Review* it may be noted that it was a leader and innovator in review, although a Whig organ it was "almost from its inception the *Edinburgh* became "the Review" for which most reviewers wished to write and authors reviewed". In November 1830 the *Edinburgh* became, after nearly thirty years as an opposition journal - a ministerial review with varying degrees of access to government. (See Joanne Shattock: "Politics and Reviewers - the *Edinburgh* and the *Quarterly*", (1989)) Hence the article "On the Frequency of Shipwrecks" (written by John Ramsey McCulloch - Economist 1789-1864; *Dictionary of National Biography*, Vol.XXXV, pp.19-21.) may be taken to be an authoritative plea from politically motivated sources (Benthamite/Ricardian), pleading the case and attempting to pave the way for government interference on the subject of shipwreck, which was by then becoming very much a national concern. It may be of no small coincidence that the Select Committee of the House of Commons to "Inquire into the Causes of Shipwreck..." was set up the following year.

variation. Changes could occur in building materials, building methods - double planking, use of copper fastenings, the numbers and sizes of timbers (knees and beams for example):

> ....It is impossible, indeed, to conceive of anything more completely different than the construction of different ships. There are not a few instances of ships being so defectively built, they have foundered and gone to pieces on their first voyage, while others have run for twelve, fifteen and twenty years or upwards with but little repair.... .[68]

The system of classification prior to 1797, from 1760 may in fact have leaned towards greater safety in that it enabled passengers to be carried by the safest ships, those designated A1, whilst for designation I1 vessels were considered suitable only for such purposes as carrying coals along the coast - those marked O were considered unseaworthy. The inducement to build and run "slop-built" ships was not as great as it was to become after 1798. It was the changes in the classification systems within the Register Society in 1797-98 (changes that lasted some thirty-six years or so until the amalgamation of the Shipowner's "Red Book" and the Underwriter's "Green Book" Register Societies in 1834) that created the basis for accusations over the dramatic increase in shipwreck during the first half of the nineteenth century. Whilst many of these accusations were well founded it was not of course the case that the actions of the Register Society were the sole cause as subsequent events were to show - but they were a major cause and one that attracted much contemporary criticism.

3(v) Shipwreck statistics and the call for political action: Study of *Lloyd's List* for the years 1816, 1817 and 1818 had by the time of the 1836 Shipwreck Inquiry quantified the losses as 343, 362 and 409 British ships stranded or wrecked, on average 763 seamen were lost in each of the same three years. By the years 1833, 1834 and 1835 these losses had increased to 595, 454 and 524 British ships stranded or wrecked and an average of 894 seamen drowned.[69] These figures represent the

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[68]*Ibid.*

[69]Figures derived at the request of the *Select Committee of the House of Commons to Inquire into the Causes of Shipwrecks*, BPP 1836 (567), XVII.373.

only available quantification until the *Wreck Register* of the Board of Trade came into being in 1855 replacing and continuing the work of the *Admiralty Register of Wrecks* which began in 1850. That there are discrepancies and inaccuracies was acknowledged:

> ....That these results do not embrace the whole extent of loss in property or lives occasioned by shipwrecks, even amongst vessels only which belong to the United Kingdom; inasmuch as these returns include only the losses entered into *Lloyd's* books from which the returns adverted to were made out; whereas it is well known that many vessels and lives are lost by wreck or foundering at sea of which no entry is made in *Lloyd's* books, and of which as no record is kept, no Return can be produced....[70]

To have made this return anything like accurate would have needed the comparison not merely of the actual amounts of loss during the two periods under consideration "but the proportion the amounts bore relatively to the amount of life and property exposed to danger".[71] No means of obtaining such figures could be had with accuracy at the time as the returns were imperfect with regard to the number of vessels, persons carried, size etc. Many vessels that had ceased to exist by 1816 were still retained on the Registry. In addition those many thousands of vessels engaged in the coasting trade were not counted or recorded by any certain means as regards tonnage and numbers of men engaged for insurance purposes.[72] Often these vessels were too small to enter the registry. Customs did not take any notice of vessels sailing in ballast or with cargoes of a certain description - hence coasting trade vessels by and large at this time went unnoticed in wreck returns. Lord Liverpool's Act of 1786[73] which required the registration of all vessels over 15 tons meant that details of ships, owners, share holders together with occupations and addresses were officially recorded in each port of registration's "Registry of

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[70] *S.C. Shipwrecks* (1836), Q.8, p.IV.

[71] W.S. Lindsay, *History of Merchant Shipping*, (1875), p.464.

[72] Even after 1834 amalgamation of the Register Societies - they still only were interested in vessels exceeding 50 tons, *op. cit.*, *Annals of Lloyd's Register*, (1884), p.56.

[73] 26 Geo III. cap. 60. III

Shipping". Registration for insurance purposes (and hence survey) only applied to vessels that were in excess of 50 tons.

Even if one acknowledges that detail was lacking, the averages for British ships stranded or wrecked had began to increase dramatically. It is interesting to note that the prestigious East India Company in the eighteenth century had only lost 91 ships in 98 years, however during the first 18 years of the nineteenth century the company lost 33 ships. The average loss for the period 1816-17-18 was 370 ships, by 1834-35-36 the average losses had increased to 524 ships; clearly an increase, and a continued loss of life and property that the public would not tolerate indefinitely.

The *Edinburgh Review* had stated on the basis of examination of *Lloyd's List* during a longer time period of casualties from 1793 to 1829 - "that losses in the British Mercantile navy only amounted at an average of that period to 557 vessels a year".[74] According to the figures collated from *Lloyd's List* on behalf of the 1836 Shipwreck Committee for the period 1816-18 the average loss was 370 ships, the average for the period 1833-35 was 524 ships. In 1833 alone there appeared to have been 800 shipwrecks - of which 200, at most 250 could be fairly ascribed to natural causes.[75] The remainder 550-600 shipwrecks were attributable to human error in one form or another.[76] Shipwrecks made news headlines and by the 1830's were more frequent than ever:

> ....has indeed grown to an excess that is quite frightful, and which has begun forcibly to excite the public's attention....[77]

Whilst classification changes in the Underwriter's Register "Green Book" were by no means obviously the only cause of shipwreck at the time of the 1797 changes, they did serve to illuminate the problem to the public inasmuch as here was a definable error which could have been averted. Many other failings still had to be addressed but at least after 1834 *Lloyd's* no longer contributed directly to

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[74]*Op. cit.*, "On the Frequency of Shipwrecks," p.339.

[75]As weather conditions outlined in Ch. One (ii) - incidence of storm, winds etc.

[76]*Op. cit.*, "On the Frequency of Shipwrecks," p.353.

[77]*Ibid.*, p.353.

shipwreck by encouraging the building of "slop ships", unseaworthy vessels. By the 1830's many concerned parties were agitating for reform. Much had been written on the subject of insurance and shipwreck prior to 1834,[78]when the general form of *Lloyd's Register of British and Foreign Shipping* emerged from the previous Registry Societies.[79] The reason for amalgamation in 1834 was not it appears solely due to any acknowledgement of fault in *Lloyd's* classification regarding the "Green Book" but principally due to the financial concerns of competing register societies heading for commercial extinction. At this point following the recommendations of the 1826 inquiry a new and more competent system of survey was introduced:

> ....In regard to Classification, the Committee believing that the evils which they described had been "Chiefly produced by want of an enlarged and well organised system of survey, which had been rendered impracticable by the inadequacy of the means existing for the proper remuneration of independent and competent Surveyors," proposed to establish a rigid inspection, beginning with construction of vessels, to be carried out by a large staff of surveyors stationed throughout the country, and subject to the supervision of Principal Surveyors appointed in London, who were to make occasional visits to the outports. Very precise instructions followed as to the conducting of the Surveyors duties.... .[80]

The *Edinburgh Review* had attributed at least two-thirds and perhaps as much as three-quarters of shipwrecks to causes other than those "naturally incident to a navy whose flag is displayed on every sea, however remote or dangerous"[81] and made the case against "the vicious customs and regulations under which the business of sea insurance is conducted, the defective construction of ships resulting

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[78]*Statements as to the Proceedings of the Committee for Classing the Mercantile Marine*, John Marshall, London, (1829). *The Mercantile Navy Improved*, James Ballingall, London, (1832). *Sea Insurance the Cause of Shipwreck*, London, (1834).

[79]"*Lloyd's*" was first used in the name of the Register Society in January 1829 as *Lloyd's Register of Shipping. Annals of Lloyd's Register*, (1934), p.46.

[80]*Annals of Lloyd's Register*, (1934), p.42, the quotation is taken from the minutes of the 1826 inquiry.

[81]*Op. cit.*, "On the Frequency of Shipwrecks," p.340.

there from, and the incompetence of masters".[82] In so making this case it anticipated many of the findings of the 1836 Inquiry.

At the annual dinner of the Royal Humane Society in 1835 Captain H.W. Hyland[83] referred to the great loss of life at sea caused by shipmasters who were "entirely ignorant of the use of sextant or chronometer" and who did not use the best instruments for taking soundings, and Parliament was petitioned to inquire into the causes. Statistics of shipwreck were issued by the *Nautical Magazine* shortly after its initial publication in 1832 which appear to have been extracted from *Lloyd's List.* They were subsequently replaced by the Monthly Casualties List. They were also listed in *Metropolitan Magazine*[84] writing in which Captain Marryat asserted that the system of marine insurance was "murder for gain" and that in the second quarter of the nineteenth century the average annual loss of ships by storm, bad navigation, piracy, fire and other hazards was estimated to be five percent of the total number of ships.[85] Insurance is seen to be "not without its evils"[86] and that the company who does not insure a ship may be thought of as being far more "attentive to their condition and to the fitness of the master"[87] than one who knows the risk to be covered. Records of judicial proceedings tell of ships deliberately sent to sea so as they may "be cast away and a profit made at the expense of the insurers".[88]

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[82]*Ibid.*

[83]Archives of the Royal Humane Society - medallion cases: Captain H.W. Hyland appears as case 12,558 who on the morning of 3rd May 1832 as chief officer of the barque *Phoenix* jumped overboard from the vessel into the River Hoogley at Calcutta, India to rescue a fellow officer.

[84]*S.C. Shipwrecks* (1836), QQ.5-6, p.1; evidence of J. Ballingall: manager of a shipping company, surveyor of shipping and writer on shipping matters.

[85]W.S. Lindsay, *History of Merchant Shipping and Ancient Commerce*, Vol.III, London (1876), p.330. According to W.S. Lindsay, shipowner and historian of shipping, a shipowner in the 1830's received the insured value of the ship - even if this exceeded the true value, so long as fraud could not be proved. See R. Hope, *New History of British Shipping*, (1990), p.279.

[86]*Op. cit.*, "On the Frequency of Shipwrecks", p.340.

[87]*Ibid.*

[88]*Ibid.*

However the cases of this were perhaps as little as one in a hundred despite caution and vigilance being diminished by the practice of insurance.

Particularly loathsome incidents such as: the wreck of the *Rothesay Castle*[89] an early steam packet, wrecked on Dutchman's Bank, N.Wales, in the vicinity of Great Orme Head on 17th August 1831; the wreck of another steamer *Chieftain*[90] only two days earlier from Belfast to Liverpool which had gone ashore on the rocks at Donaghadee off the Foreland Point having cleared Belfast Lough; the wreck of the steamer *Ben Nevis*[91] the following day from Stornaway to Glasgow drove ashore at Carskey on the southern end of the Mull of Kintyre - all of which helped to incense public awareness and demanded political action causing the British government to call eventually for a full scale and searching investigation into the many aspects of shipwreck. The *Rothesay Castle* was built in 1816 and was grossly under-powered, worn out, leaky, ill-equipped and unseaworthy; a vessel that should never of been allowed to go to sea at all, let alone carry passengers. Of 150 passengers that sailed with her only twenty survived the wreck. The sea-state deteriorated rapidly, most of the passengers incurred sea-sickness, water was rising in the bilges and the bilge-pumps were not properly working. The drunken captain refused to go back and after steaming for ten hours, 36 miles out of Liverpool the steamer struck the unseen Dutchman's Bank. The rising water had by this time extinguished the boiler and so all power was lost. Having bumped along the bank

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[89]See App. C, "The loss of the *Rothesay Castle*".

[90]*Lloyd's List* report of the loss of the *Chieftain* in August 1831 is reported in the same issue as that of the loss of the *Rothesay Castle. The Times* for the 24th August 1831 (p.3, col.f), taken from the *Dublin Evening Post* reads: ....We regret to state that the *Chieftain* (steamer) commanded by Capt. Owens got ashore in fog on one of the Copeland Islands.....considerable cargo of goods, and there were probably 30 to 40 passengers on-board. Soon after she passed Groomsport, a dense white fog rolled down on the Lough, from the high adjacent lands, and entirely closed out all view of the coast....

[91]*Lloyd's List* report of the steamer casualty *Ben Nevis* in August 1831 reads: ....*Ben Nevis* (steamer), Cooper, from Stornaway to Glasgow, drove on shore last night at Carsky, about 12 miles to the southward of this place, (Campbelltown) and it is as feared will be wrecked. The Passengers and Crew saved....

for a mile or so the funnel collapsed, brought down the mast and killed the drunken captain, then the paddle boxes broke away. Eventually the ship broke up.[92]

The problem over the construction of vessels, largely the result of survey practices at *Lloyd's* from 1797-98 with its inherent faults contributed to the dangers of gradually ageing ships of elderly and questionable construction. So also did questionable practices concerning manning and integrity of crews; amongst many other factors had led to shipwreck on such a massive scale. By the 1830's a political response seemed inevitable; it appeared by 1836 with the formation of a Select Committee to Inquire into the Causes of Shipwrecks.

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[92]R. Larn, (1981), *Shipwrecks of Great Britain & Ireland,* p.137.

Chapter Four

The 1836 Shipwreck Committee - the opening evidence

4(i) The formation of the Committee: On the 14th June 1836 the House of Commons ordered:

> ....that a Select Committee be appointed to inquire into the Causes of Shipwrecks, with a view to ascertain whether such Improvements might not be made in the construction, equipment and navigation of Merchant Vessels, as would greatly diminish the annual loss of life and property at sea.... .[1]

A committee was appointed of: Mr Buckingham, Sir Thomas Troubridge, Mr Clay, Mr Barnard, Mr Alsager, Lord Viscount Sandon, Sir Richard Vyvyan, Sir Edward Codrington, Mr Tulk, Colonel Thompson, Mr Aaron Chapman, Mr Ingham, Mr George Frederick Young, Mr Oswald and Mr Emerson Tennent. On the 14th July 1836, Mr Ingham, Mr Emerson Tennent and Sir Richard Vyvyan were replaced by Mr George Palmer, Mr Bewes and Captain Pechell. On the 15th August 1836 the House ordered that the report be put before them.[2]

On this committee there was represented a broad and powerful cross section of varied interests. Members of Parliament, Aaron Chapman and George Frederick Young had direct interests in merchant shipping. Chapman was a shipowner from Whitby on the north-east coast, the Conservative member from 1832 until 1847 and an active campaigner on shipping issues. Young was a shipowner and shipbuilder, again from the north-east coast, the Whig member for Tynemouth from 1831 to 1838.[3] These two may be said to represent "the shipping interest" especially as

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[1] *House of Commons Journal*, 14th June 1836, pp.475-476.

[2] *Report of the Select Committee appointed to inquire into the Causes of Shipwrecks*, BPP 1836 (567) XVII.373, p.ii.

[3] See: Sarah Palmer, *Politics, Shipping and the repeal of the Navigation Laws*, Manchester (1990), p.24. (it may be interesting to note that Aaron Chapman was a protectionist, as was G.F. Young - a Tory protectionist)

Young was five times the chairman and the single most committed member of the General Shipowner's Society.[4] J.S. Buckingham, MP for Sheffield was particularly concerned with social reforms. Sir Edward Thomas Troubridge, Rear-Admiral, MP for Sandwich from 1831 to 1847, was one of the Lords of the Admiralty.[5] Sir Edward Codrington, Admiral, with a remarkable naval career behind him. Sir Richard Vyvyan a Cornishman, MP for Bristol from 1832 until 1837 and for Helston from 1841 until 1857 was a student and writer of science.[6]

In the following sections the findings concerning shipwreck and the expert opinions of the witnesses will be examined. The witnesses were of expert status in their respective fields and could be considered to have been the best people in the country to help resolve the issue. The sections will establish the expert status of the witnesses and the central thrust of their evidence summarised. It will be seen that over the early days of the Shipwreck Committee's investigations three leading areas of responsibility were already being indicated: marine insurance practices, controls regarding construction of ships and controls regarding the appointment of masters and mates.

Throughout the long and arduous proceedings of the committee Buckingham[7] was the chairman. The committee met with a quorum of five throughout July and

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[4]*Ibid.*, p.32.

[5]*Dictionary of National Biography*, Vol.LVII, p.256.

[6]*Ibid.*, Vol.LVIII, p.399.

[7]Buckingham, James. Silk., 1786-1855, Author and traveler. Spent much of his early life at sea, captured by the French and became prisoner of war for several months. Started *Calcutta Journal* (1818), *Oriental Herald* and *Colonial Review* (1830) etc. In December 1832 he was elected MP for Sheffield in the first reformed parliament and for that constituency he continued to sit until the dissolution in 1837. In the House of Commons he took especial interest in social reforms, advocating the abolition of flogging in the army and navy, and of the impressment of seamen, and the adoption of means to prevent the destruction of life and property at sea. Extracted from *Dictionary of National Biography*, Vol.VII, p.202. In the *Autobiography of James Silk Buckingham* (Vol.I, London (1855)) there is no direct mention of his parliamentary concern with the issue of shipwreck although he campaigned tirelessly for its diminution. An insight may be had into his humanitarian and other qualities in that on pages 52-56 he explains his tendencies, religious feelings and views. In his

early August to listen to the evidence of a number of witnesses - some of the most renowned experts of their day on various areas of maritime affairs. On the basis of this evidence a report was made presenting the extent of loss of life and property at sea, and principal causes of shipwreck.

4(ii) The first days of evidence, 1st July & 5th July, 1836: Drawing information from a total of 33 specially selected expert witnesses the minutes of evidence began with Mr James Ballingall.[8] Ballingall had written extensively about the merchant navy[9] and in particular the subject of sea insurance.[10] His evidence to the committee outlined the manner in which the system of marine insurance had caused persons to build inferior rather than superior vessels and suggested that by changing building techniques and increasing the competence of mariners the amount of shipwrecks could be lessened. Ballingall maintained that shipwrecks had increased especially since 1830[11] and that the principal cause was the defective method of building merchant ships[12] and that these defective methods could be attributed to

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"devotional" and "sympathising" tendencies a basis may be understood for his position on human suffering through shipwreck. Also, he had had a first hand experience of storm and wreck (see pp.230-235) in which he was sailing as part of a convoy under full sail when they were caught by a hurricane that threw Buckingham's ship onto her beam-ends "so that the top sails were in the water on the lee side and the horizontal deck was nearly perpendicular...." during the night she righted, thirty-three of forty-five vessels in sight the following morning had "all their masts swept away...."

[8]See Appendix D, "List of witnesses to the 1836 Shipwreck Inquiry". In the list of principal seaports relative to which witnesses were examined James Ballingall and James Rocheid Forrest are concerned with Scotland. Ballingall was a manager of a shipping company and a surveyor of shipping. *S.C. Shipwrecks* (1836), index II, p.388.

[9]See *The Mercantile Navy Improved* by James Ballingall Esq., London (1832).

[10]See "On the Frequency of Shipwrecks", *Edinburgh Review*, LX, 1834-5, p.352, where much is drawn from *Sea Insurance the Cause of Shipwreck*, London (1834).

[11]*S.C. Shipwrecks* (1836), Q.3, p.1; Mr James Ballingall: Manager of a shipping company, surveyor of shipping and writer on shipping matters.

[12]*Ibid.*, Q.12, p.1.

the abuse of marine insurance.[13] Ballingall used an analogy of an inn-keeper having to insure tumblers to explain the principle of the underwriter's loss:

> ....with increased risk of breakage and increased premium paid to cover it, the chances of gain to the underwriter are all greatly increased and the chance of loss are all greatly diminished.... [14]

Ballingall further suggested that:

> ....if we suppose the underwriter to be of the common run of mankind we have here a clear exposition of how his interest is advanced by increased breakages (losses), and will suppose how anxious he will be that breakages should be increased for purposes of increasing the premiums and advancing his interest. If the control were left to him, he would prohibit strong tumblers (ships) being used. Increased loss is therefore the underwriter's great aim to effect....

According to Ballingall, the delusion therefore in the minds of the public of the day was the notion that the underwriters pay for all the losses with their own funds, without having previously acquired these funds in effect by increased insurance premiums. He maintained that the whole cost was ultimately borne by the public in the form of increased shipping charges which affected a whole variety of goods[15] and the evils of shipwreck borne by the ordinary seaman who more often than not were considered lucky to have escaped with their lives - let alone any form of compensation, often loosing all claim to pay as the ship and cargo were lost.[16] In attributing the causes of shipwreck to the construction of ships Ballingall outlined

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[13] *Ibid.*, Q.15, p.2.

[14] *Ibid.*

[15] *Ibid.*, Q.264, p.20; Ballingall sets the fault firmly against sea insurance "I apprehend sea insurance to be the public paying for the losses of individuals".

[16] See *Ibid.*, App.3, p.276; "Under the present practice, when merchant vessels are lost, the crews are often refused their wages, on the grounds that freight being the mother of wages, and alleging that freight has not been earned, of which the crew suppose they have certain proof in the loss of the vessel, although the freight may have been paid in advance or is fully insured, but of which they are ignorant...." In other words the owners of the shipwrecked vessels may have easily deluded the crews if they had chosen to do so (what may have remained of them) and that due earnings would have been lost.

extensively the attempts at ship's safety over the previous hundred years and also the history of Lloyd's of London, who until 1797 had organised a classification of ships on behalf of the underwriters. It was after 1797 according to Ballingall that:

> ....the committee of the society for conducting the register book then in existence, without consulting the subscribers at large, made an entire change in this system so long established and so universally approved, and substituted in its place a plan founded on principles diametrically opposite and perfectly erroneous....[17]

Essentially Ballingall exposed the practices of *Lloyd's* claiming that instead of using *ad hoc* surveyors as had been the practice prior to 1798, that since that date and prior to the reorganisation of *Lloyd's* in 1824 vessels had been classified strictly by age and place of build, the need to actually survey the hulls and rigs of vessels had been curtailed, consequently the inducement to build strong and capable vessels to be maintained in the best state of repair had gone. All the received wisdom of the previous hundred years of shipbuilding (Ballingall quotes Robert Seppings's new principal of constructing ships etc.) was in danger of being set aside by unscrupulous ship-builders for whom commercial gain made far more sense than safety. In answer to Buckingham's plea for a motive for the change in *Lloyd's* system, Ballingall stated:

> ....I defy any other answer to be given to the question than that the safety of merchant shipping would be against the interests of those parties who at present have complete control over construction; the basis of which is to have all new ships and no old ones; and in order to insure their not lasting, and to increase shipwrecks, to set strength, durability, safety and common sense at defiance....[18]

Ballingall was asked to consider the use of alternative timbers to enable lower prices of ships. He considered Baltic timber to be very good and could be used in lieu of English Oak. When asked whether there was any cause to which he especially attributed the frequent loss of ships besides the defects in building he directed attention to the great degree of incompetency of masters and mates. There

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[17] *S.C. Shipwrecks* (1836), Q.16, p.5.

[18] *Ibid.*, Q.16, p.6.

appeared to be no mode of ascertaining the suitability and qualifications of masters and mates before their appointment to the offices of merchant ships and consequently many persons, neither qualified as seamen or navigators were set in charge of vessels[19] also, frequent cases of intoxication among crews and in particular of persons in charge of look-outs was cited as a third cause of shipwreck. Ballingall recommended that the scantlings of ship's timbers should be regulated by law as with house construction of that period. Mr Young asking of him "You think that no ships are built sufficiently strong?" Ballingall answered him by stating that he considered that not one merchant ship was built sufficiently strong in Britain.[20]Ballingall was alluding to the practices of shipbuilding as laid down by the *Lloyd's* register book to which Buckingham drew his attention and he denied them to be of sufficient strength, either by way of scantlings or floors. Attention was drawn to the practice of making timbers solid from the keel upwards to the floor heads and Richard Bonniwell a navy shipwright employed in the Admiralty Office under Sir William Symonds was called in on the 5th July to explain the incident of the shipwreck of *La Pique* which survived a grounding on rocks due to her particular mode of construction.[21] *La Pique's* construction, as had been the practice for the last eighteen years or so with ships of war featured a gradually increasing thickness of timber from about three inches extra at the light water line down to the keel - such that by the keel the garboard strakes were about eleven to thirteen inches thick. It was this extra thickness in construction that was considered the reason why she survived the grounding, and it was recommended that merchant ships should be likewise constructed.[22] Ballingall produced a second model in which he proposed further improvements to construction including the use of watertight bulkheads.

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[19]*Ibid.*, QQ. 112-113, p.11.

[20]*Ibid.*, Q.573, p.37.

[21]*Ibid.*, see QQ.225-227, pp.17-18, and Q.632, p.40. His Majesty's Frigate *La Pique* had grounded on her passage from Canada running ashore in the straits of Bellisle on the coast of Labrador and lay on rocks for a number of hours. The safety of her crew was attributed to the strength of her construction which featured a "solid" bottom - a method not used in merchant ships which may have been due to the increased costs involved.

[22]*Ibid.*, Q.628, p.40; Richard Bonniwell: Shipwright.

The idea of watertight chambers seemed particularly apt for steamers; contemporary Chinese junks had watertight compartments. The question of adequate methods of construction forms the essence of Ballingall's evidence. As a final suggestion he raised the question of asylum harbours as necessary for the safety of merchant shipping.[23]

4(iii) 5th July, 8th July and 12th July 1836: On the 5th July Mr Henry Woodroffe was called to be examined. Woodroffe, a seaman from childhood having served in all posts of the merchant service from cabin boy to captain and also in the navy as seaman and petty-officer, had been for the last eleven years Secretary to the Seaman's Society at South Shields. He maintained that shipwrecks had increased in the past twenty years by threefold[24]whilst there had been very little difference in the amount of shipping belonging to the port of Newcastle. The cause of the losses, Woodroffe largely attributed to incompetence amongst the owners and crews[25]and to the condition of ships.[26] It would appear from the evidence that part-owning ships had become something of a status symbol amongst aspiring tradesmen, and that this had been a source of increasing incompetence among operators of ships. The former shipowners with a lifetime of experience had in some degree to give way to a more commercially acute group of tradespeople who often had not manned or equipped their vessels appropriately for the services in which they were engaged. Their sons may have been sent to sea in the capacity of mates or captains where only months previously they had perhaps been working in a butcher's shop.[27] He cited the case of the *Princess Victoria* in 1833 when on her first voyage from Archangel, returning laden through the White Sea with grain, coming down on a very fine day carrying royals (top sails carried to get every last advantage from the wind), the ship was said to have "absolutely burst to pieces". A boy and the mate

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[23]*Ibid.*, Q.868, p.59; James Ballingall.

[24]*Ibid.*, Q.290, p.21; Mr Henry Woodroffe: Secretary to the Seaman's Society at South Shields.

[25]*Ibid.*, QQ.297-298, p.22; Mr Henry Woodroffe.

[26]*Ibid.*, Q.306, p.22.

[27]*Ibid.*, Q.336, p.24.

were lost and the remaining members of the crew had great difficulty in saving themselves.[28] He also instanced the *Nathaniel Graham*. Woodroffe had happened to be in a tavern which was visited by the shipwrights who were employed on her refurbishment. He overheard them say that they could not caulk the ship because the gapping between the planks was so bad. He alleged that the ships built in Sunderland "were the worst built ships in the world"[29] and said that he did not believe that there was a single good vessel belonging to the Tyne.[30]On the aspect of manning, it is interesting to note that the production of indentures for having served an apprenticeship was no longer demanded.[31]Woodroffe further stated that only five ships in the past seventy years had been broken up, Buckingham asked "Do you mean by that they sail them till they are lost?" - "Undoubtedly".[32] Again the issue and practices of sea insurance would have appeared to have accounted for the easy attitude of shipowners toward loss; the case of a ship insured for five times its value was cited as temptation for an owner to be more pleased with her loss than otherwise.[33] According to the shipping club practice of insurance at South Shields, a certain number of men agreed to make a mutual insurance whereby they limit the amount to a thousand pounds or so per ship covered for loss - this is "the club". But in the event of a vessel whose owner wanted to insure her at a value of say three thousand pounds he may then have gone to several clubs. Mr Barnard inquired of Woodroff:

> ....I can take the best ship and get her insured in different clubs at a certain rate of premium - paying according to the opinions of those clubs in proportion, and I can do, by means of several clubs the same thing with the worst ship that sails out of Shields?[34]

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[28]*Ibid.*, Q.307, p.23.

[29]*Ibid.*, Q.397, p.27, see also Q.505, p.33.

[30]*Ibid.*, Q.647, p.42.

[31]*Ibid.*, QQ.314-320, p.23.

[32]*Ibid.*, QQ.428-430, p.29.

[33]*Ibid.*, QQ.431-432, p.29.

[34]*Ibid.*, Q.444, p.30.

Woodroffe had to agree, it was not always the case however that shipowners could get away with this at a time of shipwreck, for some parties would contest the case of over-insurance at the time of the claim.[35] However the overall effect would have been that as premiums crept upwards on policies issued to defective ships lost by shipwreck so the public would have to pay for it in the long run "every cargo of coals lost causes the market to rise in proportion"[36] the consequence of which was an increasing annual loss of property and of lives.

As to the means of remedying the effects of inferior construction and manning on Teeside, Barnard suggested that ships might be surveyed both when in frame and before launching and that certificates could be produced to that effect and that this might serve as a guide to the merchant, sailor or emigrant as to the seaworthiness of the ship. This idea was put to many of the witnesses. Woodroffe agreed and further suggested a tribunal where every master would be accountable as to the management of his vessel.[37] Getting a general agreement however among shipowners was extremely difficult and this suggested a case for the legislature to decide upon appropriate courses of action. Meetings had taken place of the shipowners of the port of Newcastle but agreement had not been reached.[38] This problem bore especially upon seamen who were subject to frequent loss of earnings (assuming that they escaped with their lives) at the time of shipwreck - the carpenter of the *Nathaniel Graham*[39] for instance returned home having been shipwrecked losing all his tools and possessions only later to join the *Harmony* of South Shields bound for Quebec:

> ....on the passage homeward the ship got dis-masted and water-logged; there were three or four in the wreck in a wretched state and finally they were taken

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[35] *Ibid.*, Q.477, p.31.

[36] *Ibid.*, Q.495, p.32.

[37] *Ibid.*, Q.512, p.33.

[38] *Ibid.*, Q.650, p.43.

[39] *Ibid.*, see Q.308, p.23 and Q.391, p.27 for an account of the general condition and circumstances surrounding the *Nathaniel Graham*.

> off by some vessel; he returned home a second time and had not a penny to take from his employer for a year's service....[40]

The question of qualifications and suitability to command a vessel were brought into sharper focus when Mr George Coleman gave his evidence. Coleman had formerly been an officer in the East India Company with some eighteen years service, and having had his sight impaired by lightning, had for the previous eighteen years been a teacher of navigation and nautical astronomy.[41] When asked whether he had considered the shipwreck problem he stated:

> ....I have known a great many arising from the incapacity of the captains as to navigation and seamanship, finding them deficient on each subject; I have very frequently predicted in my own mind that certain ships would be lost from the ignorance of the persons in command, and they have been lost....[42]

Coleman had taken an account from *Lloyd's List* which was presented to the inquiry concerning vessels "not since been heard of" not wrecks, which might have amounted to hundreds annually - but ships that had disappeared. Over a sixteen month period from January 1st 1833 until May 1st 1834, 95 ships and their crews had vanished, on average manning this represented a loss of 1425 lives and £760,000 of property.[43] Coleman used the evidence as backing for his plea for a system of examinations. Whilst acknowledging several causes for the loss of ships Coleman considered the most significant to have been the insufficiency of the captains and officers, their want of knowledge of navigation and seamanship. Citing the case of a boy of fourteen being in command of a ship,[44] Coleman claimed to have had witnessed hundreds of such instances during the previous 18 years.

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[40]*Ibid.*, Q.655, p.43.

[41]*Ibid.*, QQ.656-657, p.44; Mr George Coleman: teacher of navigation and nautical astronomy.

[42]*Ibid.*, Q.660, p.44.

[43]*Ibid.*, Q.679, p.45; the statement was handed to the inquiry as reported in *Lloyd's List* including Coleman's additional columns regarding "probable passage in days" and "days since last heard of" - which in the majority of cases well exceeded five times the time needed to make the passage.

[44]*Ibid.*, QQ.685-697, p.47.

Coleman's experience had been largely with the East India Company, and he attributed their comparable lack of losses to the regular practice of examining masters and officers. This observation equally applied to other companies such as Messrs Daniel & Co. of Mincing Lane who also examined their officers and had an equally low incidence of shipwreck.[45]It is interesting to note that according to Buckingham,[46]the East India Company never insured their ships - their insistence on high levels of skill in seamanship and navigation coupled with the quality of construction of the ships minimised the risk of loss.

One of the most significant contributions that Coleman made to the enquiry was his "Suggestions for constituting a MARINE BOARD"[47] the idea of a marine board had been talked about in relation to officers but his ideas went far beyond merely officers.[48]Coleman had proposed 24 points upon which a marine board could be constituted and hold authority. On the subject of officers he suggested the awarding of certificates of competency outlining the extent and depths of required knowledge in order to be placed in command of a merchant vessel, and the means by which such a board would pay for itself. The idea was put to *Lloyd's* who declared that they had no control in the appointment of masters and mates to vessels. A letter had also been forwarded to the General Shipowner's Society who appointed a sub-committee to examine the practicality of the suggestion, they concurred with the importance of the plan but could not "perceive any satisfactory means of carrying it into practical effect".

The committee returned to the question of construction when the next witness was called to give evidence. Joseph Brindley working mainly from Rochester, Kent and Lynn, Norfolk had been a shipbuilder for 50 years, having built between 30 and 40 sailing ships of war including a line of battle ship for His Majesty's service.[49]

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[45]*Ibid.*, QQ.702-705, p.48.

[46]*Ibid.*, Q. 737, p.51.

[47]*Ibid.*, App. No.1, p.269.

[48]*Ibid.*, Q.754, p.52.

[49]*Ibid.*, QQ.785-788, p.55; Mr Joseph Brindley: shipbuilder.

Brindley had devised and published a "New System of Naval Architecture"[50]in May of 1824 - some twelve years previously - in which he considered that far too much emphasis had been placed upon the scantlings of frames and not so much upon the planking itself and this he had considered to be a principal cause of failure and shipwreck amongst the merchant fleet. His new system, which he had already proved by building the *City of Rochester* (400 tons), had been amply tested when she had been driven onto rocks during a storm.[51]At this time several other less well found vessels had been lost, the *City of Rochester* - being of such a construction as to have four layers of overlapping hull planking giving her a hull thickness of some nine inches - survived intact.

Brindley stated that the relative costs had been in fact cheaper as he was able to use fir on the inner layers rather than have an extensive heavy frame of oak. In answer to Young's question concerning strength, Brindley claimed that she was infinitely superior to that of a conventionally built vessel. The main problem was that the register book at *Lloyd's* could not certify any particular letter as she was noted as "new construction" and "doubtful," this appeared to have been a case of ignorance with the surveyor not wishing to commit an "unknown" to the letter A1 - and consequently the owner could not get insurance and others would not build a ship in that way,[52]consequently the method was somewhat dogged by an adherence to convention, despite being the basis of a very strong vessel.

The committee continued the consideration of construction methods as a principal cause of shipwreck when they called upon Lieutenant Robert Wall, another naval architect to give evidence. Wall was of the opinion that the mercantile marine was in "a state of progressive decay and disorganisation"[53]and that the increasing incidence of shipwreck had been the subject of much public discussion and press comment. Wall considered the causes to have been many and

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[50]*Ibid.*, p.56; A diagram appears of midship and longitudinal sections of the *City of Rochester* built to Brindley's new system.

[51]*Ibid.*, QQ.795-800, p.50; in which the captain of the *City of Rochester* attributes his safety and that of his officers and passengers to the particular construction of the ship.

[52]*Ibid.*, QQ.822-823,p.57 and Q.850, p.58.

[53]*Ibid.*, Q.888, p.61; Lieutenant Robert Wall: naval architect.

varied but he considered the one outstanding cause was that of "the injurious operation of marine insurances".[54]He condemned the underwriters "the underwriter's trade consists in the wrecking of ships, and increases in proportion evidently to the casualties of the sea."[55]He considered that the scantlings given by *Lloyd's* to be utterly inadequate and advocated ships to be of solid bottom and of diagonal framing to a method he claimed to have invented called "Oblique Framing". This appeared to be a derivation of the system originated by Sir Robert Seppings in 1810.[56] Wall proposed four immediate measures to help counteract the incidence of shipwreck: a board of naval control over the merchant service; all vessels to be built with solid bottoms; it was to be an offence to insure a vessel for more than two thirds of its value; and that lastly, no person could act as a master or mate without being successfully examined for the purpose. He also further recommended the carrying of ship's lifeboats (and suggested a cork based design) and on the basis of losses reported in *Lloyd's List*[57] recommended the provision of harbours of refuge at Filey Bridge and Redcar, and finally the establishment of a board of engineers on the model of that of the civil engineers.[58]

The following witness Mr John Henry Hodgson had crossed the Atlantic in a timber laden ship, where because of leaks sprung during a gale in which several ships were lost he had almost perished too. As a result of his experiences he presented to the committee a model of a pumping arrangement that might be undertaken by all ships having a clear deck and capstan.[59]

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[54]*Ibid.*, Q.889, p.61.

[55]*Ibid.*, Q.890, p.61.

[56] It was first tried on *Tremendous* in 1811 and had become standard by 1815 although few ships had actually been fitted with it by then. See B. Lavery, *Nelson's Navy*, London (1989), Pt.III, p.66, "The Seppings System".

[57]*Ibid.*, QQ.968-974, p.65; *Lloyd's List* - from 4th November 1821 to 14th October 1829 had reported 169 wrecks in the vicinity of the Tees estuary (Redcar) to Scarborough (Filey Bridge) during three gales of wind alone; 1821,1824 & 1829.

[58]Thomas Telford, 1754 -1834 had created the first Institute of Civil Engineering, see Brian Bracegirdle and Patricia H. Miles (Eds.) *Thomas Telford*, Newton Abbot (1973).

[59]*S.C. Shipwrecks* (1836), QQ.980-994, p.66; Mr John Henry Hodgson: inventor.

The question of shipwreck was soon addressed directly to the witnesses at an early stage in their respective examinations. In the case of Lieutenant James Rocheid Forrest RN, the government agent for emigration at Leith, straight away Buckingham asked "has your attention been drawn to the subject of the losses of ships"? Again insurance was cited as the primary cause,[60]and the leading factor with unscrupulous owners who saw advantage in losing the vessel. Forrest considered ignorance of navigation to be another major cause of shipwreck and cited the case of a porter being appointed as captain of the *Eliza* of Leith - the vessel allegedly bound from Leith to Sunderland was in fact going to Oporto and was stranded in the Channel. On the matter of navigation Forrest suggested that there might have been a central board for the examination of masters and officers of vessels. Again as with Henry Woodroffe, Barnard suggested the practice of survey in frame followed by a survey prior to launching, Forrest concurred. The problem of over-loading was brought into question, timber laden ships that had to compete with American and others were particularly susceptible to capsize due to heavy deck cargoes. As were colliers, Forrest stated "I believe there are few gales of wind in which many colliers do not founder"[61]Barnard observed that they were frequently overloaded with "wales under water several inches".

The last witness on the 12th July 1836 was Captain Hugh Evans. As the harbour master at Holyhead for the previous 26 years Evans had been in a particularly apt situation to comment on the increasing amount of coastal shipping. The trade in and out of Liverpool had been increasing at that time and with it though not at the same rate had the incidence of shipwreck along that busy part of the coast. Evans' principal contribution as a witness was the idea and plan of extending Holyhead Harbour as a harbour of refuge to accommodate this increasing trade in a time of storm - "Holyhead is on the track of trade and the best place for all purposes - I have particulars of 39 ships and vessels on shore in Holyhead Bay, 20 of them lost with many lives".[62]Many improvements had been carried out in the region of Carnarvon Bay - a forty mile sweep to the south of Holyhead - such as the

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[60]*Ibid.*, Q.1001, p.67; Lieutenant James Rocheid Forrest RN: government emigration agent.

[61]*Ibid.*, Q.1101, p.72.

[62]*Ibid.*, Q.1190, p.81.

placing of lights, especially that of the South Stack. The positioning of the South Stack light and several beacons erected on the coast "by order of the honourable Board of Trinity House" had enabled the increasing coastal traffic to safely round the head bound for Liverpool. Vessels that had previously "having made their voyage to remote parts, escaped the perils of the wide ocean, arrived off their native coast, and when actually preparing to enter their destined port were unexpectedly wrecked",[63]could now hope to avoid such dangers with careful navigation and seamanship.[64]The case then for an extension of Holyhead Harbour as "an asylum port in the channel" was made as Evans produced drawings. He also recommended Mount's Bay westward of the Lizard Point and under Beachy Head as being other prospective sites for asylum harbours and places of refuge.[65]Like many of the other witnesses, Evans was also in favour of the idea of the intervention of a marine board,[66]to be placed in London but to have local agents.

4(iv) 15th July 1836: On the 15th July, Mr Robert Brindley gave evidence. The one outstanding concept that Brindley brought to bear was that of the use of displacement as a measure of tonnage. Brindley was a surveyor of shipping and naval architect, who like other witnesses who had come before was greatly aware of the enormous increase in shipwreck. Despite being employed by *Lloyd's* he criticised heavily the means by which surveyors were taken on - and stated that the committee of *Lloyd's* had been incompetent to judge the fitness of surveyors.[67] He recommended that: "the Legislature should assume to themselves an authority to

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[63]Evidence of Captain Hugh Evans - taken from the Liverpool paper dated July 17th 1834.

[64]Although this was not to be the case with the *Royal Charter*: having arrived home from Australia carrying returning gold prospectors and £370,000 of gold, she was wrecked off of Anglesey on Tuesday 25th October 1859 during a force twelve hurricane later to be referred to as the *Royal Charter* gale. See *The Golden Wreck*, Alexander Mckee, 2nd ed. 1986. Also *Illustrated London News*, 5th November 1859.

[65]*S.C. Shipwrecks* (1836), Q.1177, p.76 and Q.1190, p.81.

[66]*Ibid.*, Q.1155, p.74 (as suggested by Mr George Cole, see App. No.1, p.269).

[67]*Ibid.*, QQ.1356-1377, p.88; Mr Robert Brindley: surveyor of shipping.

appoint the surveyors of shipping".[68] Brindley was also critical of *Lloyd's* rules for construction, the fact that almost irrespective of material type a vessel is allowed to remain in the A1 category, despite the fact that the scantlings may have been inadequate in the case of planking. Brindley repeatedly came back to the question of ship's tonnage: "the national admeasurement of ships for tonnage contributes in a great measure to the losses of vessels"[69] and he advocated the method of displacement rather than either that of the old measurement system or the new as a means of safely ascertaining the loading of ships.[70] Whilst again advocating preference of a thicker plank structure rather than a solid bottom [71]as a means of overcoming shipwreck, the idea of displacement as a means by which a safe loading and hence waterline mark could be achieved had dominated Brindley's contribution to the evidence. Brindley cited rules that had been laid down twenty years previously and that had been in use in naval schools,[72]although he considered that more than five-sixths of the ship-builders in England were entirely ignorant of the

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[68]*Ibid.*, QQ.1414-1418, pp.90-91.

[69]*Ibid.*, Q.1206, p.82.

[70]"Old measurement" system was based upon measurement of length, breadth and "half the maximum breadth" (half of the beam) taken as height to the deck-head from the keelson as an approximation to give a cubic measure; the "new measurement" (1836, 5 & 6. William IV, cap.56, p.950) replacing the approximation of height as max. half-breadth (half beam) by using the actual height above the keel to the deck-head was an attempt to get nearer to the actual volume in cubic feet and hence tonnage, but by not taking into account the particular shape of the hull was still only a vague approximation of the true measurement - it would appear from the table taken from the *Shipping Gazette* (evidence of Robert Brindley: *Ibid.*, p.85 - "....A comparative analysis of the old, new and actual tonnage of the present mercantile navy, the admeasurement made at Dartmouth by Customs, March 26th 1826....") that neither the old nor the new system of measuring tonnage was a particularly accurate assessment of the actual burthen. (def. *English Gem*: burthen - load /weight /cargo). Also see: W. Salisbury "Early Tonnage Measurement in England", Part III. H.M.Customs, and Statutory Rules, *Mariner's Mirror*, No.52 (1966), pp.329-340.

[71]*S.C. Shipwrecks* (1836), Q.1355, p.88; Also see reference to *City of Rochester*, a ship that survived a grounding because of the construction method of using heavier planking than normal practice (*Ibid.*, p.56; evidence of Joseph Brindley - drawing dated Rochester, May 1824).

[72]*Ibid.*, QQ.1378-1381, p.89.

means by which it should be calculated.[73] Displacement according to Brindley was the method of measuring actual tonnage in the Royal Navy[74]but the method for measuring nominal tonnage (as described by Mr Young) was as subject to errors in the Royal Navy as were the calculations of the merchant navy builders.[75] As regards the five-sixths of the merchant vessel builders: "we should look to the future to an improvement according to the march of intellect".[76]

Following Brindley, Charles Lorimer gave his evidence. He was an "adjuster of averages" employed at Liverpool to "apportion the charges when a vessel is wrecked and to divide the proceeds when anything is saved". He was of the opinion that the shipwrecks had not increased significantly when one took into account the relative increase in commerce. He considered that it was the master who was responsible and that largely through want of education of the commanders and sometimes through drinking, the ships were lost. During Lorimer's evidence the question of "seaworthiness" was raised several times, whether it would have been easier to have certified a man as being capable of commanding a ship or whether it would have been easier to have certified a ship as being seaworthy in order to help alleviate instances of shipwreck. "Seaworthiness" and its meaning had been a problem to define in law.[77]Amongst the variety of causes that a ship could be pronounced unseaworthy had been the question of loading. Palmer at least on the committee seemed well aware at the time of the detrimental aspects of overloading and particularly in the case of timber carrying ships. The idea of legislation was again mooted with the suggestion of surveyors keeping watch on the building of vessels and aspects of seamanship (loading): "appointed by public authority, as in North America". Young (who took an anti-interventionist stance) suggested that the terrors of the sea concerning lives and property might have been a greater

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[73]*Ibid.*, QQ.1316-1319, p.87.

[74]*Ibid.*, QQ.1382-1383, p.89.

[75]*Ibid.*, Q.1395, p.90.

[76]*Ibid.*, Q.1319, p.87.

[77]*Ibid.*, Q.1596, p.101; Mr Charles Lorimer: adjuster of averages (marine insurance).

deterrent to sending ships out in an unseaworthy state than "local" legislation.[78] Whilst the limitations of *Lloyd's* surveyors had been acknowledged "they are servants of the persons employing them" not of the state, Lorimer argued that intervention in any situation "might hang as a clog upon commerce". He did not seem necessarily enthusiastic for measures directed at the safety of ships with regard to construction but rather of the competence of their commanders, in which case he recommended a board for the examination of officers[79] with the argument that it was not the same difficulty in determining whether a man was capable of commanding a ship as whether a ship was fit to go to sea.[80]

On the question of insurance he suggested that rather than going for big risks where premiums may have been higher it was far preferable to the underwriters to insure at a low rate of premium a regular risk "the profit to the underwriter at the end of the year will be greater". Lorimer maintained that the underwriters would "stand forward on all occasions to adopt improvements" and that despite high premiums and excessive rates encouraging a system of gambling speculation,[81]he agreed that "it does not follow that each underwriter has a direct interest in increasing the number of losses" in order to gain profits, the underwriter's business interests being best served by reduced risks (greater safety) and steady premiums. Comparisons with American vessels in the trade between Liverpool and New York showed American vessels to have a greater record of safety and the American masters superior to the British ones[82] - with the consequence that owners of goods shipped out favoured American vessels. Many of these vessels were operating as "dry-ships" - no spirits being allowed on board. During this evidence Young (in the

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[78]*Ibid.*, Q.1607, p.101.

[79]*Ibid.*, Q.1631, p.103; Also see: QQ.1451-1462, p.93.

[80]*Ibid.*, See Q.1434, p.92; He considered that "....there is a great want of education; many captains of ships are very ignorant men, taken from low classes of society, and not sufficiently instructed in navigation ...not sufficiently educated for the great trusts reposed in them....".

[81]*Ibid.*, Q.1552, p.98.

[82]*Ibid.*, QQ.1486-1488, p.95.

interests of the shipowners?) questioned the logic of the case for intervention[83] and Barnard again pursued the case for survey of vessels in frame and at launch as a means to ascertain unseaworthiness.[84]There seemed to be an unnecessary amount of argument in the evidence, Lorimer (who confesses to it on many occasions[85]) did not seem to profess a great deal of knowledge of some of the more intimate details of the matter but maintained an adamant stance against the quantification of "unseaworthiness" (and the consequent commercial results) favouring the examination by a board of masters as the means by which the improvements should be made.

4(v) 19th July 1836: The evidence of Captain James Couch was technical in nature; whilst Couch had not been concerned with the general question of shipwreck he was particularly concerned with ships' "channels" as he considered this to be the area of most strain during heavy gales at sea. He had devised a patent channel whereby the effects of the waves would have been completely avoided and the ship not thrown onto her beam ends.[86] The idea had been accepted by several notable merchant ship builders as it would improve the construction of merchant vessels but at the time of the inquiry there had not been any vessels in build that the

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[83]*Ibid.*, Q.1650, p.104; Referring to the reporting of ships as being unseaworthy "....would it not be productive of enormous inconvenience to the commerce of the country....".

[84]*Ibid.*, Q.1650, p.104; "....Do you think a public register of the character of a ship would tend to settle the point of seaworthiness...."?

[85]*Ibid.*, Q.1430, p.91; When asked whether he had formed an opinion as to the extent of shipwrecks - "....No, I have not....".

Q.1500, p.95; When asked about British ships not being allowed to bring in anything but the produce of Great Britain "....I am not certain as to their Navigation Acts". See also: Q.1519, p.96; Q.1568, p.99; Q.1577, p.160; Q.1655, p.105.

[86]*Ibid.*, Q.1684, p.107; Prior to Capt. Couch's developments "channels" appear to have presented a broad flat point of leverage for an on-coming wave to lift the vessel over onto her beam-ends - they constituted a broad thick protruding plank structure - coming out horizontally from the ship's side in order to broaden the base for the shrouds so that the load could be spread. Couch's patent channel avoided wave effect due to its different structure and could enable the rapid clearance of the wreckage of masts, yards etc. from the hull at a time of disaster.

new system could have been tried on,[87]and while the board of the Admiralty had initially accepted to try an application of the new idea, it had been hindered by the local resistance of Captain Symonds, the surveyor of the navy "from the jealous influence he possesses".[88] When asked about other suggestions to lessen the number of shipwrecks Couch pointed to the need for improvements in the navigational abilities of merchant captains and officers, and the need for examinations as we "go through in the navy". The question of the need for more sufficient ground tackle in merchant ships was raised[89] and of there being a maritime code that might for example persuade captains of merchant vessels to anchor across the wind "openly" rather than having "the weathermost ships anchored ahead of the ships to leeward" where in the case of broken anchors (ground tackle) those ships would collide.

During the evidence of Mr John Anderson, a secretary to two shipping mutual assurance associations at Newcastle[90]much evidence came to light on the practices of insurance transactions. The Liberal Premium Association and the Hope Association were of the type of "local" insurance arrangement known as "Clubs". These societies spreaded the risk between their members who were in the main shipowners themselves "common partners in a common cause, and that their interest is to have few ships lost, because the more that are lost, the more they suffer".[91] They therefore had a direct interest in the condition of ships because it would have been themselves who would have had to have paid increased premiums at a time of loss whereas the underwriters for *Lloyd's* had merely to raise the premiums as risk and loss became greater - they did not have the same sense of direct experience of loss as the ship owning "club" members. The Associations even offered incentives to masters and officers to bring "ships home under difficult circumstances"[92] and conducted inquiries into the cases of total loss.

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[87]*Ibid.*, Q.1698, p.109; Q.1704, p.110; Q.1717, p.111; Captain James Couch.

[88]*Ibid.*, QQ.1707-1715, pp.110-111.

[89]*Ibid.*, QQ.1733-1747, p.112-113.

[90]*Ibid.*, Q.1750, p.113; Mr John Anderson: The Liberal Premium Association and the Hope Association.

[91]*Ibid.*, Q.1759, p.113.

[92]*Ibid.*, Q.1794, pp.114-115.

Anderson accepted the case for greater education amongst seafarers as being one of the means by which fewer accidents could happen.[93] Ships that had been formerly laid-up for part of the year had enabled the boy seamen to go to school; now, due to the increase in commerce ships were worked over the most dangerous times of the year, not only causing the boys to forgo their education but to increase the "sea risk".

The concept of risk in the context of shipping was seen as largely dependent upon cargoes and associated vessels; colliers were a high risk, traders not such a good risk, whereas the majority of the ships insured by the Associations were coasters "generally small and employed in the coasting trade: French, Dutch, Baltic and some few in the British American Trades". The point was made by Buckingham that vessels may have been over-insured and the inference was that paying for ship's insurance at sums beyond what they were worth may have been deliberately attempting to make gain out of shipwreck. The Associations had a limit upon the sum insured, however according to Anderson a vessel could be insured beyond these limits by going to several Associations (Clubs). In the case of a vessel being refused insurance, the owner could still have applied to the "common underwriter" the underwriters at *Lloyd's*. "Is it not a fact that the ships are insured at *Lloyd's* without a competent knowledge of the character of the vessels" asked Buckingham - the fact seemed to be that the premium was regulated according to the risk.[94] Very few ships apparently had been actually broken-up due to being unseaworthy, rather they were repaired and sold to other (less exacting) ports.

Anderson attributed any defects found in the ships or their management to the rigid and severe economy in which they had to operate, maintaining that the profits did not enable adequate building and equipping of ships. Again Barnard put the question of survey at the building stage and at launch as "the means of the public getting some knowledge of the state of the vessel". Anderson considered it in the interests of the underwriters "to encourage every possible improvement in the

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[93]*Ibid.*, QQ.2040-2041, p.28; and with reference to examinations into fitness and qualifications of masters: QQ.1801-1808, p.115; QQ.1817-1823, p.116 & QQ.1836-1837, pp.116-117.

[94]*Ibid.*, Q.1897, p.122.

finding of vessels" and in this context Young asked whether the underwriters had in fact encouraged chain cables in place of the old hemp cables.

The notion that the underwriters may have gained by increased premiums due to increased risk was denied, in general the underwriters stated that it would have been far better to have gained more business at a moderate premium than to have gone to the extremes, for the former was the most profitable.[95] High premium/high risk was allegedly looked upon as tending toward a "gambling transaction" and according to Anderson the amount of profit in underwriting since the war had been very low.

The last witness on the 19th July 1836 was Mr Samuel Baker. Baker brought before the committee a plan for a spiral buoy, that had been invented by Michael Logan. The buoy, some 22ft high had been adopted in 1795 by the Trinity Corporation to be tried at Smith's Knoll off Yarmouth. Seemingly a superior design in all other respects from the existing buoys its further usage had however been discouraged by Trinity House due to differences of opinion with Logan. Logan had approached *Lloyd's* in 1826 and they too had refused to assist in utilising the invention, the reason given by a Mr Bennett of *Lloyd's* at the time was that "insurance (premiums/profits) was low, and if coast navigation was made secure it would be still more so".[96] Despite its apparent superiority (it would not have been engulfed by strong current of tide) and with a sounding device would be "particularly recommended for the River St. Lawrence where it is foggy" the buoy had not been taken up by anyone. The Navy Board and the Admiralty had informed Baker that buoyage rested entirely with the Trinity corporation, and they could not be convinced to change. Anticipating modern practice, Buckingham finally asked Baker whether he thought it advantageous "to have buoys on different sides of the river as you sail up of different colours" to which Baker said "no".

4(vi) 22nd July 1836: On the 22nd of July Captain Manby, barrack master at Yarmouth was called in and examined. Yarmouth was considered the most dangerous part of the coast of the kingdom, Manby had submitted a statement of the

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[95]*Ibid.*, Q.1995, p.126.

[96]*Ibid.*, Q.2090, p.131; Mr Samuel Baker: (Marine Spiral Buoy).

actual number of ships driven onshore from 1825 to the time of the enquiry. In some eleven years 61 wrecks had occurred[97]the larger portion of which had been totally lost, Buckingham put forward the suggestion of having an officer appointed to examine and report into the circumstances of every wreck.[98] Most of the incidents seemed to have occurred on the Cross Sands, which Manby considered "one of the most dangerous sands that could possibly be" and that he had made several recommendations for the establishment of a floating light at St. Nicholas Gatway "on the persuasion that it is the only effectual means to diminish the great constant loss of life and property on those most fatal sands".

It appeared that despite Manby's pleas to the Trinity Board signed by upwards of 200 Yarmouth shipowners besides other persons interested in shipping to attempt to get a light established (he even offered to make arrangements for the light himself[99]) it fell upon deaf ears at the Trinity Board. The same could be said for Manby's attempts at getting recognition from the country for his widely used invention of the Line Mortar - he had applied in vain to have the superintendence of it entrusted to him. This idea (enlarged upon in Chapter Three - 3(iii) above) put to use by the preventive service and taken up by other countries for which Manby had issued translated plans had not by this time been formally recognised in Britain despite Manby having "received the thanks of every country, and had received honours from four sovereigns". The issue had so upset Manby that he thought there may have been some - "odium in my character of conduct". Upon inquiring, Lord John Russell had given him the assurance "that such was not the case, and that he had not the most distant intention to cast any imputation on my character".[100]

The issue of insurance practices was an important one for the committee to understand, since suggestions had been made that instances of shipwreck could have been the result of sending poorly found ships to sea for material gain, made by over-insurance in the face of impending danger. The next witness Mr Thomas Adams gave much evidence as to the practices of the insurance associations -

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[97]*Ibid.*, Q.2147, p.136; Capt. George Manby: barrack master (the Line Mortar).

[98]*Ibid.*, Q.2201, p.139.

[99]*Ibid.*, Q.2164, p.137.

[100]*Ibid.*, Q.2174, p.138.

"clubs". As Secretary to the Coal Trade Mutual Insurance Association at South Shields (two-thirds of whose ships were engaged in the coal trade) Adams confirmed previous evidence that the ships rejected by the clubs could get insurance in London, Glasgow or Newcastle and that individual underwriters at these ports were prepared to take risks that the clubs might otherwise refuse.[101] The practice in the clubs to take on a new ship usually involved some kind of inspection often attended by several members of the committee, some of whom most likely would have been shipbuilders, they "personally investigate the general state and condition of the hull and stores and of the ship". In these circumstances some vessels were rejected "from not being in a seaworthy state or for want of great repairs". Private insurers, individual underwriters who would take great risks that the clubs had refused took up the business, often charging well over the usual premium to cover the risk.[102]

Practices in the Coal Trade Mutual Insurance Association included an annual inspection by survey of the ships in the club. In the case of manning they had on occasion insisted that extra hands be taken on. In the case of vessels lost at sea the masters were examined, this examination could lead to suspension or discharge. Rules were laid down concerning stores required, different sails and anchors, sheathing, cables and the character and ability of masters of ships. Without adherence to these rules and practices insurance cover could be invalidated.

These local arrangements under which four-fifths of the vessels in the Tyne were covered by the clubs[103]were not enforced on the remaining fifth, many of whom sought the services of *Lloyd's* underwriters in London. It would appear from the evidence of Thomas Adams that in the case of ships being insured by the clubs up to their limit, the ship may be further insured to its value[104]by going to other clubs or to the *Lloyd's* underwriters. If the owners were to have insured beyond this value and were found out by the respective clubs then the difference may have been

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[101]*Ibid.*, Q.2242, p.141; Mr Thomas Adams: Secretary to the Coal Trade Mutual Insurance Association.

[102]*Ibid.*, QQ.2244-2245, pp.141-142.

[103]*Ibid.*, Q.2313, p.144.

[104]*Ibid.*, Q.2302, p.144; There is a valuation placed upon each ship insured.

deducted from them in the case of a settlement due to loss. However, if a vessel was to have been insured by an owner who did not belong to a club - for example through *Lloyd's* - where this could have been done for 12% over the club premium, then the case could have arisen where the ship was insured for a higher value than she would have been worth and it may have well been in the interests of her owners that she should have been lost.[105]Even if the ship was to have been entered in *Lloyd's* registry book she was not necessarily surveyed and therefore may appear a somewhat blind risk on the part of *Lloyd's*,[106] which presumably was in the line of business so long as the premium covered the risk. Those in the mutual insurance societies (clubs) would not seem to have had any interest in over-insurance because ultimately the costs would have fallen upon themselves. The case of over-insurance seemed to rest with the underwriters at *Lloyd's* who were prepared to accept the risk provided that they got the extra 12%, they did not even appear to have been bothered about the condition of the vessel in question.

The question of loading arose when Young asked whether the clubs had any rule applicable to deck-load. In the case of the Coal Trade Mutual there was a rule, enforceable by fines but it had not been the case generally.[107]There appeared also to be a tendency to sacrifice the seamen's quarters for cargo space in the quest for more profits with a consequent deterioration in the seaman's welfare. On the question of the manner to which the ships were loaded there seemed to be general agreement amongst seamen - that they were loaded too deep.[108]On the subject of examination of masters and officers Adams was in agreement with the concept of a board - to be appointed by government.

The practices of the mutual insurance associations (Clubs) were not widespread throughout the country so it would appear that the members interests could not have been utilised in the appointment of examiners on a national basis to commend the fitness of persons in command of vessels, in a local situation this may have been the case but it could not have formed the basis for national legislation.

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[105]*Ibid.*, Q.2318, p.145.

[106]*Ibid.*, Q.2310, p.144.

[107]*Ibid.*, Q.2334, p.145.

[108]*Ibid.*, QQ.2355-2356, p.146.

The need for some kind of nationally organised examination for masters and mates seemed paramount as examples were given of persons far too young or inexperienced to have been given command of their vessels. The loss of the *Triad*, her master having had only two years experience at sea, and of the *Navigation*, her master a carpenter "appointed almost fresh from the dockyard" were cited amongst others to illustrate the effects of the lack of a system of examination.

The inquiry continued with the evidence of Peter Barlow FRS a mathematical professor at Woolwich. Barlow had considered the characteristics of compasses over the previous seventeen years or so, and in his studies had made a number of experiments to try and account for errors reported in headings. Taking his information from naval men[109]and making his own experiments he found that compasses were "liable to great error". The error reported differed in various ports of the world in the same ship, its cause being "that the iron of the vessel attracts the compass out of its proper direction".[110]These errors were due, according to Barlow, to the localised effects of a mass of iron in close proximity to the compass. Its effect may have been much greater in merchant vessels where it had been common practice to place an iron tiller close to the compass. The effect of "local attraction" was first observed on Captain Cook's voyage.[111]Variation from "local attraction" in various parts of the world and what was later termed "deviation" from on-board factors such as a mass of iron cannon had been demonstrated by Matthew Flinders in the early part of the century. According to the minutes of the inquiry Barlow had put forward the idea to the Admiralty of placing an iron plate behind the compass to correct errors made by the mass of the ship forward - it had not much been attended to "as very few captains or masters will take the trouble to understand the subject".

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[109]*Ibid.*, Q.2392, p.151; Sir Edward Parry, Captain Basil Hall, Captain Beechy and many others.

[110]*Ibid.*, Q.2484, p.151; Mr Peter Barlow F.R.S.: mathematical professor.

[111]William Wales, Cook's astronomer, had remarked upon the fact that the variation of the compass changed with the heading of the ship as well as with geographical position. Matthew Flinders, at the end of 1801 during his voyage around Australia in *Investigator* had studied Wales' remarks and was interested in finding the cause. Realising that the change of variation with the ship's heading must be due to the altered relative position in the ship's structure, he ultimately devised a table for the deviation for every heading of his ship. See *The Admiralty Chart*, Rear-Admiral G.S. Richie, pp.84 - 86.

Barlow had recommended that iron should not be brought within a certain distance of the compass on merchant ships[112](as was the practice on-board men-of-war, Sir Edward Codrington reminded him). Barlow considered that carelessness in the siting of iron was the biggest problem on merchantmen, and given more care, then the need for correctors may have not been so acute;[113] the errors, due to the positioning of iron stanchions for example were likely to increase as more and more iron was being used in the construction of ships.[114]

After Barlow, the last witness to give evidence on 22nd July 1836 was Mr Henry Moores Rowe. A commander of ships for some ten years he gave a testimony as to the fitting of Scott's patent cable springs - a device to take the snatch out of an anchor chain cable. The opinion of nautical men was said to have been in favour of them, and at ten pounds each they were considered beneficial, in order to prevent the ship from straining and tearing away from its anchored position.

By the close of the 22nd July half of the witnesses had been examined and several possible causes of shipwreck had began to emerge as well as the ideas of some of the committee members for the alleviation of such risks. Predominant

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[112]This was much as Flinders had ordered during the voyage of the *Investigator* from 1801; when he returned to England he discovered that the effects of the iron in ship's structures forward of the poop could be counter balanced by vertical bars of iron close abaft the compass (later to be known as "Flinders Bars"). *Ibid.*, p.88.

[113]*S.C. Shipwrecks* (1836), Q.2524, p.153.

[114]See article on compass error in *Quarterly Review*, 104, July - Oct 1858, pp.183-185. Also, see "Compasses All Awry: The Iron Ship and the Ambiguities of Cultural Authority in Victorian Britain", Alison Winter, *Victorian Studies*, Autumn 1994, Vol.38, No.1, pp.69-98.

amongst the indicated causes were the question of marine insurance, the construction of ships and the need for examination of ship's officers.

Chapter Five

The 1836 Shipwreck Committee - the closing evidence

At the half way point in the inquiry the dominant factors presented as causes of shipwreck had already emerged. They were firstly: ship-building practices and secondly: insurance with the necessity of education a distant third. Matters connected with ship-building and constructional considerations occupied the testimony of nearly half the witnesses. The predominant issue therefore was the inherent weaknesses brought about during the actual building of ships, weaknesses that were very much the upshot of interpreting *Lloyd's* rules prior to the time of the amalgamation of the two societies (see Chapter Three-3(iv) above). Insurance practice, particularly the interpretation of survey rules was at this time so often the cause of built-in weaknesses.

5(i) 26th July 1836: The examination of the witnesses passed its half way point with the examination on the 26th July of Mr Nathaniel Warner Symonds. The subject of marine insurance had been previously discussed in the context of shipping losses, essentially from the aspect of sending a defective ship to sea in order to gain insurance incomes, indeed the opening evidence of Ballingall (in Chapter Four-4(ii) above) concerned this very subject. It had been the case for example with the *Nathaniel Graham*. Symonds was the Secretary to the *Society of Lloyd's Register*, the committee looked to his evidence as critical to the deeper understanding of the workings of the insurance market as alluded to by Ballingall. Symonds' description of the course of *Lloyd's* to 1834 included mention of the dissatisfaction of the shipowners at changes made to the system of survey and registration about the year 1797 and the subsequent setting up of an alternative register (see Chapter Three - 3(iv) for an extensive exposition on *Lloyd's*). This was much as Ballingall had maintained attributing the problems of shipwreck to the changes in the practices at *Lloyd's* from this date. According to Symonds, in July 1833 "the two societies that were then in existence, the Underwriter's Society and

the Shipowner's Society found they could not go on any longer".[1] In 1834 the two societies became one. Symonds explained to the committee the constitution and workings of the reformed societies now called the *Society of Lloyd's Register of British and Foreign Shipping*. The evolved society was dependent entirely upon private subscription and was controlled by a committee comprising equal representation of merchants, underwriters and shipowners (eight of each plus two others), the chairman of the General Shipowner's Society and the committee of *Lloyd's*.

One of the greatest issues bearing on the prevention of shipwrecks as far as *Lloyd's* were concerned from hereon was to be the accuracy and reports of surveyors appointed to survey ships around the country. In all, sixty surveyors were appointed on the basis of knowledge and experience, by the committee. Extensive instructions concerning these appointments were issued to the surveyors with regard to ascertaining the real and intrinsic quality of ships, the maintenance of accounts and bookwork records containing all the technical aspects of the required surveys:

> ....materials of which ships have been constructed, the quality and workmanship of the timbering and the planking, the size of scantling in strict conformity with the annexed copy of the rules....[2]

Three surveyors were appointed to London, 47 for the outports, for the eight principal ports surveyors were examined by the committee as to their suitability. The appointment of suitable men as surveyors was crucial to the assessment of risk (and hence profit to *Lloyd's*). Symonds stated:

> ....I can say from the experience which I have had for thirty-eight years in business, and from the variety of institutions I have been acquainted with in the course of my life, that a committee of no set of men in the world could have taken more pains, or have acted with more integrity and zeal to select the fittest men for the situations than they did....[3]

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[1] BPP 1836 (567) XVII.373, *Select Committee appointed to Inquire into the Causes of Shipwrecks*, QQ.2576-2578, p.157 (this was due to a lack of funds); Mr Nathaniel Warner Symonds: Secretary to the *Society of Lloyd's Register*.

[2] *Ibid.*, Q.2595, p.159; The special duties of surveyors.

[3] *Ibid.*, Q.260, p.160.

This policy was a complete change of course from the use of surveyors appointed on an *ad-hoc* basis as had been the case up until the amalgamation of the societies prior to 1834. The amalgamation of the societies had caused many old practices to be passed over and a new code of conduct enacted.[4]

The surveyor's information was contained in the "Green Book" which according to Symonds contained records of nearly 7000 out of a total of 13,000 ships belonging to Great Britain that were above 50 tons - he stated that a large proportion of the shipping in Great Britain in terms of numbers were ships under 100 tons. Vessels of below 50 tons were not registered - many of which may have been used in river work and did not go to sea - it was not usual practice to insure such vessels. Most contemporary wreck statistics therefore would not have included the fate of many of these smaller vessels.

The committee were keen to pursue the question of marine insurance as a means of profiting in the event of shipwreck. Symonds considered that a man could have a ship built as he wished and that survey for seaworthiness should not be a matter for legislation. However if a man deliberately built a ship to be lost, then he ran the risk of being hanged for it. He denied any knowledge of ships being insured for more than their real value in expectation of loss or a ship being built deceptively strong (e.g.: false bolt heads) in order to profit from loss or any case of false cargoes (e.g.: wine-barrels filled only under the filler - the rest with sand) in order to profit from the deception of loss. Symonds thought that many of these practices had been prevented by the appointment of *Lloyd's* surveyors.[5]

Using the example of Sunderland, "there are built more ships in Sunderland than all the other ports in the kingdom put together" - Symonds explained that the system of classification of the new society was made by the committee upon the surveyors information, the survey sheets being the basis of the decision. This system had enabled decisions to be arrived at by the committee on classifying the

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[4]*Ibid.*, following Q.2610, p.159, there is printed the annexed documents concerning the appointment of surveyors dated 30th January 1834. Also, after Q.2648, a printed example of the general form and thoroughness of the surveyors reports from the date of the inception of the new society.

[5]*Ibid.*, Q.2627, p.162, & Q.2639, p.163.

condition of vessels anonymously; thereby eliminating any possible bias through mutual favours and so forth, which otherwise could have easily have been the case.[6] A vessel was elected to stand in the first class - A1 for a specified number of years depending upon the durability of the materials from which she was constructed. There had been objections to this principally from the north-east of Scotland on the basis that to hold this class for the maximum time required the ship had to be built of English Oak, a species not especially plentiful in Scotland. The use of a substitute foreign timber was objected to on the grounds that it was inferior. The issue had been referred to the Admiralty who had offered an account of the durability of the various varieties of oak that showed foreign oak to be even less durable than the committee of *Lloyd's* had anticipated, the distinction was thereby justified. Symonds stated the case of a vessel built in Dundee, three years of age and built of Stettin oak timber and Danzig plank, entirely decayed and rotten.

The question of scantlings (size and proportion) arose again as this was one of the contentious issues that might have had direct bearing on the incidence of shipwreck. Comparisons were made with ships built for the Royal Navy which Symonds considered there to be no analogy - the two types of ship being built for different purposes. The merchantman may have had to have been built heavier than the naval ship because she may often "have to take the ground". This issue had been the subject of a committee at *Lloyd's* who had had to decide upon required sizes and provided that the surveyor could satisfy the committee of *Lloyd's* that these sizes had been adhered to then the classification would be issued correspondingly and the insurance cover made.[7]

The use of marine insurance as a means of profiting from loss was further pursued by Young who asked the question directly "do you think it is the practice with shipowners to insure their ships for the purpose of loss"? He also probed the motivations of the underwriters who could conceivably be judged to have profited from shipwreck in as much as owners of vessels fearing the financial consequences of loss would have sought to insure their vessel. If there were no risk of shipwreck and loss shipowners would not look to *Lloyd's* services. A cynic could easily be

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[6]*Ibid.*, QQ.2650-2652, p.167.

[7]*Ibid.*, Q.2698, p.170, & Q.2731, p.172. (Scantlings debate)

excused for making the obvious connection between extent of losses, need to raise premiums and the desire in shipowners not to suffer a financial risk that might be too great for them to carry alone. Thereby causing them to pay the increased premium as if the whole matter were a conspiracy on behalf of the underwriters. Symonds did not want any part of this, and stated several inducements that *Lloyd's* had offered to encourage inventions and improvements in the safety of vessels.[8] However, he acknowledged Buckingham's notion that there might be celebration if a discovery were to be made that eliminated shipwreck with the retort "that such an event could never occur, unless you remove all winds, and waves, and rocks and shoals".[9] He argued that whilst high premiums were necessary at time of high risk then high losses could eliminate the potential high profits and thereby nothing would have been gained. A case was stated of exceptional high premiums of twenty to forty guineas per cent where due to losses half of the underwriters were ruined.[10]

The examination to this point had been trying to ascertain the motives of the underwriters with regard to safety, Young had put the issue directly to Symonds "do you not think that it is a moral crime in any man to discourage that which tend to the preservation of life and property"? Symonds agreed. The question of high premiums covering increased risk was seen to fall initially on the proprietor of the ship but ultimately the whole community would have had to bear the cost as the increased costs of the commodities involved trickled down. Young (in the interest of the shipowners) made the point that the giving of funds by the general body of *Lloyd's* served to show that they had an interest in the preservation of ships and property. It would appear that Young at this juncture by the particular questioning of the witness was helping to make the case for the underwriters.[11] He certainly seemed to be against government interference in the survey of ships when he put the

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[8]*Ibid.*, Q.2735, p.172, & Q.2746, p.173; The underwriters had given *Lloyd's* £1000 to raise the character of British merchant ships. They encouraged the use of chain cables instead of rope. *Lloyd's* had given up to £100 to promote the objects of Padstow harbour association, and encouraged the establishment of lights along the coast.

[9]*Ibid.*, Q.2751, p.173.

[10]*Ibid.*, Q.2755, p.173.

[11]*Ibid.*, QQ.2793-2795, p.176.

point to Symonds "that such interference of Government might be most injudicious and most prejudiced to the marine commerce of the country".[12]At this point the question of government interference in the survey of ships was broached, for the seaworthiness was largely dependent upon the requirements of private insurance survey and if any impartiality was present the survey could be considered biased, as the underwriters may have dictated. Buckingham made the point that in the City of London the Building Act[13]required houses to be surveyed in conformity to the structural needs "to ensure the safety of persons inhabiting those houses". Symonds did not agree with the analogy considering instead that if a ship's master thought it safe to sail then the sailors would trust their fate to his judgement.

The assistance given by the Shipowner's Society to the government in enabling the framing of the Passenger Act (5 & 6 William IV, 1835 cap.53) was cited as evidence that there was no fundamental objection to government interference from the shipowners, Young made the position clear stating that his wish was that the system of survey for the construction of good ships should become more general "not the system of a private company but of public regulation" he inferred that the Shipowner's Society "would not oppose any interposition on the part of government with regard to ships".[14] Later that same day John Henry Hodson was called again to give evidence this time concerning the measurement of ship's tonnage by the method of displacement. He considered that the old method of measurement was incorrect (as had previous witnesses[15]) and presented documents to the committee containing instructions and diagrams to enable the accurate measurement of a vessel using a system of identical docks in which water levels were illustrative of displacement and gauges registering this change had their readings calibrated as weight. The significance of this was bound up in the notion that if the total displacement and hence tonnage could be accurately

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[12]*Ibid.*, Q.2803, p.177.

[13]*Ibid.*, Q.2809, p.177.

[14]*Ibid.*, QQ.2820-2821, p.178.

[15]See *Ibid.*, App. No.6, pp.277-278: Letter from Mr J.D. Hodgson to Chairman of the Committee on Shipwreck dated August 10th 1836, on ascertaining the tonnage of ships by displacement. Also, Mr Robert Brindley QQ.1378-1392, p.89.

determined then the safe load tonnage could be also ascertained in relation to the safe loaded waterline level i.e.: the calculated loading depth, that was considered apt for the vessel to recover herself in a case of knockdown - the degree of buoyancy. Hodson, given the degree of buoyancy required ("....determined by competent scientific gentlemen....") proposed a load-line which according to Buckingham "so defined as to form a gauge beyond which the vessel should not go to sea". This line according to the degree of buoyancy required, depending upon circumstances (e.g.: for smooth water or river navigation one-tenth lighter, for open-sea much greater) could therefore act as a measure to prevent over-loading of ships and hence consequent shipwreck.

The earlier evidence of Robert Brindley also partly concerned this subject "that the duties being levied on the tonnage - there is a temptation to evade those duties by building ships that will carry much and measure little".[16] The then current system of measurement depended upon the length, breadth and depth of a vessel; the previous system had used an estimate of depth as being half the breadth "below the height of a half breadth above the keelson" neither of which would have necessarily been anything like the actual tonnage as the cross-sectional form of the vessel was never taken into account (according to Brindley the later "improved" system was worse). Displacement as described by Brindley and later illustrated by Hodson's model could be the only true means of measurement of tonnage. The faults of the old systems with their consequences for hull form, the building of "coffin ships" and subsequent inability to escape the lee-shore were acknowledged in the summing-up report of the committee but it would be many years before Samuel Plimsoll took the legislative steps in associating loading with safety and demanded the compulsory load-line in 1871.[17]

5(ii) 29th July 1836: Mr George Bayley a surveyor of shipping for *Lloyd's Register* Society was called in and examined. Bayley, by profession a shipwright

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[16] *Ibid.*, Q.1216, p.82; Buckingham to Brindley - evidence of Robert Brindley.

[17] Proposed by the Merchant Shipping Act of 1871, the Board of Trade were given powers to make and enforce detention orders for those not complying in 1872, it was finally made compulsory by the Merchant Shipping Act of 1876 (39 & 40 Vict. cap.80).

was one of the surveyors assigned to the Port of London.[18] *Lloyd's* rules concerning survey of vessels stated that there were to be three periods at which a ship should undergo survey, Bayley had seen vessels at least once a week[19] which inferred that at least the minimum requirement was being upheld and probably far exceeded. He had stated that builders had often failed to achieve standards in material, scantling or workmanship to acquire the desired character, consequently the value of the ships had been lowered. This situation in Bayley's estimate had far improved with the new rules for survey (since *Lloyd's* 1834), and that as a result the inducement to build cheap ships ("slop" vessels) had been removed with the change in survey practice and "that ships were better built now than they were before this classification took effect". The inference was soon made that many of the ships afloat, ships built prior to the change in survey rules, may have been defective either in strength, materials or workmanship. Bayley had no doubt of this.[20]

The question of strength in the building of vessels was again raised and in particular the idea of filling-in between the timbers at the ship's bottom (as had been the case with *La Pique*, see Chapter Four above). Bayley considered the existing rules sufficient to give all the strength a merchant ship required. As to the proposal of filling-in he considered that it may have been sound practice from the aspect of safety and strength but not so good for durability as it prevented adequate air circulation with consequences of rotting and decaying of the ship's timbers. Bayley did not consider that there was enough care taken in the construction of ships, arising principally from carelessness on the part of the builders and their need to avoid expense, the only remedy for this being "the steady operation of a correct system of surveying and reporting the ship as she really is" this would provide knowledge of the actual quality and hence affect the price obtained.

The case for government interference in the building of merchant ships was rejected by Bayley, who did not consider the appropriation of government authority

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[18] See *Annals of Lloyd's Register*, London (1884), p.61.

[19] *S.C. Shipwrecks* (1836), Q.2848, p.181; Mr George Bayley: surveyor of shipping for *Lloyd's Register* Society.

[20] *Ibid.*, Q.2862, p.182; "....There are no doubt many inferior ships which are now afloat and have some deficiency in their construction...."

amongst surveyors to be a good idea, nor did he consider officers employed in the Royal Navy competent enough to prescribe for the building of merchant ships. Young helped to make the case for survey, reinforcing Bayley's opinions on construction and the consequent on-going need for survey by reiterating through the witness the arguments concerning strength and durability.[21] Realising Bayley's opinions against government interference (which one might suppose to be the same interest as the general body of shipowners to which Young was representative) Young, as if to underline his own thoughts on the matter put the question to the witness:

> ....Do you think that to place in the hands of the Government the power of such complete supervision and control over all the ships engaged in the maritime commerce of this country, would not be an intolerable interference with the exercise of private rights over private property that would be fatal to the maritime commerce of this country....?[22]

To which Bayley conveniently agreed. The point was made again with reference to the threat of foreign competition (of which America posed a constant threat) that such possible government interference "would not be deeply injurious to the maritime commerce of this country"[23] again Bayley had to agree. Whether or not Young meant to openly defend the interests of the shipowners, his own concerns appeared clearly through the supposed impartiality as he seemingly defended his vested interests and business concerns against the possible interference of the state.

Bayley had been directed by the committee of classification at *Lloyd's* to travel around the coasts of England and Scotland to investigate the workings of the new system. There had been prejudice against the system, especially in Scotland concerning the workings of the committee, but this had gradually disappeared. The Scottish objections, especially from the east-coast ports concerned the use of Baltic timber; *Lloyd's* would not accept vessels constructed with Baltic timber (oak) to be the same as London built vessels using English Oak (Bayley considered the

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[21] *Ibid.*, QQ.2910-2917, p.185.

[22] *Ibid.*, Q.2913, p.185.

[23] *Ibid.*, QQ.2916-2917, p.185.

durability of the best English Oak to be double that of best Baltic).[24] Attention had been drawn to recent losses (transport ships *George the Third* and the *Neva*) with the chairman asking whether Bayley could admit that some ships had been lost "in consequence of going to sea in an unfit state"? The case in particular was raised of timber laden ships (see Chapter Seven-7(i)) and the possibility of placing restrictions upon deck-cargoes, for many losses had occurred in coming from America. As far as ships leaving English ports were concerned then over-loading was most prevalent in the coal-trade and yet despite the visible and tangible problem of over-loading Bayley considered that no uniformity of opinion could be obtained as to a safe load-line. In reply to Sir Edward Codrington's question concerning the survey of vessels employed in the West Indies trades Bayley stated that those vessels had to undergo a rapid turn-around so as to get away from the West Indies again before the first of August in order to avoid the hurricane season and the consequent double insurance costs (this view was later attested to by Mr James Dowie (shipowner) during his evidence to the 1839 Inquiry on the loss of timber carrying ships[25]) this meant that many of these vessels could not have undergone survey except in a very superficial manner as delay would have meant loss of earnings to their owners; trade and profit taking precedent over safety.

Although he could not put a precise figure on it, Bayley admitted that there were merchant ships that were broken up from being declared unseaworthy. *Lloyd's* had kept an account of such vessels since 1834. Of the ships annually reported as being lost[26] Bayley considered that the figures from *Lloyd's List* were an exaggeration due to the fact that many that were reported stranded subsequently got off and had been sent to sea again. The old practice at *Lloyd's* (pre-1834) had according to Bayley given rise to a situation where there were many bad "old ships" and also many bad "new ships". A vessel being in the first class for a number of years, the end of which despite any refurbishment she had to lose her position in class one, at which point she would be sold to an inferior trade not requiring a class

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[24] *Ibid.*, Q.2662, p.168; also, see evidence of Mr N.W. Symonds concerning the use of Baltic timber.

[25] See BPP 1839 (333), *Report from the Select Committee on Shipwreck of Timber Ships*, in Q.311 where an increase from 25 to 30 shillings went to £2 to 7 Guineas for the winter voyage.

[26] *S.C. Shipwrecks* (1836), Q.2998, p.190; 500-600 per year.

one vessel - the original owner now purchasing a new ship to carry on in the class one trade. The overall effect was of increasing the number of ships afloat, however Bayley maintained that this was only slight because of losses, those broken-up or those sold to foreign parts and therefore had not increased considerably.

Bayley, being one of the appointed surveyors for London had had the opportunity to survey ships in the Port of London that had previously been surveyed by surveyors in the out-ports. His instructions from the committee at *Lloyd's* were to survey all new ships arriving from the out-ports. In the majority of cases his cross checking of specifications reported by surveyors in the out-ports had been correct, but there had been exceptions. The case of the *William Lushington* had been one such exception. The report from the out-port had said that she had undergone very extensive repairs and that as a result of this work she ought to be considered fit "for the conveyance of dry and perishable goods to all parts of the world" and therefore to be placed in the class diphthong AE.[27] Bayley's survey in London had reason to report otherwise, he found "nearly all the deck fastenings had worked loose, the orlop beams had been removed and made use of to replace some defective lower deck and upper deck beams". This vessel had been surveyed at Plymouth by Mr Robert Brindley, now no longer a surveyor to the society. Bayley considered Brindley's handling of the repairs to be "altogether a scandalous piece of work" and attention was drawn to the means by which surveyors such as Brindley came to be appointed. The use of testimonials seemed to have been the main criterion of selection, the use of examinations as to competency was called into question by Bayley who despite acknowledging the desirability of such a means of selection, considered that the more modest and retiring men would not be able to make true representation of their ability despite their many years of practice and skills. Young seemed to be very much in favour of the old tested system of testimonials asking "Do not you think that the best possible proof of the capability of any man is to be found in the unsuspected testimony of those who are capable of

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[27] If a vessel was not restored to A class she lapsed into the second description of the first class, designated AE provided that her condition was sufficiently good; it being considered that vessels of this description were fit to carry dry and perishable goods. Restored vessels also lapsed into AE class upon the same conditions, these vessels were colloquially known as dipthong ships. *Annals of Lloyd's Register*, 1884 Edition, p.60.

judging his qualifications, and have had opportunity of judging".[28] Bayley agreed but Barnard asked whether a man may be appointed on the basis of both testimonials and examination? What had been done in the case of the *William Lushington* clearly exposed the deficiencies of the system of selection. According to Bayley the lack of knowledge and consequent application did not rest with the surveyors; the building yards themselves appeared to be inadequate to the task of building ships from draughts.[29]

Ship-builders had been induced to make cheap ships, especially in the light of Canadian imports, reducing the costs of production in every way. The consequence of this had been the introduction of a very great number of inferior ships prior to the formation of *Lloyd's* in 1834. Bayley stated that within seven years and not before, a much improved class of ships would constitute the mercantile marine. In Sunderland for example the improvement according to Bayley was most decided, with many of the builders taking an interest in the learning of the "higher branches of the art". The system of classification at *Lloyd's* now gave the strongest inducement in improving the construction of ships.[30]Bayley considered that the supply of cheap ships in which they were built in an insecure manner may have been tantamount to murder of the individuals lost in them when they foundered at sea. They would have given service for one or two years, but by the third year many had to be broken up "so rotten that there was not a sound timber in the upper part of them". Bayley did not consider shipowners "to be alive to their own interests" in this matter, it being false economy to have cheap ships rather than more costly ones that lasted a greater number of years and required less repair. Where quick profits were available there appeared a tendency to use cheap ships, even if it meant that they had to go uninsured. Even ships that may have appeared seaworthy and were often anything but, could still be insured. *Lloyd's* had been a voluntary society and as such could not legally insist upon surveys taking place, Bayley's evidence suggested that such vessels might often have gone to sea. Nevertheless he could not

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[28]*Ibid.*, Q.3040, p.193 ; Mr G.F. Young: committee member and shipowner.

[29]*Ibid.*, QQ.3052-3057, p.193.

[30]*Ibid.*, QQ.3066-3068, p.194.

condone the notion of an all powerful government appointed surveyor preventing such sailings.

The idea of government intervention in the prevention of sailings had been brought to reality in 1835 by the Passenger's Act[31] whereby a power was vested in emigrant agents, who having made a cursory investigation of emigrant quarters could in fact demand the vessel not to sail if they saw fit. The question was put to Bayley as to whether he thought the system might be tightened up by the appointment of competent persons. Bayley could not be confident that such persons could be found, even *Lloyd's* apparently had difficulty in obtaining suitable candidates for the posts of surveying of ships.[32] In the case of naval transports a shipwright surveyor accompanied the naval officer who was responsible for checking the condition of the transport ships taken into service. In the case of convict ships examination by government officers was said to be very minute, the actions of government surveyors in these contexts was seen by Mr Tulk as possibly the solution to the proper survey of merchant vessels "might not such an examination by Government surveyors be applied to all merchant ships generally"? Bayley denied this pointing out that there was a different sort of education required for knowledge of a merchant ship. The object of the government inspectors with regard to warships was to bring them to the highest point of efficiency almost regardless of the costs involved; this could not apply to a merchant vessel.

5(iii) 2nd August 1836: One of the most significant witnesses to be examined by the committee was John Marshall. At the time of the inquiry Marshall was an agent of the Emigration Committee, he had been a shipowner and agent in engaging shipping for foreign purposes for over thirty years. In 1824 he had been instrumental in affecting the alteration in the classification system at *Lloyd's*. The widespread dissatisfaction in having two Registers found expression in a succession of public meetings. By 1823 John Marshall:

> ....has left upon record a very full account of the proceedings at this and subsequent meetings, from which we gather that by this time both the

[31] *Ibid.*, Q.3093, p.196: See 5 & 6 William IV, 1835, cap. 53.

[32] *Ibid.*, Q.3099, p.197.

> Registries of shipping had fallen largely into disrepute and were travelling slowly to financial ruin....[33]

Marshall had advocated radical changes in the organisation and administration of the Registries. He had identified the system as being "injurious in its operations on the property of individuals and the efficiency and reputation of the Merchant Marine".[34]In his evidence when referring to the period prior to the formation of the new registry he stated:

> ....up to the period when the investigation took place in the years 1823 and 1824, and subsequently, there were a very large portion of British shipping inferior; it was proved that several of them were sent to sea in an insufficient state to perform the services on which they were employed....[35]

He had written a book on the subject in 1829[36]the recommendations of which were largely taken up by the new system, but by no means all. The problem had been the method of classification by age, many ships still were in service "defective in their construction and in an inefficient state of repair" however according to Marshall they were slowly going out of existence. He did not consider that ships built after the 1834 reorganisation of the societies could so easily be described as "slop-built". Marshall had considered the extent of shipwreck and was so concerned with its growth and magnitude that he thought Parliamentary legislation should be enacted. He attributed it to two principal causes: "insufficiency in the vessels themselves" and "the character and professional competency of the persons to whom they are committed". This had been the underlying theme of the great majority of all the witnesses' testimony thus far (Ballingall for instance identifying the shortcomings in ship construction and manning). As to remedies Marshall considered two means. The first, as far as the vessels were concerned, would be to classify them in *Lloyd's* books, the effect being that the ship could then have been used in an appropriate

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[33]See *Annals of Lloyd's Register*, London (1884), Ch.5, p.29.

[34]*Ibid.*, p.31.

[35]*S.C. Shipwrecks* (1836), Q.3145, p.199; John Marshall: agent of emigration committee.

[36]See *Statements as to the Proceedings of the Committee for Classing the Mercantile Marine*, by John Marshall Esq., London (1829).

trade according to her condition (i.e.: "A" class ships for world carriage of dry and perishable cargoes, "I" class ships for coastal carriage of cargoes not subject to sea damage and so forth); secondly, the creation of a marine board by which masters and mates could be examined as to their competency. Again as Coleman and others had indicated a marine board by which matters arising within merchant shipping could be exclusively dealt with. The only way that Marshall could foresee this coming about was by legislative enactment. In addition he had welcomed the idea of a "general system of well defined maritime law" the like of which had existed in France and "grievous inconvenience from the want of such a code" existed in England. This could be particularly apt in helping seamen's grievances to be settled in order to avoid going to the Court of Admiralty. Marshall thought that there would be strong objection from the shipowners to "such a classification of their vessels being made by merit as the Legislature might enforce" but that any such objection could be overruled by consideration of the public good. As to the examination of masters and officers he thought that again there might be objection, but that the better class of them might welcome it. Mr Tulk referred back to Marshall's description of "insufficiency of vessels as being a cause of shipwreck" Marshall clarified the term as to indicate two causes of shipwreck: "unfitness of vessels arising from original malconstruction, or the insufficiency of the timbers and fastenings"; and secondly, "the want of reparation when the vessel requires it". Manning was the other aspect of his testimony and in this aspect he had apparently observed:

> ....that men take charge of vessels who in my judgement are professionally, and, if I may use the term, morally, I mean by the general character of their intellect and experience, incompetent of the duties they undertake....[37]

In the course of his experience Marshall had known several fatalities due to such incompetence. He considered the formation of a marine board - a parent board in London and delegated branches at the principal out-ports - the means by which agreements and disputes between masters and men may have been regulated and also examinations conducted. The case for a marine board following the recommendations of so many of the witnesses was becoming a dominant theme of

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[37]*S.C. Shipwrecks* (1836), Q.3169, p.201.

the inquiry. Its composition to be chiefly of nautical men, persons of high character, a portion from the Royal Navy, a portion belonging to the merchant service and some legal persons. Whilst being instrumental in affecting the changes in the register societies Marshall's recommendations as in his book, had not been entirely taken up. He considered *Lloyd's* revised system to have been much more satisfactory, but still not entirely without objection, the making of two descriptions of what are termed first-class ship "A" and "AE" especially alarmed him, the "AE" being known as diphthong ships (see footnote 27).

Marshall's achievement in investigating and prompting the changes at *Lloyd's* was all the more impressive when one considers the vested interests opposed to them. The underwriters exercised great power, Marshall originated the proceedings in 1823 "with a view to inducing the underwriters at *Lloyd's* to concur with the shipowners and merchants". He had pointed out the evils of the system, and out of 1300 members of *Lloyd's* voting on whether or not to have "an inquiry into the then existing and most injurious system" the vote was carried by a majority of only 25 with the underwriters virulently opposed. The apparent opposition of the underwriters caused the question to be again raised over their interests and over the effects upon safety and profits. Would the underwriters have gladly sanctioned a discovery by which ships could have been built that reduced the risk and consequently lowered the premiums, or would perhaps their conception of their own interests have precluded this development in favour of the continued premiums?

Some witnesses had suggested that surveyors should be appointed and derive their powers from government. Marshall opposed this view maintaining that for proper appointment and control of surveyors the board should not have been entirely and exclusively appointed by government. He was sure that to work correctly it had to be set up by the authority of parliament, and that its members should represent the interests of shipowners as well as government. Whilst accepting that merchants and underwriters had a very important interest, Marshall had deep reservations about including merchants and underwriters on a marine board, and he did not think the support of owners of "inferior ships" would be forthcoming. As to the ability and character of seamen Buckingham put it to Marshall that there might be established a register office whereby their names, descriptions when discharged, ability and character "to facilitate their engagement

in other vessels" could be ascertained - Marshall agreed, so long as it would not interfere with the freedom of individual action.

The habit of intemperance amongst merchant seamen was brought before the committee in the testimony of Mr Charles Parnell, the dockmaster at Liverpool. Parnell who had served in this capacity for about 14 years considered there to be two main types of shipwreck: the unavoidable which no skill could avert resulting from gales and sudden shifts of wind near the shore; and the avoidable, resulting from neglect, inexperience and especially intemperance. Intemperance by habits of drinking "spirituous liquors" had caused many serious losses according to Parnell, who submitted to the committee several accounts of danger and stories of potential loss based upon letters he had received from masters of vessels in Liverpool.[38] Parnell believed that nine-tenths of all losses were attributable to intemperance, and considered spirits to be unnecessary "injurious to body and mind".

The problem had so vexed the shipowners of Liverpool that some had sent vessels to sea without "ardent spirits" on-board, the merchants of the city considered this advantageous "and steady sober young men prefer going in temperance vessels to vessels to which ardent spirits are used, temperance vessels generally get the best crews". The system of sailing without "spirituous liquors" had been so extensively practised amongst American vessels that by 1836 more were said to have sailed without spirits than with. Marine insurance companies in the city of New York, Baltimore and Virginia had allowed discounts on premiums on account of vessels sailing with no carrying or consumption of spirits.[39]Indeed American ships in all respects were considered superior to English, both in construction and crewing. Parnell admitted that English commerce had suffered as a result of this alleged superiority in that American ships had preference for goods and passengers (he also pointed out that even in the US many men of the United States navy had agreed to forgo grog rations in favour of extra pay such that for example on the sloop of war *John Adams* "not a man draws his grog").

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[38]*Ibid.*, QQ.3237-3242, pp.207-208; Mr Charles Parnell: dockmaster at Liverpool (Letters of Capt. Underwood of the ship *Albion* etc.).

[39]*Ibid.*, QQ.3253-3254, pp.208-209.

Parnell agreed to the idea of an enquiry into the circumstances of loss, with consequent exposure of negligence and incompetence. Seamen were often sent aboard vessels in a high state of intoxication before sailing, Parnell gave an account of ships needing to be navigated out of harbour by shore-based riggers to get the vessel clear of land, the crews being too intoxicated.[40]Whilst admitting there were several private registry offices for seamen Parnell acknowledged the advantage of a register office established by the authority of the government for the shipping interest. He also considered that a board of inquiry should be set up or committee to ensure the competence of captains.

The next witness, Captain Edward Pelham Brenton RN, began his evidence in a similar vein to Parnell, citing ignorance and drunkenness of the masters and crews of merchant ships as being "one great cause" of frequent shipwreck, Brenton cited cases of ignorance concerning elementary navigation amongst merchant ships. He considered the appetite for drink amongst seamen to be insatiable, the only times they were sober was from difficulty in obtaining it. However as in the case of the American ships referred to by the previous witness, Brenton was sure that it was a habit that could be broken, convinced that no useful purpose could be made of the use of spirits. In addition to the detrimental effects on the crew and consequent inability to handle the ship Brenton gave examples of the dangers posed by fire as a result of spirits igniting and quoted the loss of the *St. George*, the *Edgar*, and the *Kent* East Indiaman. Brenton would even have had the Royal Navy do away with spirits as an example to the merchant service, describing spirits as "ten thousand times more dangerous than gunpowder".

The sailor arriving from sea and coming ashore "with the reward of his toil" was very soon intoxicated and easy prey for others to take advantage of his circumstances "The moment I get ashore I will go up to Wapping with my wages and lay my soul afloat" was their expression.[41]To help avoid such blatant exploitation institutions had been established to provide a secure shore base. One such establishment quoted by Brenton was the Sailor's Home, supported by private subscriptions and sailor's payments, the idea being that it should have been a secure

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[40]*Ibid.*, QQ.3276-3279, p.210.

[41]*Ibid.*, Q.3338, p.214; Captain E.P. Brenton: officer in the Royal Navy.

place to have left a chest, bedding etc. when between ships.[42]It had been a step toward "the general elevation of the character of sailors and their improved sobriety and order", but much more was needed if the old habits of drunkenness and disorder were to be broken, Brenton considered that the use of training ships whereby boys could be brought up for the navy in a different way would be one such solution. In addition, examination of masters and officers, even extended to seamen by way of a board was recommended with such a check as a registry in every port of Great Britain. Finally, Brenton condemned the system of workhouses in terms of recruiting suitable boys to train as seamen as being responsible for a source of moral contamination likely to destroy any good disposition of boys and consequently likely to turn them into vagabonds rather than as a basis for good seamen; quoting the observations of a master of the workhouse school:

> ....that the moment a boy showed any good disposition, he was laughed out of it by the adult paupers; it is that great demoralising work which is going on through the workhouses: the moment the children get into one they commence bringing up for thieves and prostitutes.[43]

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The final witness on the 2nd August 1836 was Mr Oliver Lang, a master builder of naval ships in the King's yard at Woolwich. Lang had not had much experience of building merchant vessels. With what experience he had had with merchant vessel construction he considered them to be of insufficient strength. He claimed to know nothing of *Lloyd's Registry*, but when asked to consider the recommendations of *Lloyd's* with respect to dimensions he concurred with the sizes given for a ship of five hundred tons. The issue of filling-in a ship's bottom solid, preferably to the load-water line was one of great interest to the committee as it seemed to offer a method of greatly increasing the strength of the hull. Lang was able to confirm that this had been the practice in building for the navy, and that with proper construction, ideally using felt on each side of the timbers to prevent any

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[42]The evils and hardships facing sailors coming ashore after a voyage are considered in an article entitled "Sailors", The *Original*, 1835, pp.211-212 & pp.218-221.

[43] *S.C. Shipwrecks* (1836), Q.3371, p.216

transfer of dry rot, such practice greatly improved the capability of the vessel to "take the ground". The *La Pique*, "filled" to Lang's plan was one such example.[44]Lang gave examples of other vessels that had undergone different types of construction and had been shipwrecked: the *Dutton* East Indiaman, built with "open spaces" came into Plymouth Sound:

> .... came broadside onshore and fell outwards towards the sea...she rolled with the sea for she was labouring hard on the rocks groaning and making a most dreadful noise...she did not remain a few hours before she went to atoms....[45]

The *Amethyst*, wrecked under Mount Baden:

> ....she lay there six weeks beating from one place to another, and was not beaten to pieces; she had a solid bottom....[46]

The *Lightning* steam vessel, had incurred "a remarkable number of accidents" collisions, groundings:

> ....the times she has been on the shore and the keels carried away from under her, and the shocks she sustained by falling on the rocks....[47]

The *Lightning*'s hard service was attributed to the solidity of her bottom. Lang could not put a figure on the expense of such a solid in-filled construction, but it appeared that expense could have been the only objection. He recommended the use of the system to the vessels of the merchant service as increased security from break-up due to shipwreck.

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[44]*Ibid.*, Q.3406, p.218; Mr Oliver Lang: *La Pique* (referred to in Chapter Four - 4(ii)) had survived a grounding "....A ship of that construction would rest on a ledge of rocks in that part which is best fortified by the keel and thick garboard strakes, the thickness of which might be rubbed a long while with out endangering the safety of the ship, in this case it actually rubbed from four to five inches into the floor of the timber...." evidence of Richard Bonniwell to the Shipwreck Committee, *Ibid.*, Q.608, p.39.

[45]*Ibid.*, Q.3406, p.218.

[46]*Ibid.*, Q.3407, p.218.

[47]*Ibid.*, Q.3428, p.219.

5(iv) 4th August 1836: On the 4th August the proceedings started with the evidence of Mr John Pym. Pym was the shipping agent at Liverpool and very much aware of the dangers of the approaches to the port from St. George's Channel. In 1835 according to Pym about 13,000 vessels entered the port of Liverpool and of these, 200 were driven ashore or wrecked. The proportion of wrecks in St. George's Channel had increased considerably and Pym accounted for this by the difficult navigation of the channel and approach to the port. Pym recalled several instances of large scale shipwreck[48]and proposed that a solution might be found in the building of a harbour of refuge between Great and Little Orms Heads, which a public company had been endeavouring to execute.

Pym as shipping agent had had opportunity of seeing the manner in which crews were collected together for merchant ships. Again the subject of drunkenness arose, many men apparently being so drunk that they could not walk and were "taken to the vessel side by cart loads". He confirmed the practice of the riggers, who took the vessels out of the harbour "into the river, sometimes as far as the rock" the crews being rendered incapable by drunkenness. Pym saw the need for a general office of registration. There had been a system under the patronage of the Shipowners' Association but it had failed due to the inability to enforce the filling in of documents referring to character. Great contention surrounded this issue as many things could go wrong, for example a belligerent captain might make an unfair assessment of character, causing the man to be refused employment. According to Young, under the Merchant Seamen Registration Bill,[49] a master of a ship was bound to give a seaman a written character, but Pym made the point that a register office may have been a better and more reliable form of reference. Young also asked Pym what the current practice in Liverpool was with regard to the carrying of lifeboats upon steam vessels. Here as elsewhere lack of proper regulation had caused insufficient measures to be taken, even in the case of emigrant ships to

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[48]*Ibid.*, Q.3449, p.221; Mr John Pym. See also: Q.3451, p.221. Also Q.3463, p.221; this account is taken from *The Times* of Tuesday August 2nd 1836 and recalls the loss of the *John Welsh*, the *William* and several others.

[49]BPP 1834 (195) III.1, *Bill to amend laws relating to Merchant seamen of the UK and for forming a Register of Men in Service.*

Quebec and Australia which Pym did not think were adequately equipped.[50] Pym's closing statements to the committee concerned the annual loss of seamen from the British Merchant fleet to America due to higher rates being paid in American ships. American ships according to Pym were better built. Because of this they enjoyed the benefits of better freights; which with better crews and better officers enabled quicker turnaround passages as they supposedly enjoyed greater safety and hence more money;[51] better pay for the crews, who were in greater demand for the westward passage. Hence many good Englishmen finished up on American ships "and we never see them in our service again".

From the next witness further insight into the practices of insurance underwriters, such an influential aspect of shipping practices, was gleaned. Arthur Willis had been an insurance broker and underwriter at *Lloyd's* for nearly forty years. Willis considered there to have been "a diminution of wrecks" over that time in proportion to the extent of shipping, which he considered to be "constantly on the increase". The changes that had been brought about in the registry were seen by Willis as "a great check to the building of vessels of an inferior class". He considered "that the system of registry that did prevail formerly was an encouragement to the building of inferior vessels; it was an erroneous system unquestionably".[52] Willis maintained that the underwriters did not resist the changes (as Marshall had inferred[53]) in the formation of the new registry, but that the resistance had emanated from the shipowners themselves who resented interference, especially as it was decided to levy a tonnage duty to cover costs. When it was seen that no such duty would be required, many accepted the new system. In accounting for lower insurance premiums than had been the case previously Willis held that the captains and officers of merchant vessels were much better educated than some fifteen to twenty years previously and this helped to account for what he considered to be a diminution of wrecks. He thought that the idea of a board to regulate

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[50]*S.C. Shipwrecks* (1836), QQ.3554-3560, pp.225-226.

[51]*Ibid.*, Q.3574, p.228; A difference in wages of about £1 a month - in Liverpool 50/- to £3 a month whereas in America £3 - £4 a month.

[52]*Ibid.*, Q.3590, p.229; Arthur Willis Esq.: insurance broker and underwriter.

[53]See evidence of John Marshall: *Ibid.*, QQ.3181-3182, p.202.

officers and captains as to their competence was a good one but that objection might be made by the shipowners, Buckingham pointed out that it was practice to examine masters and captains in the East India Company, Willis did not seem at all impressed, but agreed that such a measure may have served the public good and the underwriters could not have objected to any such measure "that tended to the diminution of risk".

The questioning then turned to the setting of premium levels and consequent profits, Willis explained the delicate balance between premiums and risk: "In short, the underwriter endeavours to find out, as nearly as he can what is the actual risk, and so to shape his premium as to cover his risk and leave a moderate profit".[54]As to the setting up of a board for the examination of masters and seamen the Chairman put the question to Willis whether the underwriters should contribute to the expense of such a board, Willis thought that it should come from public funds. As to giving greater publicity to the work of the Registration Society, most of the public rooms in the commercial towns had Registers according to Willis and were very accessible to anyone who wanted to see the designation of a particular ship, cost two guineas and any individual wishing to have a Register could have had one.

Willis considered there to have been not only a diminution of shipwreck in England but also in the American service, which had proportionately less wrecks because of "the superiority of their construction, outfit, and the superiority of their seamen and officers".[55]One of the major points that the Committee sought to clarify was the question of profits to an underwriter increased by "hazards of navigation" and consequent increase of premium. It was put to Willis as it had been put to many others associated with underwriting. Willis considered the notion to be quite absurd, prudent underwriters preferring risks involving small hazards at a low premium: "underwriters will not lend themselves to the insurance of vessels of a known inferior class".[56]Part of the alleged superiority of the American vessels was the general practice of sailing without spirits on-board (enjoying a 5% deduction in insurance premium). There had been an example of an English ship the *Alexander*

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[54]*Ibid.*, Q.3636, p.231.

[55]*Ibid.*, Q.3661, p.233.

[56]*Ibid.*, Q.3680, p.234.

Baring sailing from London to Canton at the opening of the China trade, sailing as the American vessels - without spirits. Buckingham responded, incredulous at such an irony, asking "You mean to say that in ceasing to use spirits they had not injured their health"? On English ships, sailing without spirits did not affect the rule of insurance, their use was seen as a necessary evil,[57]however the committee were very keen to understand the benefits or otherwise of sailing without. Willis accounted for the fact that American ships had been insured at less premium than British ships as "British ships that generally go to America are not of the first character". He considered American ships to be of a superior construction and manning. He held that the difference in ships was regretted at *Lloyd's*, but this was the case. In the case of "insurance made with a premium supposed to be proportionate to the risk incurred by the bad state of the ship" he denied such practices, maintaining that the underwriters would not insure an unseaworthy ship merely by placing a higher premium. And that ships "that were in so bad a state that they were not admitted to any of the clubs in the north can be readily insured at *Lloyd's*" as had been suggested by a previous witness, he vehemently denied. This evidence ran counter to some previous witnesses, Anderton and Adams in particular.[58]Willis felt that the system of registration was satisfactory at the time of the inquiry and "will tend most essentially to improve the merchant marine of the country", and that objections against registration had been diminishing, that there were about 150 applications a week to be placed upon the registry and that instances of very bad ships were becoming extremely rare.

Buckingham used the idea of a ship registry, familiar to Willis, to enquire whether it may have been considered a good idea to have had a registration office for seamen, Willis considered "such a register would be attended with infinite prejudice and danger both to the seamen and to the captains". He reiterated many of

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[57]See *Ibid.*, Q.3700, p.236: "....Spirits are likely to elevate them, and to induce them to incur greater exertions than they would undergo without....".

[58]See for example evidence of Mr John Anderton, *Ibid.*, QQ.1887-1908, p.121; It may have been actually possible to insure at *Lloyd's* having been refused insurance at the northern clubs, but if when a claim was made - the ship was found to be unseaworthy - it could have been considered void (see esp. *Ibid.*, Q.1906, p.122). Also, *Ibid.*, Q.2310, p.144; evidence of Mr John Adams: "....insured in London by the underwriters at *Lloyd's* ...none of them are surveyed...".

the previous objections to such a registry, such as the empowering of captains to issue character assessments: "classifying men would lead to eternal disputes and endless litigations". As to the captains "it would be a dangerous power to give to such individuals". Seamen who had been assigned bad characters, Willis thought may be tempted to impersonate other men of known good character in order to get employment.

The avowed object of the Committee as stated by Young had been:

> ....to get all persons to be examined who are willing to give information which they consider will lead to any beneficial result....[59]

To this effect witnesses were encouraged to send further ideas and considerations to the Committee, following the submission of oral evidence. It had been a genuine attempt to draw any such information that may have been helpful in the alleviation of suffering by shipwreck from whatever sources that were considered to have been of influence. As such and as demonstrated by the evidence thus far the witnesses had been drawn from many different maritime interests.

To that end the next witness considered that revolutionary changes in the manner in which ships were propelled might help to alleviate the possibility of shipwreck. William Henry Phillips who had served in the navy as a midshipman for over five years had devoted much time and energy to the problem of:

> ....obviating loss of life and property at sea, by equipping vessels with sails having a rotary motion, to enable vessels so furnished to proceed directly against the wind....[60]

Philips presented a series of drawings to the committee and described in detail the basis of the workings of such a vessel. It had not been received too well in some quarters:

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[59] *Ibid.*, Q.2219, p.140.

[60] *Ibid.*, Q.3780, p.241.

> ....Hitherto I have not submitted my plans to anyone, further than the title of my project, which has been generally regarded with an incredulous silence, such as would dispute the proofs even of the world's globular form....[61]

Lastly on the 4th August, George Manby returned a second time, to present to the committee a document "explaining what I thought would effect the object of diminishing the loss of life and property". Manby wished to form a private association to that end, and as such what he presented to the committee was a "prospectus for forming an association, or joint stock company for furnishing the proper means for saving lives and property from wrecks on the coast of Great Britain".

5(v) 5th August 1836: On the last day of the inquiry the expert witnesses called were John Walker, William Bush, Henry Trengrouse, George Cooper, George Charlton and Sir Edward Codrington. The main issues that concerned these witnesses respectively were: charts, navigational lights, rocket rescue systems, shipwreck statistics, ship construction and finally the effects of drinking. Quite a cross section of issues and as wide apart in subject matter as many of the previous witnesses' testimony. Nevertheless the main strands of argument and case for reform had by then been quite firmly established as marine insurance, the need for an overall controlling marine board and attention to the education and drinking habits of seamen. Walker had been appointed to "take charge of the charts of the East India Company following the death of Captain Horsburgh"[62] the office of hydrographer having been abolished. Horsburgh's charts and his "Directory" - containing information of new discoveries communicated to him had become the responsibility of Walker. Walker considered that in much of the Indian Archipelago the navigation was still very dangerous, as charts were inadequate or inaccurate and gave rise to many wrecks. The Indian navy continued some of the survey work of the East India Company ships in that surveys were being carried out around the Maldives, the coast of Bengal to the north of Chittagong, the entrance to the

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[61] *Ibid.*, Q.3784, p.241.

[62] He had prior to this appointment been the engraver of charts with his company Messrs. Walker of Castle Street, Holborn. See Rear Admiral G.S. Richie, *The Admiralty Chart*, (1994), p.215.

Hoogley River and the coast of Ganjam, but it still did not equal the surveys of the old East India Company's ships whose commanders were given instructions to make surveys wherever they went. Because of the likelihood by 1836 of "there being a great number of additional ships likely to visit those quarters in consequence of the opening of the trade to vessels of all countries" Captain Beaufort of the Admiralty had corresponded with Walker offering services in respect of charting the eastern seas for which Walker accepted.

Walker had vowed to do his best in his new position despite the removal of the office of hydrographer. He stated to the committee that he intended to carry on the work of up-dating the charts as new information was sent to him[63] and to see what Captain Beaufort could do, although he stated that if the public service was to be injured by the arrangement he would "make a representation to the company about it". Walker agreed that the work of survey should go on whether it was under the auspices of the East India Company or the Admiralty, indeed it would prove of the "greatest economy" to make a "complete examination and perfect survey of all the coasts in the world".[64]

The problem of providing navigational lights upon sands and shoals had occupied the life of the next witness Mr William Bush who presented to the committee a proposal for placing lighthouses in situations where "it is not practicable to place them". Through a model and drawings Bush demonstrated a double cone structure to be sunk in the sand. Intended for use on the Goodwin Sands for the northern light, it had been approved by Trinity House and the cost estimate was in progress.

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[63]*S.C. Shipwrecks* (1836), Q.3817, p.247: On the basis that such information was found to be "....properly laid down....".

[64]See Sir Evan Cotton, *East Indiamen - The East India Company's Maritime Service*, London (1949): The East India Company had existed from 1600 to 1858, but by 22nd April 1834 its exclusive privilege of trade with China was taken away (Charter Act of 1833) it having already lost its exclusive privilege of trade to India by the Charter Act of 1813. Between 1700 and 1818, 160 Indiamen were lost by wreck, burning or capture (*Hardy's Register*, (1818), pp.360-363) - the total fleet varied considerably year by year (in 1791-2 for example there were 92 ships trading to India and China measuring 81,179 tons). These losses were of ships and crews considered the very best in the merchant service.

After Bush the committee called in Henry Trengrouse (see Chapter Three-3(iii) above) Trengrouse together with Manby, Dennett, Carte and Boxer had been the most influential figures in the first half of the nineteenth century in enabling rescue from stricken vessels. The essential problem being to affect a rope communication with the vessel in order to attach a heavy hawser and bring the survivors to safety.[65]

As noted above Trengrouse had been "engrossed" by the subject of shipwreck since the loss of the *Anson* and over a hundred of her crew only 50 yards or so from the beach. He attributed the loss of so many men to the want of proper means of preserving their lives. That wreck according to Trengrouse had suggested such a means "by which lives could be saved in a similar situation". From that time he had perfected and improved his apparatus, the essential purpose of which was to enable a "rope communication" to the stricken vessel - the most effective means of accomplishing this he considered to be the use of a rocket.

The use of rockets had been developed by Sir William Congreve following his many experiments with sky-rockets and the invention of the metal cased Congreve Rocket in 1808.[66] These had been used for military purposes, the first trial of its efficacy being at sea in Lord Cochrane's attempt to burn the French fleet in the Basque Roads in 1809; they were used during the Walcheren expedition of 1809[67]and at Leipzig in 1812[68]and off the coast of Spain.[69]Sir William Congreve published many pamphlets on the use of rockets during the early years of the nineteenth century, amongst which he published a "quarto volume, explanatory of the mode in which the Congreve rocket may be adapted for cavalry, infantry or

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[65]See W.B.C. Probert, "The evolution of rocket-based maritime rescue systems in the first half of the nineteenth century", *Mariner's Mirror*, Vol.83, No.4 (November 1997), pp.434-449.

[66]Sir William Congreve, see *Dictionary of National Biography*, Vol.XII, p.9.

[67]See David Yarrow, "A Journal of the Walcheren Expedition 1809", *Mariner's Mirror*, Vol.61 (1975), pp.183-189.

[68]See G.A.B.,"War Rockets in the British Mid-Victorian Fleet", *Mariner's Mirror*, Vol.XXXI, p.173.

[69]Their military utility having been proven their subsequent usage involved the formation of special rocket companies on land and the fitting out of special rocket ships at sea.

shipping".[70] His 1814 "Details of the Rocket System" mentions various applications for sea and land service.[71]

Trengrouse, using a Congreve rocket, demonstrated to a committee of the Society of Arts in Hyde Park, London - the ability of the rocket to project a line dependent upon his method of discharging the rocket and the arrangement of the line.[72]Buckingham saw the similarity to Captain Manby's mortar apparatus for projecting a line from the shore (indeed one of the main features of Manby's apparatus was the method by which he enabled the line to run out - Trengrouse had used a similar technique[73]) and enquired as to the preference of the equipment being based upon the shore as was the case with Manby's mortar or in the ship as Trengrouse was in favour of. The argument being that the rocket could far more easily "communicate" with the shore rather than depend upon the proximity of a Manby mortar reaching a ship from the shore, for a mortar could not so easily be carried aboard a ship. Trengrouse, giving a series of shipwreck accounts made the case for carrying his apparatus aboard the ship: "vessels must be furnished with means calculated to afford relief".[74]He cited the case of the waterlogged *Francis*

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[70]See *Penny Magazine*, Vol.VIII, September 28th 1839, pp.374-376: for a contemporary assessment of the history and uses of the rocket.

[71]See Colonel Congreve,"The Details of the Rocket System Shewing the Various Applications of this Weapon both for Sea and Land Service, and its different uses in the Field and in Seiges", London (1814).

[72]See *Royal Society of Arts - Minutes of Committee of Mechanics*, 27th April 1820: for which they recommended to the Society "....To present the gold Vulcan medal and 50 guineas to Mr Trengrouse as a bounty, on condition of his leaving a complete model and description of his apparatus with the Society within one month, for the use of the Public and relinquishing all pretension to a patent....". In the *Transactions of the Society of Arts*, Vol.XXXVIII. 1820, pp.161-165 & plate 33; Henry Trengrouse was voted the large Silver Medal and Thirty Guineas for his apparatus for saving lives in cases of shipwreck.

[73]See "The Faking Box" described and illustrated in: BPP 1816 (409) XIX.193. *Papers relating to Capt. Manby's Plan for Relief in Cases of Shipwreck*, Also, *Gentleman's Magazine*, Vol.XCI (1821), pp.161-167, pp.257-261, pp.356-360. See also, *Cornhill Magazine*, Vol.XXVIII, July-December 1873, p.73, fig.2.

[74]*S.C. Shipwrecks* (1836), Q.3856, p.251; Henry Trengrouse: rocket rescue system pioneer.

and Mary where the crew could have been taken off earlier by an American vessel were it not for the severity of the weather that prevented affording assistance. Trengrouse read a short extract from a letter of recommendation that he had received from the Brethren of Trinity House who "recommended that all vessels be furnished and provided with the apparatus of the rocket".[75]He described to the Committee the nature of the apparatus involved in his method of rescue:

> ....I have so improved and condensed the apparatus, that it is now contained in a chest only four feet long, eighteen inches high, and fourteen inches wide; this expresses its portability. It contains prepared rockets, which operate by their own power to carry the end of a line to a certain object; also iron rods shaped as a ramrod, to be projected from a small musket, by a small charge of powder, qualified to effect a rope communication a hundred yards distance; it also contains cork jackets, which I call Sailor's Life spencers, the wearer of which cannot sink; also travellers to run upon a hawser, to convey persons above the water, from a vessel wrecked upon the shore, as well as property; and other things calculated to aid and benefit shipwrecked persons....[76]

Trengrouse was asked whether the system had been put to use; by August 1836 only part of the apparatus had been proven, the traveller had been used to unload a cargo of oranges from a wrecked smack. However, Trengrouse stated that in 1832 a rocket had been used successfully for the first time at the wreck of the *Bainbridge* off the Isle of Wight.[77]Due to this incident the invention of the life-saving rocket had been ascribed to a Mr John Dennett of the Isle of Wight[78]who it was said in the "late war" had manufactured rockets (upon the plan of the Congreve rockets) and had since claimed to have adapted his principles to the object of saving lives. Dennett's rescue, performed after the failure of four efforts with the Manby mortar was made by the first firing of a large rocket from the shore toward the narrow stern of the vessel. According to Dennett: "very superior merit was ascribed to its operation by a great number of persons of respectability".

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[75]*Ibid.*, Q.3856, p.251.

[76]*Ibid.*, Q.3857, p.252.

[77]See *Lloyd's List*, No. 6784 Tuesday October 9th 1832.

[78]John Dennett (1790-1852), see *Dictionary of National Biography*, Vol.XIV, pp.367-8.

With such obvious utility and advantage over other systems for such a small price, Trengrouse was asked to account for the fact that the system had not been more widely utilised. He had been given several testimonials and had been requested to supply sets of apparatus to various individuals, but the Admiralty although having "minutely scrutinised" the apparatus and witnessing an experiment had subsequently refused to take it up. Nor did *Lloyd's* express any interest or encouragement.[79]Trengrouse had not commenced production of the equipment in any great numbers, due to the fact that he had felt demoralised by the attitude of the authorities towards acquiring it:

> ....I must admit, that I believe there exists a too general disposition to object to new things intended for real benefit, particularly with sailors; they almost need to have things forced upon them.....[80]

Trengrouse claimed to have experienced the most painful disappointments and to have incurred a very heavy expenditure: "hope deferred maketh the heart sick". Now, because of the fact that shipwreck and loss of life had "arrested the attention of the Legislature" Trengrouse had found new hope and felt that he would soon commence manufacture expecting the Admiralty and other marine departments to re-consider their attitude towards taking up his innovation, convinced more than ever as to the superiority of the rocket.

The next witness was Mr John George Cooper, employed in the secretary's office at *Lloyd's List*. Cooper had prepared returns at the request of the Committee for ships categorised as missing or lost and for ships stranded or wrecked, and also for persons drowned in the years 1816, 1817 and 1818 and by way of comparison

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[79]See *S.C. Shipwrecks* (1836), Q.3877, p.255; "....They did not give me any encouragement at *Lloyd's*, although my inventions are expressly intended to promote the prevention of shipwreck and the preservation of property and lives when shipwreck occurs....". The alleged sentiments of *Lloyd's* at this point run counter to earlier evidence provided by the underwriters of *Lloyd's* (See for example: *Ibid.*, Q.3681, p.234 ; evidence of Arthur Willis Esq. Also, *Lloyd's* had contributed a considerable sum of money to the Shipwreck Institution in 1824 - and was quoted in Sir W. Hillary's "Appeal to the British nation...." as on p.484: "recompenses voluntarily given by the liberal institution of *Lloyd's*") claiming that they had aided everything that had contributed towards helping remedy shipwreck.

[80]*Ibid.*, Q.3868, p.254.

the years 1833, 1834 and 1835. At that time no official figures of estimates from government sources existed, the only clue as to quantifying the losses came from *Lloyd's List*. Cooper claimed that he had no knowledge of the actual number of vessels afloat or registered during those years and therefore he could not state whether the proportion of losses was greater or less. According to the figures from *Lloyd's List*, in addition to the ships categorised as lost - 89 - there were 1,114 categorised as stranded or wrecked between 1816 and 1818 inclusive. Over the later period 1833 to 1835 inclusive the ships lost were 129 and those stranded or wrecked 1573[81] - a significant increase. Forty-nine vessels between 1833 and 1835 inclusive had their entire crews drowned, there had been therefore according to Buckingham a probable total of 2190 lives lost between 1816 and 1818 inclusive and 2524 between 1833 and 1835 inclusive. Cooper declined to be pressed for an answer on the probable value of the losses. Claiming to know nothing of underwriting he could not comment on settlements concerning losses, however Cooper agreed that from an insurance point of view a ship's commander would regard a total loss as being of far greater advantage to him than a partial loss. This may have accounted for the deliberate burning of the *Mary Francis* - a vessel that was ice-bound in 1835.[82]

Cooper was followed by Mr George Charlton a master mariner who had commanded a ship for many years in the merchant service, in the coal and the Baltic trade, and the West India and East India trades. As with many of the previous witnesses Charlton attributed the cause of shipwrecks to weaknesses in the construction of vessels and to the incompetency of masters and officers. In the case of ship's construction he presented a model to the Committee, as he claimed to have devised a mode of building a ship of straight timber, whereby strength was greatly increased and costs cut by a third. Charlton agreed with the chairman's suggestion that officers and masters should undergo an examination adding that "no man ought to take command of a ship without he has had ten years practice at sea". On the subject of lighthouses, Charlton thought that light-vessels should be placed at the

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[81] An amount of time equivalent to at least twice the estimated voyage time was used to determine whether a ship was categorised as missing or wrecked. See *Ibid.*, QQ.3899-3900, p.259.

[82] *Ibid.*, QQ.3915-3922, pp.260-261.

buoy of Middle Sand and the buoy of Mouse Sand to enable ships to run at night from the River Thames. This apparently had been the opinion of "a great many captains of ships, and masters of colliers, and gentlemen that are in the habit of trading backwards and forwards". These sentiments had been passed to Trinity House by way of letter, some three years previous, but as yet to that point no reply had been received.

The last witness to give testimony before the Committee was himself a member of it, Sir Edward Codrington.[83]Codrington, a distinguished naval officer was convinced that the greatest impediment in the way of improving the character of seamen was the supply of liquor "I conceive almost all punishments to arise from that circumstance". He was in favour of the naval authorities ceasing to supply liquor, a naval tradition since 1740.[84] The original measure of half a pint of raw spirits a day had been reduced to a quarter by recommendation of a committee that Codrington had sat with headed by Lord Exmouth, this then was increased by one-fifth, according to Codrington who concurred with the idea that it rendered the crew less efficient and diminished the actual strength of the ship's company in cases of emergency. The continued habit by seamen of drinking grog ashore had also led to excesses and ill-effects as Codrington attested to the case of seamen intoxicated ashore being robbed and murdered.[85]

Again the actions of seamen during instances of shipwreck were considered, Codrington agreeing with previous testimonies "that in almost all cases, the first on the part of the bad men in the ship, would be to get at the liquor". The energy and efficiency of the crew would have been sapped by intoxication rendering them

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[83]See *Dictionary of National Biography*, Vol.XI, pp.204-207: Codrington, Sir Edward, 1770-1851, A distinguished naval officer who after an outstanding career, during which he lead a squadron of ships under Nelson at Trafalgar and ended as commander-in-chief at Portsmouth.

[84]See *S.C. Shipwrecks* (1836), Q.3971, p.263: Codrington stated "....that the original reason for giving liquor to ship's companies was to prevent the effects of scurvy; but since the improvement in the supplies to the navy of lime-juice, and in the mode of preserving health, there is no necessity for any such expedient and therefore it remains an injury instead of a good....". Also see: "An Essay addressed to Captains of the Royal Navy", (section on drunkenness), *Pamphleteer*, Vol.XXVI, No.LI, 1825.

[85]*S.C. Shipwrecks* (1836), Q.3972, p.264.

unlikely to have adhered to their usual discipline and would have greatly contributed to the rapidity of fatal consequences at a time of impending disaster. Indeed Codrington agreed that:

> ....cases of vessels running foul of each other for want of a good look-out, and going on shore from steering a bad course, and other accidents which occasion shipwrecks, that many such instances arise from the drunkenness of somebody, either officers or men....[86]

The inclination of seamen toward liquor ashore had led to easy exploitation by crimps. The crimps, or keepers of sailor's lodging houses had paid watermen a fee for every sailor that they could bring from a newly arrived vessel after a long voyage. The sailors had often left their vessels, made half drunk, without money and with nothing but their chest upon which the crimps advanced them money until they had received their wages. They were often then tempted into extravagance and recklessness until an exorbitant bill was made out, this was then deducted from their wages and they were very soon robbed or defrauded of the remainder.[87]Codrington alleged that having reached a state of intoxication the seamen were often drugged by the crimps with laudanum "so to occasion complete stupefaction". Codrington went on to explain that he believed:

> ....a vast number of seamen have been what is called "burked" under these circumstances; I mean killed for the purpose of plunder, and their bodies sold; so that either living or dead, they are constantly sold, and all originating in the use of liquor....[88]

Buckingham put it to Codrington that the prevailing politics of "permitting everybody to do as they please" should be withheld[89] in favour of something like

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[86]*Ibid.*, Q.3984, p.265.

[87]See *Original*, 1835, card 131, pp.211-212 & pp.218-221; For an account of the hardships of sailors in port, emanating principally from habits of intoxication and consequent vulnerability.

[88]*S.C. Shipwreck* (1836), Q.3990, p.266.

[89] The later part of this period is usually described as one of *laissez-faire*; a belief that sees the state's role as primarily one of protecting property, and as such "non-interventionist". In this respect the nineteenth century jurist A.V. Dicey characterised the period 1825-70 as "The Period of Individualism". To withhold this situation inferred the need for state intervention to protect the

parental care over the seamen as they were the subject of such exploitation, and that asylums and "appropriate places of residence" could be established by a united effort on the part of the Government, ship-owners and the society of merchants. Codrington agreed, stating that it would be the proper duty of Government, considering "that this maritime nation is mainly dependent for all its happiness upon seamen". The establishment of a register office seemed the first step in this process of reform, Codrington realised the difficulties in bringing about such a measure not least because of the increasing attitude of non-interventionism but nevertheless agreed with the advantage of the registry.

Thus 33 witnesses, in the words of the Committee "all persons willing to give information which they consider will lead to any beneficial result", had given their evidence in the hope of shedding light upon the issue. This had been the first national inquiry into the question of shipwreck, a problem that could no longer be tolerated in the minds of many, but at that time still needed political expression by way of legislation that had the power to redress.

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lives of seamen. See J. Bartlet Brebner, "*Laissez-Faire* in Nineteenth Century Britain", *The Journal of Economic History*, Vol.VIII and supplement, 1948.

Chapter Six

The 1836 Shipwreck Committee - findings and political response

In 1836 the government of the day had felt obliged to act. For the first time in the history of merchant shipping a concentrated parliamentary attempt to identify the causes of shipwreck had been completed. The evidence had resulted by August 1836 in a Report in which the Committee had listed ten principal causes of shipwreck: defective construction of ships, inadequacy of equipment, imperfect state of repair, improper or excessive loading, inappropriateness of form, incompetency of masters and officers, drunkenness of officers and men, operation of marine insurance, want of harbours of refuge and imperfection of charts.[1]

6(i) The Report: The report condensed the findings of the committee from the minutes of evidence. The extent of loss in property and lives at sea had been ascertained from the figures requested from *Lloyd's List* supplemented by estimates from the committee. This was the only means at the time of quantifying the gravity of the situation. During the evidence of Mr John George Cooper[2]the requested returns to the Committee showed ships lost or wrecked, and lives lost for the years 1816, 1817 & 1818 and a comparison made for the later period 1833, 1834 & 1835. Whilst the proportionate loss could not be ascertained, the absolute loss appeared to be greater as the time period went forward; upon these figures the Committee made estimates of the value of loss. In the report, each ship and cargo was given an assumed value of £5000 (a value that Cooper would not concur with in his evidence) and therefore the total value lost in the first three year period was £6,015,000 against a total value lost in the last three years of £8,510,000. Highlighted in particular were the losses from the Port of Tyne by shipwreck over the four years prior to the report, 272 ships lost from about 1000 vessels of sail

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[1]*Report of the Select Committee appointed to inquire into the causes of Shipwrecks*, BPP 1836 (567),The Report, p.V.

[2]*Ibid.*, QQ.3883-3922, pp.258-261; Mr John George Cooper: employed in the secretary's office at *Lloyd's List.*

registered to the port, with 682 lives lost. Also, in a sixteen month period from January 1st 1833 to May 1st 1834, 95 vessels had been reported missing or lost, and never been heard of. These vessels were engaged mainly upon foreign voyages; a further loss of an estimated £760,000 of property and 1425 lives.

The figures derived from *Lloyd's List* and the local registries did not take into account the whole extent of the loss by shipwreck, for many vessels, especially those whose tonnage did not exceed 50 tons, were lost by wreck or foundering at sea for which no records were kept. Based upon the figures for losses quantified by *Lloyd's List* the report estimated a total loss of nearly £3 million per annum. And although covered by insurance in many cases, the loss nevertheless ultimately fell on the British public. In addition to the value of the loss of property the loss of life estimated at not less than a thousand persons a year, gave rise to an increased social burden on the British public because of the support needed for the many widows and orphans. The statistics are open to criticism. In 1816 many vessels which had ceased to exist were still retained on the register and the returns to the Committee were not based upon accurate enough information, especially concerning those vessels in the coasting trade. Also, in considering the comparison of two sets of figures for 1816-1818 and 1833-1835 no account was taken of the proportion of loss relative to the amount of life and property that was at risk during this period.[3]

Amongst the principal causes of shipwreck listed by the Committee as "susceptible of removal or diminution" defective construction of ships headed the list. Seen as having been encouraged by the system of classification that had existed from 1798 until 1834 at *Lloyd's* where the chief criteria was the age of the vessel and the place of building, the system was said to have been responsible for shipowners being induced to build their ships "in the cheapest manner, and with the least degree of strength that was sufficient to sustain their vessels through the shortest period named".[4] Instances of this had been amply illustrated during the minutes of evidence: the case of the *Princess Victoria* having "absolutely burst to

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[3]See "Merchant Shipping and further Legislation", *Quarterly Review*, 1876, CXII, pp.265-273. Also, W.S. Lindsay, *History of Merchant Shipping and Ancient Commerce*, 1874, 6th Ed., (re-print 1965), Vol.III, pp.464-465. (Note: both these sources are anti-interventionist)

[4]*S.C. Shipwrecks* (1836), The Report II, Q.12, p.V: Principal Causes of Shipwreck.

pieces"[5]; the *Nathaniel Graham* "the ship literally fell to pieces"[6]; and the *William Lushington*, "altogether a scandalous piece of work".[7] In the classification system from 1798 to 1834 no amount of repairing would have restored a ship to First Class, therefore there was little or no incentive to make adequate repairs or replace equipment. The system had resulted in a surfeit of vessels, as the First Class time period elapsed so then owners had new (slop-built) vessels built, and the expiring First Class vessels, not being able to justify any repairs which would not have affected their category, presented a burgeoning fleet of Second Class vessels that contributed to depressing freight rates and profits which in turn ensured a rigid economy in trade that might not have allowed any expenditure on items of equipment (master's navigational equipment for example) that would have justified an earlier replacement. In addition to this state of affairs concerning competition within the United Kingdom, British shipowners had to face competition from the ships of Continental Europe and America. These vessels often enjoyed a superior access to cheaper materials for building, equipping and provisioning, which enabled them to realise profits that the British ships could not adequately compete with.[8]

The report drew attention to the forms of ships:"the inappropriateness of form in British merchant vessels, which often incapacitates them from beating off a lee-shore". This was attributed to two factors: the nature of British maritime trade and "defective systems of measurement with heavy tonnage duties formerly levied on British ships". The system of measurement to calculate tonnage duties had induced the building of ships that would measure little but carry much. The old system of measurement that lasted up until 1836 (replaced by provisions laid out in 5 & 6. Will. IV, cap.56, p.950) allowed for a cubic capacity based upon length, breadth and assumed half of the breadth for depth. This gave rise to a form of hull that was excessively narrow and deep so that much more cargo could be carried than the system of measurement suggested was possible, in addition to this vessels were predominantly built of a flat bottom form, especially on the east coast, to

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[5]*Ibid.*, Q.307, p.23; Mr Henry Woodroffe: Secretary of the Seaman's Society of South Shields.

[6]*Ibid.*, QQ.309, p.23.

[7]*Ibid.*, Q.3025, p.192; Mr George Bayley: surveyor of shipping for *Lloyd's Register Society.*

[8]*Ibid.*, Report, p.XI, "American Shipping".

accommodate the necessity of going aground on beaches and operating in shallow waters.[9]The resulting form of hull produced a ship that was deficient in speed, buoyancy and responsiveness and consequently was incompetent in escaping from the dangers of the lee-shore. The Committee accepted that the true measurement of tonnage, a measure of the actual amount of dead weight that a ship could safely carry, would be most desirable to accurately attain. Having achieved this, a fixed safe proportion could be deemed the registered tonnage and thereby eliminate any inducement to build ships of inappropriate forms in order to evade tonnage duties.[10]The Committee accepted that the formation of a new association *Lloyd's Register Society for British and Foreign Shipping* with the associated changes envisaged would effect a great improvement in the general character of ships, although being a private association it could not enforce rules to ensure safety.

Regarding the manning of the merchant fleet the report stated that many witnesses had attested to incompetency of masters and officers: lack of skills in seamanship and especially in navigation. Some masters of merchant vessels having been given command after quite insufficient times at sea could not trace a ship's course on the chart, and could not ascertain latitude by lunar observations. Consequently vessels had been met with at sea that were out of their reckoning by several hundreds of miles, some indeed wrecked upon coasts that they had no idea were in the vicinity. Added to this situation of what appeared to be general incompetence was the further aggravating factor of the use of spirits and consequent drunkenness leading to improper and contradictory orders and sleeping on look-out at the helm. This situation in many cases led to collision through want of vigilance and in many cases shipwreck through wrong courses being steered. In the case of sudden bad weather and the need for quick effective action, an intoxicated crew would have been much less effective and would have endangered the proper working of the ship. The report held that the very existence of large quantities of ardent spirits on-board and their use even when diluted was itself a frequent cause

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[9]Even this measurement system was far from accurate as Mr R. Brindley and others attested to in their evidence. See for example: *Ibid.*, QQ.1272-1294, pp.84-85.

[10]To this end the system of measurement by displacement as advocated by R. Brindley presented a basis for scientific quantification of tonnage. See also: J.H. Hodgson, *Ibid.*, App.No.6, pp.277-8.

of the loss of ships. Fire, one of the worst hazards of a wooden ship had been considerably more prevalent from the drawing off of spirits, and there was also the breakdown of order and discipline resulting from access to spirit casks. The habitual use of spirits whether in the Navy or in the Merchant Service was seen as being ultimately responsible for many cases of loss of ships and crews. The report highlighted the fact that in America the Navy and Merchant Service had done away with the use of "spirituous liquors as an habitual article of daily use" claiming that in excess of 1000 sailing vessels had made this reform with a much greater state of efficiency and safety. The public insurance companies in America were so impressed with the greater safety record that they made a return of five percent of the premiums, some British ships sailing from Liverpool on the same principle had also enjoyed the "greatest benefit to the ship-owners, underwriters, officers and crews".

As to marine insurance, the report stated that although this enabled individuals to evade excessive losses it had a tendency to transfer a financial responsibility for such losses from the owners to the underwriters which consequently resulted in an implied removal of certain responsibilities: care in construction, care of supply and condition of equipment, responsibility for adequate management at sea. The cost of insurance was primarily on the freight ultimately to be paid by the public irrespective of the hiking of insurance rates due to losses, in this way all parties engaged in the transaction of the goods were shielded from losses with the exception of the end purchaser. The "costs" of shipwreck were borne by the public.

Many areas of the coast of Great Britain which were exposed to gales had no immediate adequate shelter for vessels in the case of such storms. In such places harbours of refuge might have easily saved many vessels from destruction. Two instances of this had been brought before the Committee, in the vicinity of Redcar on the north-east coast and between Great and Little Ormes' Head.

Finally, the list of principal causes of shipwrecks drew attention to the imperfection of charts, particularly in the case of the newly opened regions of the Eastern Archipelago and the China Seas. The report acknowledged the work of the

East India Company and of Captain Horsburgh's directory and charts but concluded that there remained much more to be done to enable safe passage in those areas.[11]

6(ii) Proposed remedies: In answer to the ten items on the Committee's list of principal causes of shipwrecks the Committee proposed and suggested twenty areas of reform and change to meet the failings highlighted in the 267 pages of evidence. Firstly, and with no lack of evidence upon which to base the strongest recommendations was the case for an overriding authority with the sanction and authority of Parliament to oversee maritime affairs - the establishment of a marine board:

> ....That it is a matter of the first importance to authorise, by enactment, the formation in London of a Mercantile Marine Board, to direct, superintend and regulate the affairs of the Mercantile Marine of the United Kingdom, on such a plan of organisation and control as shall unite a due regard to the private interests of the shipowners, merchants and underwriters, whose individual property may be embarked therein, with an equal attention to the public interests in the preservation of the national capital from destruction at sea; and, above all, in securing as far as possible the safety of the lives of those who may be engaged in navigating the ships and conducting the maritime commerce of the country....[12]

This phrase summed up the responsibilities of government for the safe and efficient operation of the mercantile marine and apart from the addition of suggesting measures that may have ensured a reasonable standard of living was a formula that the following hundred years did little to alter.[13]The recommendations with regard to

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[11]In *Op. cit., History of Merchant Shipping 1816-1874*, Vol.I, p.466, London (1874), W.S. Lindsay draws attention to the notion of "Imperfect charts" - being used to cover for cases of incompetency, drunkenness or carelessness. He goes on to describe the story of the brig *Eclipse* whose skipper persuaded the owners against a voyage to Quebec on the basis that "the charts are a' wrang in the St. Lawrence" - he claimed that often, captains left to supply their own charts did not update them. Another case was quoted of a ship lost near Boulogne through the use of a thirty year old chart that did not have the latest lights marked on it.

[12]*S.C. Shipwrecks* (1836), The Report, Q.25, p.VIII; Remedies proposed or suggested.

[13]See *Seafarers and their Ships*, HMSO (1963), p.18.

the composition of the Board stated that there should be a competent number of experienced officers of the Royal Navy and masters of the Merchant Service together with shipowners, shipbuilders, an hydrographer, a professor of nautical astronomy and navigation, and one or more men of eminence in the legal profession. The election to these positions was to be made by the Admiralty, the Trinity House and the Shipowners. This Board "should be entrusted the power to carry into effect, both in London and the out-ports, under the sanction and authority of Parliament" the various measures which the Committee set out in detail, the essential features of which were as follows:

Code of Maritime Law: using as much of the existing common and statute law, and adding what other provisions as might be necessary in order to define the obligations and duties of shipowners, officers and seamen "with a view to supply the remarkable defect under which Great Britain now labours, in being almost the only maritime country in the world in which no such code of maritime law exists".[14]

Nautical Improvement: the Committee sought ideas and plans that would enable a wider dissemination of skills and knowledge in all subjects related to the sea; nautical astronomy, navigation, hydrography and surveying, naval architecture, seamanship, rigging, stowage, regulation of crews and "other matters conducive to the improvement of British ships and British seamen".[15]

Classification of ships: the need to perfect a system of classification that truly reflects the actual state and condition of all ships registered.

Building, Surveying and Equipment: to collect information as to the best means of building, surveying, fitting-out, equipping, loading, and supplying with the required amount of men, provisions, water and boats to the vessels built and registered in the United Kingdom and to suggest means of utilizing this information.

Examination of Officers: to ensure a certain a standard is reached in seamanship and navigation before they are allowed to take up appointments in the Merchant Service. Further, to ensure that higher standards in seamanship, navigation and nautical astronomy are attained before taking up appointments in

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[14]*S.C. Shipwrecks* (1836), The Report, Q.27, p.VIII : Remedies proposed or suggested.

[15]*Ibid.*, Q.28, p.VIII.

command of vessels. Also, that examiners be appointed in these subject areas to ensure the maintenance of the standards so set, and with a power to grant licences to suitable officers, authorising each class to wear a uniform denoting "passed officers of the merchant service".[16]

Savings Banks and Asylums: to enable the preservation of the health, strength and moral character of seamen and thereby reinforcing the efficiency of ship's crews and hence tending to lessen the risk of shipwreck. The establishment of Saving's Banks for seaman's wages and Asylums for the reception of men and their property (usually confined to a chest) was thought to be a measure that may have helped to prevent exploitation in the hands of crimps and thereby help the sailor by enabling him to retain more of his hard earned wages.

Registry Offices: to form Registry Offices for merchant seamen that would enable a record of name, age, capacity and character of seamen to be kept on certificates, such that these certificates may enable "the requisite facility for the selection of the best men".[17]

Nautical Schools: that cheap Nautical Schools were established that may inculcate not only the practical aspects of navigation and seamanship but habits of cleanliness, order and sobriety.

Courts of Inquiry: to arrange "a plan for the institution of Courts of Inquiry to examine into the circumstances of every shipwreck that occurs"[18]and to be able to apportion blame with power to suspend or withdraw licences and certificates in cases of neglect. In cases of skill, courage or humanity in preserving the lives and property of others - to offer reward.

Settlement of Disputes: to form Special Tribunals in order that disputes concerning wages, discipline and so forth between shipowners, officers and men may be dealt with in a speedy and efficient manner rather than having to incur the time and expense of settling such matters in the ordinary courts of law.

Funds from Fees: that the proposed Mercantile Marine Board in London be supported from funds raised by fees payable on registering ships and upon the

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[16]*Ibid.*, Q.32, p.IX.

[17]*Ibid.*, Q.34, p.IX.

[18]*Ibid.*, Q.36, p.IX.

granting of certificates of worthiness in the case of officers as well as by whatever public funds may be necessary.

Assistance from Government: the Committee considered that in addition to the work of the Marine Board the government could act directly in a number of areas: by the reduction of duties and taxes on shipping thereby enabling them to compete with ships of other nations; by diminishing the use of spirits and substituting more nutritious beverages thereby enabling a more efficient crew; by the prevention of using every last space on a ship for cargo especially in the case of deck cargoes - at the expense of seamen's welfare and safety; lastly, by opening up negotiations with other maritime powers:[19]

> ....in order to effect....a comprehensive treaty....for the preservation of the lives and property of those who may have the misfortune to be wrecked on their shores....in order to supersede, if possible, the present barbarous practice of plundering the ship and men thrown by misfortune on dangerous shores....[20]

The Committee acknowledged the various plans and models submitted, especially that of *La Pique* with the ideas concerning solid bottoms for ships. They considered both Manby's system of rescue by conveying a rope communication from the shore to the ship and Trengrouse's system of rescue by the use of rockets to enable a communication from ship to shore to be deserving of national encouragement. The Committee in summing up its proposed remedies for shipwreck drew attention to the practices of American shipping, the superiority of which must have galled many at the time as several witnesses considered both the ships and their crews superior to British ones.

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[19]There was nothing new in this, Sir W. Hillary had made similar recommendations in 1824. See "An appeal.....", *Pamphleteer*, London, 1824, p.493: "that other maritime nations should be invited to form similar establishments, so far as accords with their respective laws and usages, and to concur in mutual arrangements with Great Britain for the reciprocal aid of the subjects and vessels of each other."

[20]*S.C. Shipwrecks* (1836), Q.43, p.X & XI; The Report: remedies proposed or suggested.

Lastly, it was stated that the Committee considered that at the earliest opportunity, in the next session of Parliament they should call the attention of the Legislature to the findings of the report:

> ....with a view to the introduction of such enactments as may be best calculated to elevate and improve the general character of the British Mercantile Marine, and to place it in such a state of safety and efficiency as to make its ships the most perfect structures that art and science can form, its officers the most distinguished for their competency and skill, and its seamen as respectable in character, and as happy in the enjoyment of adequate remuneration for their toils, as their devotion to their countrymen in war, and their services to commerce in peace, so justly entitle them to expect....[21]

The 1836 Inquiry into the Causes of Shipwreck resulted in a report that put forward a truly comprehensive plan of reform. These recommendations, "Remedies proposed or suggested", were so comprehensive as to be almost visionary in view of official opinion at that time on the responsibilities of government. The government in August 1836 to whom the above plea was directed was dominated by Whigs with Lord Melbourne as prime minister. Melbourne, speaking essentially of political reform, and not a noted proponent of change, was quoted as saying just before the election of 1832:

> ....when the new parliament meets we shall be pressed to go further in reform. There is no knowing to what one may be led by circumstances, but at present I am determined to make my stand here and advance no further ....[22]

Despite Melbourne's apparent indifference concerning reform, the Whig reforms of the 1830's reflected the fact that most middle class people wanted only limited change; they feared reaction from the working classes, but by the same token the working classes had to be accommodated. Major reforms such as the abolition of slavery in the British Empire (1833) and the Factory Acts (1833) concerning child labour had their origins in campaigns outside of Parliament which eventually forced the government to take action. In 1836 Parliament ordered its Division Lists to be published. The people could thus see how their representatives voted and the affairs

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[21] *Ibid.*, Q.46, p.XI; Legislative enactments - Remedies proposed or suggested.

[22] See C.P. Hill, *British History 1815-1914*, OUP Press (1981), p.45.

and procedures of Parliament became public to a fuller extent - this was reform indeed. Most of the 1830's reforms contained a large element of what may be described as humanitarian concern and in many cases an underlying economic interest. Such was the case with the recommendations of the Shipwreck Committee: the government was urged to legislate, it failed to respond. State intervention in the 1830's comparatively speaking had been considerable considering the ideal of *laissez-faire* that pervaded contemporary political and economic thought. By the second quarter of the nineteenth century no political economist could escape the controversy concerning the role of the state in both particular circumstances and with general policy.[23]In this context McCulloch had written the article "On the Frequency of Shipwreck" in the *Edinburgh Review* (1835) urging the government to intervene. The development and shifting of ideas amongst many parties, some with vested interests would have to take place, as well as a clearer vision of what was required as a corner-stone of legislation before reform in this area would happen; however the findings of the Shipwreck Committee had made it a subject for on-going debate.

6(iii) Too many vested interests: From such an exposition of obvious wrongs and misdoings it may seem staggering that the government of the day had failed to take any immediate action. The failure of the government to respond to the plea of the Shipwreck Committee's report to address the shortcomings of the merchant service left James Silk Buckingham, its chairman to introduce a private Bill. It would appear from the publication of the subsequent division[24] at the time of Buckingham's Bill that the Shipwreck Committee of the previous year had been far from unanimous in arriving at its conclusions, with much of the vested interests in shipping taking a more conservative stance at the prospect of radical change than the report had recommended. The main agitator in this context was the General

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[23]See for example A.J. Taylor: *Laissez-Faire & State Intervention in 19th Century Britain*, (1972), p.21.

[24]PD *Hansard* (Commons), 3rd Series, Vol.XXXVIII, 19th April 1837 - 17th July 1837, Wednesday June 7th, Cols.1225-1227.

Shipowner's Society (GSS) for whom George Frederick Young was the chief spokesman.

The London based GSS dating from 1831 was itself the successor of the Shipowner's Society of Great Britain, itself based on a former body the Shipowners of the Port of London.[25]Whilst the GSS appeared to be a formidable organisation, supposedly representative of the industry as a whole throughout the nation, in reality the situation was quite different. According to Palmer[26] "despite its grand title, and impressive outward show of activity, the General Shipowner's Society consisted at any one time of perhaps four or five men who met together once or twice a month at the society's offices at Cornhill". After the 1832 Reform Act and partly as a consequence of it making an increase in seaport constituencies there were eleven members of parliament during 1836-37 that could be identified as having direct interests in shipping.[27]Many of these MP's saw themselves, and were regarded by others as the representatives of the shipping industry, "the shipping interest"; George Lyall, George Frederick Young, Alderman William Thomson, William Hutt and Henry Liddel and Aaron Chapman, were seen as the "experts" who could be called upon to give authoritative statements as to the condition of the industry nationwide.

The reality of the situation in the country was far removed from this parliamentary ideal. Representation for a few large shipowners operating essentially from London was the case, but representation across the country was far from even, as Oviatt's (the paid secretary of the GSS) report suggests.[28]In the Autumn of 1840 Oviatt made a tour of the out-ports and in many cases he found that there were no permanent associations even at local level and these were necessary as a step towards supporting the General Shipowners at national level. The essential barrier was that the industry was hugely competitive due to the

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[25]See for example Leonard Harris: *London General Shipowner's Society 1811-1961*, London (1961).

[26]See Sarah Palmer: *Politics, shipping and the repeal of the navigation laws*, (1990), Ch.2 - "The Shipping Interest", pp.32-35.

[27]See *Ibid.*, Table 7, p.24; Based upon biographical information compiled by Frederic Boase, *Modern English Biography*, 1892-1921, re-printed 1965.

[28]*Ibid.*, p.34. Also see General Shipowner's Society, committee minutes III - 5th January 1841.

amount of operators, especially at this local level where apathy concerning community of purpose to act at national level and local loyalty preventing this possibility, far exceeded the need to do so at the time. Whilst the GSS maintained an impression of national representation for the industry, at the time the reality of the organisation was far removed from this ideal. The shipping interest in reality comprised a recognised parliamentary group by the 1830's of avowed protectionists whose chief spokesmen were Aaron Chapman,[29] G.F.Young[30]and Alderman Thomson of Hull. This interest presented a formidable obstacle to change and was hardly entirely humanitarian in its motives, rather it sought to a large degree to ensure the economic interests of its essentially London based shipping organisation. The conservative attitude to change amongst these vested interests, many of whom were avowed protectionists in supporting the Navigation Acts (and resisted any interference in the industry) was largely responsible together with the difficulty in interpreting specific changes to marine practices for the failure of government to respond in detail to the recommendations of the Shipwreck Committee.

6(iv) Buckingham's Bill: James Silk Buckingham, who had been so instrumental in attempting to bring about change from the deplorable shipping losses did not want to give in without at least trying to salvage some reform from the recommendations. He introduced a private Bill in the hope of at least securing some of the main changes that the report had brought to attention, not the least of which was the formation of a Marine Board to oversee the affairs of the Mercantile Marine separate from the general business of the Board of Trade. On Thursday March 9th 1837 Buckingham rose to address the House "for leave to bring in a Bill for the establishment of a Marine Board, and for the better regulation of the Merchant Shipping of the Kingdom".[31] In his speech to the House Buckingham acknowledged the shipping interest but the speech appeared to be a plea to the nation as a whole on the basis that it was the nation at large that would ultimately

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[29]Shipowner and Conservative member for Whitby, 1832-47.

[30]Shipowner and Shipbuilder, Whig member for Tynemouth, 1831-38.

[31]Buckingham's Bill - 1st Reading, PD *Hansard* (Commons), 3rd Series, Vol.XXXVII, 7th March 1837 - 18th April 1837, Col.164.

have to suffer and would have to sustain the human and economic hardship as a result of shipwreck. Buckingham's argument was based upon the fact that if it were the case to allow the protection of the maritime commerce of the country by government legislation concerning: the naval protection of merchant shipping, the establishment of lighthouses, the formation of a Board of Longitude, and to have a Trinity Board for the regulation of pilots and pilotage; then it should also be the case that there should be legislation concerning the direct prevention of shipwreck by ruling against: defective building, defective equipment, and defective management, being the chief targets of such legislation. Buckingham argued that while in England legislation had been passed for such things as size of wagons and coaches, even the breadth of their wheels; for a country that protects the shipping interest it seemed incredible that no measures had been taken to prevent shipwreck. A terrible catalogue of wreck statistics were read out: "in two months only of 1833 no less than 100,000 tons of British shipping was lost ....the lives of 4000 men put in peril....the River Tyne alone, there were lost at sea between February 1832 and April 1834 - no less than 143 vessels".

Besides the three principal causes already alluded to, Buckingham drew attention firstly to the sinister "remote" causes of which he considered marine insurance to be the most sinister; secondly, to the incompetence of persons placed in charge of vessels; thirdly, to the stringencies imposed by severe competition of foreign vessels in conjunction with the taxing of stores and equipment to English shipowners rendering them incapable of providing the necessary improvements to enable safety such as up to date charts, chronometers, and sextants; fourthly, the rule of tonnage measurement, only lately modified to produce a worse system than before in which there was still a temptation to build vessels of shapes that would best avoid tonnage duties, but were not the best shapes for a seagoing sailing vessel, a situation that the American vessels did not have to contend with and therefore were faster and safer thereby attracting more valuable cargoes. Finally he drew attention to the lack of accountability and responsibility to the public authorities when lives and property were lost at sea, no inquiry was called for when a ship was lost (unlike the situation with the Royal Navy) despite the widows and orphans being left without a breadwinner.

Whilst Buckingham would have liked to have seen a revision of the system of marine insurance he considered it to be worthy of a special Act and thought that the most effectual way of reform lay in the example of the practices of the north-east ports such as Newcastle where Shipowner's Mutual Insurance Societies prevailed. The idea being that the risk, responsibility and financing were to be shared among members with such a facility in every large port in the kingdom favoured by the legislature with exemption from stamp duties and so forth, to provide the greatest incentive to seek mutually to prevent shipwreck in order to maintain low premiums rather than the indifferent attitude of remote underwriters, "a class of men who drain a large annual income from the premiums paid to cover losses".[32]

The main thrust of the Bill was directed at the formation of a Marine Board in the Port of London, a measure which was seen by many[33] as the corner-stone of the extensive reforms needed. This was sought in order that an overall governing body could be established "charged with the especial duty of superintending the general state and condition of the whole of the mercantile marine of the kingdom and promoting every means in its power whatever can tend to improve it".[34]

Buckingham argued that this was the case in France and every other maritime country. The Marine Board that his Bill sought to establish would be charged with drawing up a code of laws and rules of discipline such as the French system had enjoyed for the previous hundred years. The establishment of marine hospitals and marine asylums for the protection of sailors against the activities of crimps was seen as an additional responsibility for the Marine Board. In winding up his speech Buckingham drew attention to two further areas in need of reform; the fact that the industry had been depressed by taxes that had led to cost cutting with consequent lack of funds for safety measures; and depressed by the system of classification in building ships that had led to a surplus of ships and competition that generally reduced rates and consequent profits.

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[32]*Ibid.*, Col.177; Buckingham's speech to the House.

[33]See especially *S.C. Shipwrecks* (1836), App.1, p.269: evidence of Mr George Coleman "Suggestions for constituting a Marine Board".

[34]PD *Hansard* (Commons), 3rd Series, Vol.XXXVII, Col.178.

Buckingham's proposal was seconded by Joseph Hume[35] who whilst maintaining an anti-interventionist stance was convinced that Buckingham had a strong case and that at least he should be allowed to bring his Bill. Hume realised the incredibility of the situation in which a person could meet with death ashore and immediately be the subject of a coroner's inquiry and yet if five hundred men perished at sea no provision existed to enquire how they had met their end.

In the ensuing debate Poulett Thompson[36]on the part of the government did not oppose the bringing in of the Bill but could not believe that it could be made the subject of legislation as it was so diverse.[37]He argued that the very thing that Buckingham stated was lacking in English shipping - legislation - when English shipping was the most successful economically in the world, may have been the reason behind its success. Other countries had greater legislation and yet were not as successful, "an argument against too much meddling with the subject by the legislature".[38] With regard to insurance practices he could not condone interference but agreed that an inquiry ought to be set-up in the case of shipwreck as was the practice "respecting deaths caused by accident". Where the Bill had sought to change practices associated with the construction of ships Poulett Thomson had the most serious objections; seeing the Bill as preventing the competition between builders by which the best construction was discovered. In the case of measurement he had been recently instrumental in effecting what he considered to be a better

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[35] See David Roberts: "Jeremy Bentham and the Victorian Administrative State", *Victorian Studies*, March 1959, pp.193-210. Although Roberts has discounted the influence of Benthamism on Merchant Shipping legislation and on Labouchere in particular he cites Joseph Hume an old friend of Bentham to the effect that a new spirit of improvement pervaded society from the 1830's. Also see PD *Hansard* (Commons), 3rd Series, Vol. XVIII, cols.127-255.

[36]Charles Edward Poulett Thomson (1799-1841); see *Dictionary of National Biography*, Vol.LVI pp.236-237: President of the Board of Trade from 1834 when he succeeded Lord Auckland until 29th August 1839 when Henry Labouchere (1798-1869, *Ibid.*, Vol.XXXI, pp.367-369) was appointed president having served as vice-president from 6th May 1835.

[37]See PD *Hansard* (Commons), 3rd Series, Vol.XXXVII, Col.182.

[38]*Ibid.*, Col.183.

method[39] and whilst admitting that it wasn't perfect he welcomed any suggestion for further improvement.

George Young hastened to add that the Shipwreck Committee had not been as unanimous in opinion as Buckingham had suggested. Young felt that in introducing the Bill, Buckingham was attempting to "carry out his own pre-conceived opinions". Young certainly had pre-conceived opinions of his own in that he was convinced that the House could not do any good by interfering with insurance practices, claiming that Buckingham had greatly over-stated his case. Like Poulett Thomson, Young could not condone interference from the legislature in matters concerning construction. He agreed with the need for establishing proof of competency amongst men entrusted with the command of merchant ships and that such men should be the subject of inquiry at a time of shipwreck, and not be allowed to resume their situation until exonerated of all blame.

The overall gist of the Bill with respect to insurance practices was also criticised by Robinson,[40] who protested against its content "except so far as the interests of humanity rendered it necessary". The idea of inquiry into the causes of shipwreck he considered to be of great benefit but as to the construction of vessels he considered that the legislature might do more harm than good in interfering. Aaron Chapman[41] supported many aspects of the Bill, especially that concerned with the over-loading of ships. Sir Edward Codrington[42] attested to the case of vessels lost "for no other earthly reason, (as he believed) but that she had been largely insured". He did not consider that enough attention had been paid to the safety of the lives of those aboard merchant ships. Thompson[43] considered the seamen's institution may have prevented unseaworthy ships being manned. Mr Warburton[44] recognised the practice of shipwreck for insurance purposes, more

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[39] Resulting in the Act of 1836: 5 & 6 Will. IV, cap. 56, p.950.

[40] PD *Hansard* (Commons), 3rd Series, Vol.XXXVII, Cols.186-188.

[41] *Ibid.*, Cols.188-189.

[42] *Ibid.*, Col.189.

[43] *Ibid.*

[44] *Ibid.*

often than not preferring to sustain total loss rather than partial loss in order to secure a better settlement. He remained apprehensive as to the notion of licensing masters of merchant vessels, considering that such a system may be reduced to serving the interests of the appointed board. Captain Pechell[45]stated "it was perfectly notorious that when a ship was fit for nothing else it was sent to bring timber from Canada". Sir John R. Reed[46]could not accept that ships were lost purposely on a regular basis. Pease[47]considered that it was too often the case that seamen being induced to join a ship at short notice (two hours) could not have had opportunity to examine the seaworthiness of the vessel. Lord Sandon[48] wholly supported Buckingham's Bill and thought it would do much good. Buckingham stated finally that it had not been his intention to interfere with marine insurances or the construction of ships and that the Bill contained only twenty clauses, he welcomed suggestions that may be offered towards its improvement. Leave was given to bring in the Bill.

Buckingham's Bill represented the pinnacle of the legislative and humanitarian attempt arising since the close of the Napoleonic Wars to curb the incidence and effects of shipwreck and it was a significant attempt to arouse ideas of reform: ideas which although they had gained much support and ground were not as yet sufficiently defined to elicit legislation on the scale needed to dramatically reduce the shipwrecks.

On June 7th 1837 the second reading of the Merchant Shipping Bill[49] was defeated by 176 votes to 28. In the short debate which preceded the division Poulett Thompson had expressed grave doubts over the details of the Bill. As it was drafted it appeared to destroy the whole mercantile law of the country and in its place establish a very expensive marine board with supreme power. Young agreed with other aspects such as the need for inquiry into the causes of specific shipwrecks and

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[45]*Ibid.*, Col.190.

[46]*Ibid.*

[47]*Ibid.*

[48]*Ibid.*

[49]PD *Hansard* (Commons), 3rd Series, Vol.XXXVIII, 7th June 1837, Cols.1222-1227.

with a proper examination of masters, but like Poulett Thompson he disliked its minute detail, dubbing it a "legislative monstrosity". Labouchere considered it "to be a vexatious interference with the shipping interest of the country". Sir Edward Codrington spoke in favour of the Bill accepting that in principle it was good, even if certain clauses needed to be amended. Buckingham's final words involved a plea for the House to at least consider the matter as they had already done in the case of emigration ships.

Many of the proposals of the Shipwreck Committee had clearly evoked hostility among vested interests, the Board of Trade, the General Shipowner's Society and *Lloyd's* among the most significant. Many of the measures suggested by the committee were ultimately taken up, but not until much later in the century and often then in much modified form.[50]

[50]For example the system of marking safe loading levels brought to the attention of the Shipwreck Committee in 1836 by J.H. Hodgson (*S.C. Shipwrecks* (1836), Q.2841, p.180) and finally brought to legislation through the work of Samuel Plimsoll amongt others in the Merchant Shipping Act of 1876.

Chapter Seven

Deck cargoes, other hazards and technical endeavour

7(i) The Atlantic Timber Trade: In the second quarter of the nineteenth century the demand for timber to service an expanding economy where house-building, ship-building, railway-building and civil engineering projects consumed vast quantities of wood justified the commercial enterprise of transporting these quantities of timber from the North American provinces as well as the older European trade centred on the Baltic. Most of the Atlantic trade took place via the St. Lawrence from Quebec in British ships since timber brought from British North America could only be transported thus under the Navigation Acts.[1] The voyage from Quebec averaged between 45 and 50 days, the round trip to and from North America being 13 to 16 weeks. This voyage "in order to pay the owners" took place twice a year: first, in the spring when vessels would leave between the 25th March and the 5th of April and second in the early Autumn having returned, un-loaded and revictualled. This could make their eventual departure from America very late in the season, a ship leaving as late as November would almost be sure to encounter some atrocious conditions in the Atlantic.[2] Many were lost before they even got into the Atlantic beating down the Gulf of St. Lawrence into the teeth of gales from the east and heavy snowstorms. Shipwrecks amongst the Baltic trade during the winter season were frequent (the rate of insurance premium being 12/6 in the spring and 8gns in the winter attested to the increased risk and attendant losses[3]) but even these disasters were seen as "acceptable" losses[4] compared to the disastrous loss of life and sufferings of the crews in the case of timber-laden vessels from North

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[1] *Select Committee to inquire into Shipwrecks of Timber Ships,* BPP 1839 (333) IX.223, Q.945, p.57; Evidence of George Frederick Young: Shipowner and Builder.

[2] *Ibid.*, Q.140, p.14, & QQ.145-146, p.15; Peter Courtney: Nautical Surveyor to *Lloyd's Register of Shipping.*

[3] *Ibid.*, Q.897, p.53; Alfred Janson: Underwriter.

[4] *Ibid.*, Q.898, p.53.

America, whose fate in a far more expansive and desolate Atlantic could be infinitely more grim.

Shipwrecks of timber-laden vessels engaged in the Atlantic trade reached such proportions of loss and consequent suffering of crews that by 1839 a Select Committee was appointed to inquire into the losses and to report to Parliament any measures that may be taken to limit them.[5] According to *Lloyd's List*[6] the losses had been steadily mounting in the years prior to the inquiry. The Secretary to the Royal Society for the Preservation of Life from Shipwreck, Thomas Edwards had prepared an account of the losses involving timber-laden ships from 1832 using *Lloyd's List*[7] and the accounts of suffering published in the newspapers and publications of the time.[8]

By 1834 according to Edwards' account four ships from America had been "wrecked on the shores of America or Europe," whilst seventeen had been lost at sea - six of which were never heard of again. Of the remaining eleven, in three of those ships the suffering had been immense, in one ship the *Lucy* after nineteen days adrift, having capsized on the 31st December only two of the crew were found alive on the 18th January.[9] Another the *Mary Armstrong* was found water-logged, ten of the crew saved, four having been washed overboard, while the *Atlas* had been seven days water-logged, four of the crew had perished, the master and remainder of the crew had been taken from the main top.

In 1835 fifteen ships were listed as wrecked on the shore whilst there were 34 lost at sea 17 of whom nothing was further heard. Of the remaining 17, in six the suffering of the crews had been extreme. In all cases they were found to be water-

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[5]*Select Committee to inquire into Shipwrecks of Timber Ships*, BPP 1839 (333) IX.223.

[6]The following wreck statistics are based upon extracts from *Lloyd's List* - given in evidence to the 1839 inquiry by Capt. D. Sutton - *S.C. Shipwrecks of Timber Ships* (1839) p.3 on the basis of a list made by Thomas Edwards (see p.1).

[7]See *S.C. Shipwrecks of Timber Ships* (1839), App.1, "Account of the different Timber Ships wrecked from the year 1832 to 1839".

[8] The list was completed by Captain David Sutton during Edwards' absence from April 1837 to April 1838.

[9]See account of the *Lucy* in the *Mariner's Church Sailors Magazine* for March 1834.

logged, the case of the *Francis Spaight* was particularly shocking in that four of the crew had been sacrificed by lot for the preservation of the rest.

During 1836 twenty-seven ships were reported wrecked on the shore and 44 at sea, 18 of which were never heard from again, in the remaining 26, again the suffering of the crews had been very great. The *Earl Kellie* had capsized in a gale. Two were killed including the master, seven men drowned and three men including the second mate starved to death. The *Marshall* had been struck by a sea and became water-logged, nine of her crew were lost by fatigue and drowning.

In 1837 seven ships were wrecked on shore and 26 at sea, in 19 of these cases nothing was further heard. Of those six in which there were survivors three had endured especial hardship; the *James Grant* had been water-logged, the crew were picked up by the *Vibelia* having survived on the wreck for 14 days, during which time three men had been washed overboard. The *Duncan* also became water-logged with three men drowned. Fifteen were saved in the case of the *Caledonia,*[10] again water-logged, the remains of the crew (four having died, two washed over-board) were found by a Russian ship the *Dygden* having been on the wreck for thirteen days with little food or water. According to Captain Sutton's evidence to the Shipwreck Committee "two, when near to death, had their throats cut for the sake of their blood, and the next day they were to have sacrificed a boy".[11]

During 1838 eighteen ships were wrecked on the shore and 48 at sea, 27 of which were never heard of again. Of the remaining 21 there had been two extreme cases of suffering, one of which, the *Earl Moira* in a water-logged state had first been found by the *Sarah* on the 30th November 1838 but could not be approached due to the severity of the weather, eight persons were seen onboard, two of whom jumped overboard in desperation and were drowned. By the 15th December the *Ranger* "fell in" with *Earl Moira* and managed to board her, four men were found dead in the main top with the remains of a human body found cut up and "hanging like butcher's meat".[12] In *Anna Maria* four bodies were found huddled together

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[10]In 1838 *Nautical Magazine* published the facts respecting the *Caledonia*, see p.62.

[11]*S.C. Shipwrecks of Timber Ships* (1839), Q.60, p.4; Capt. D. Sutton: acting Secretary of the Royal Society for the Preservation of Life from Shipwrecks (April 1837-April 1838).

[12]See *Commercial Gazette* of January 1839 "Shipwreck of the *Earl Moira*."

dead and another in the top with the leg apparently of a woman he had been eating. This discovery was made by the *Elizabeth* from Clyde on the 26th January 1839 having found the wreck at lat.43 deg.N., long.18 deg.W and subsequently boarded her.

The figures of losses in *Lloyd's List* only covered those vessels which were reported by letters from agents, correspondents and subscribers;[13]so it was by no means comprehensive. In order to verify the figures for losses the Timber Ship Committee obtained a Return from the Commissioners of the Customs of the number of ships which cleared from British North America between 1836 and 1838 to ports in the United Kingdom in order that a comparison could be made to ascertain the true scale of the losses. According to the Custom House Return[14] the number of missing ships significantly exceeded that reported in *Lloyd's List.* The number of ships stated as lost or missing from British North America in 1836 was 74 (*Lloyd's List* 71), in 1837 was 51 (*Lloyd's List* 32), and in 1838 was 101 (*Lloyd's List* 66) from a total number of sailing's of: 1836 - 1942, 1837 - 1815 and 1838 - 1670. The Timber Ship Committee, in their search for reasons for disaster, further requested the character designation of the vessels reported missing or lost. The Secretary of *Lloyd's Register Book of Shipping* marked the respective character designation against those ships that had been listed with *Lloyd's* as having been surveyed and subsequently received their character letters, but many in the list of missing ships had never been subject to survey. In 1836 for example, out of 74 ships listed missing or lost thirty-two had not been subjected to survey, of those that had 11 were A1, 2 at AE, 14 at AE1, 1 at E, 13 at E1 and 1 at I1. In 1838 of 101 ships there were 24 at A1, 1 at AE, 20 at AE1, 18 at E1, 2 at *AE1, 2 at A, 2 at AE with 33 ships not surveyed.[15] The implication from these statistics and ship classifications was that because of the general spread of disasters throughout the various classes of vessel - particularly as there was a large proportion of A1 and

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[13]*S.C. Shipwrecks of Timber Ships* (1839), QQ.71-81, p.5; Mr Thomas John Smith: chief clerk at *Lloyd's List.*

[14]See *S.C. Shipwrecks of Timber Ships* (1839), App.4, p.119 - for an abstract of this Return.

[15]See App. E, "Description of classes of *Lloyd's*".

good ships lost - the overwhelming losses must have been due to "other causes than the frailty of the vessels themselves."[16]

The average size of ships lost was between 320 and 330 tons (old measurement). The losses in the three years prior to the inquiry appear to have been 196 ships according to the collated evidence of the Custom House Return and *Lloyd's List*; an estimated 63,200 tons of shipping, manned by 2,548 seamen. The total value of these including freight and cargo averaged £5,100, a total loss of £999,600. The Timber Ship Committee, in attempting to ascertain the special nature of the timber trade exposed facts that suggested the parties concerned were well aware of the dangers and risks involved. Seamen's wages in the trade far exceeded the wages paid to other seamen where voyages were of a similar duration. To Quebec they had been as high as 55/- a month, whilst 40/- had been the rate for the East Indies and 45/- to the Mediterranean.[17] For voyages of longer duration, to India and China seamen could be hired for 35/- a month.[18] In the case of insurance, for the autumn voyage the rate was from 2 to 7gns, or 8gns and more depending on the state of the ship,[19]again the required premiums reflected the greatly increased risk during the later autumn voyage, the rate for the spring voyage being 25/- to 30/-.[20] The duration of a voyage from Quebec in the winter being 45 to 50 days (the summer voyage not being much less) during this time often the entire water and provisions for the crew were carried on deck in order to preserve space in the hold.[21]

Time and time again throughout the inquiry reference was made to the carrying of deck-loads as being the principal reason for the shipping losses and

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[16]See *Report of S.C. Shipwrecks of Timber Ships* (1839), p.IV.

[17]*S.C. Shipwrecks of Timber Ships* (1839), QQ.874-876, p.51; Mr Joseph Somes: shipowner in the Port of London.

[18]*Ibid.*, Q.812, p.48; Mr Alderman Pirie: shipowner.

[19]*Ibid.*, Q.463, p.32; Arthur Willis Esq.: underwriter at *Lloyd's Registry of Shipping*.

[20]*Ibid.*, Q.311, p.23; Mr J. Dowie: shipowner. (See also the evidence of Mr John Rutherford, Q.375, p.26 and also Arthur Willis Esq. Q.462, p.31)

[21]*Ibid.*, QQ.230-237, p.19; Mr Nathaniel Gould: merchant in the Canada trade. (See also evidence of Arthur Willis Esq., Q.499, p.34)

ensuing hardship. The carrying of deck-loads affected the ship in several ways. The ships were not generally built to withstand heavy loads on deck, being for the most part ships from other trades put into the timber trade. The general feeling was that should a ship be deemed no longer suitable to carry a dry cargo, then she became suitable for carrying timbers.[22]Secondly, where these loads were imposed on the decks they relied only on the existing bulwarks and stanchions as points of location and devices to enable them to be held down. According to the evidence of Charles Walton to the Timber Ship Committee:

> ....it is not only the weight but the heavy sea coming in, lifts the deck-load up with all its lashings, and down it goes again, and sometimes the provisions and chains etc. get adrift, and it goes over to leeward against the stanchions, and that splits the covering boards and breaks the stanchions, and ultimately the ship gets full of water....[23]

Finally, the very existence of the deck-load could reduce the efficiency of the vessel by hampering the work of the crewmen. According to the evidence of Courtney to the Timber Ship Committee:

> ...the deck-load is a very serious impediment to the navigation of the ship in this way; that from the space occupied by the large bulk on deck the crew cannot so easily perform their duty; they cannot go so quick from one end of the ship to the other as they would if the deck was clear....[24]

Generally the proportion of deck-load to the whole cargo when it was carried was in the region of a fifteenth to a tenth: 30 or 40 loads on deck to 500 below,[25]and whilst the seamen suffered the increased risk the owners of the vessels enjoyed the extra profit. Many in the trade acknowledged the increased risk hence the insurance and wage hike, but despite the obvious danger the carrying of a deck-load was often

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[22]*Ibid.*, Q.106, p.11; Charles Graham Esq.: Secretary to *Lloyd's Registry of Shipping.*

[23]*Ibid.*, Q.589, p.38; Charles Walton Esq.: shipowner (ships employed in timber trade). See also the evidence of Mr Nathaniel Gould, Q.198, p.18; Charles Walton Esq. Q.545, p.36, and George Frederick Young, Q.937, p.56.

[24]*Ibid.*, Q.147, p.15; Mr Peter Courtney: a nautical surveyor to *Lloyd's Register of Shipping.* (See also Capt. Edward Smith, Q.639, p.40 and Mr Alderman Pirie, Q.797, p.47.

[25]*Ibid.*, QQ.122-123, p.13; Mr George Bayley: shipwright surveyor to *Lloyd's Register Book.*

considered a necessary part of an increasingly competitive trade in order that the voyage should return a profit.[26] According to one ship's captain, many reasonable masters in the trade:

> ....complained of having to take so much weight on deck, but such was the competition of the service that if they did not do it and was to give up the ship, some other master would do it and take the command of her out of their hands, therefore in order to compete with those more reckless of life, they were compelled to take this deck-load, much against their opinion and experience....[27]

Ships in the trade arriving from America had been examined by *Lloyd's* surveyors to find that they were very much strained:

> ....particularly by their waterway seams, with the butts of their blank shears and shear strakes and the knee fastenings which pass through the latter, and not unusually find their stanchions started and blank shears split, and which must have admitted much water when at sea in bad weather, so much so as to have caused the ship to be water-logged....[28]

A deck-load during an Atlantic storm could shift and settle to leeward against the lee stanchions as the vessel lay in that direction. This increased strain, together with the possibly of an upward strain as seas broke over the deck, may have induced the deck-load to attempt to float off. That this action inevitably caused structural failures, was attested to by the witnesses. The very existence of the increased load on deck raised the centre of gravity of the whole cargo above the centre of displacement of the ship to render it "crank and tender."[29] Some captains, especially in deep ships not specifically built for this trade attempted to counteract the degree of disproportionate weight above the ship's centre of displacement by adding vast quantities of ballast in order to increase stability. The net result in many cases was that the overall weight carried by the vessel merely served to put her

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[26]*Ibid.*, Q.197, p.18; Mr Nathaniel Gould. (See also evidence of Mr George Bayley, Q.125, p.13)

[27]*Ibid.*, Q.642, p.40; Captain Edward Smith: commander in the navy (previously in the timber trade).

[28]*Ibid.*, Q.107, p.11; Charles Graham Esq.

[29]*Ibid.*, Q.115, p.13; Mr George Bayley.

deeper in the water and thereby decreased the ability to navigate whilst increasing the risk of water-logging.[30] As deck-cargoes shifted stanchions could break off and their respective covering boards be ripped up so the water could run into the hold and the ship become water-logged. The crew in the case of water-logging would climb to the highest point - the tops where they were frequently starved - any provisions kept on the decks would have been washed over-board, and anything remaining in the hold rendered useless as it could not be reached under-water. The effect of water-logging may have caused the centre of gravity to be raised to such an extent that the vessel would have eventually capsized.

The high number of losses of timber-laden vessels could be attributed to a number of causes according to the Timber Ship Report of 1839. The first was the condition of the ships, for a great many of them had been previously employed in "dry" trades (West India sugar trade etc.) and now were no longer able to stay dry through years of straining and subsequently had been sold off to timber trade usage where the presence of a few inches of water in the bilges would be of little consequence.[31]Secondly the ships were over-laden, with resultant instability and un-seaworthiness which often led to capsize in the event of cargo shifting.[32] This may have been particularly noticeable in older ships built to the tonnage laws from 1773 and still in use in the 1820's[33] where the capacity of the vessel was calculated using a factor of half the breath for the depth, no matter how deep. The depth and capacity could thus be increased without adding to the measurement. This had resulted in the building of ill-proportioned ships (unlike those of American competitors) that depended upon low stowed heavy cargoes to maintain stability and when they became old and leaky were consequently potentially very unstable.[34] Thirdly, bad stowage of cargo, the practice of knocking down pillars that supported

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[30]*Ibid.*, Q.867, p.51; Mr Joseph Somes. Also see Capt. Edward Smith, QQ.656-657, p.41.

[31]*Ibid.*, QQ.1014-1017, p.65; Mr A.S. Ord: shipowner and merchant. See also Q.1150, p.72; Mr Robert Adams: Foreman of HM Dockyard Chatham.

[32]*Ibid.*, QQ.65-67, p.5; Capt. David Sutton and see QQ.148-152, p.15: Mr Peter Courtnay.

[33] 13 Geo. III cap.74, where the equation was: Tonnage = $\frac{(L - 3/5B) \times B \times B/2}{94}$

[34]*Ibid.*, Q.1150, p.72; Mr Robert Adams.

the deck-beams in order to get more into the hold. The deck-loads were then often supported by beams that had no sufficient support resulting in structural failure.[35] In the case of stowage of provisions and water, they were mostly carried below and consequently of no use in the case of a water-logged ship. Fourthly, the inaccuracy of charts: an assistant to the hydrographer of the Admiralty attested to the inaccuracy of charts during the 1839 Timber Ship Inquiry, charts in general were said to lack sufficient accuracy. Although the approaches to the Channel were said to be well known, the coasts of Newfoundland where the timber-laden vessels navigated had not been surveyed by the British Government and only a few years previously had the position of the Virgin Rocks (about 100 miles from Newfoundland) been exactly ascertained.[36] Fifthly, the attitude to navigation on the part of the ship's masters. Much ignorance and incompetence in seamanship and navigation existed, the commanders of many of the timber-laden vessels trading with America not being of the calibre of those employed in vessels of other trades.[37] Sixthly the carrying of deck-cargoes, in the great majority of the reported cases of shipwreck and human tragedy involving timber-laden vessels it had been this practice that had been the cause of disaster. The most usual outcome was water-logging and a consequent inability to proceed with the voyage, invariably combined with experience of extreme hardship through the loss of provisions and water thereby rendering the crew helpless. Lastly was listed bad weather in the Atlantic, one of the worst places to be at sea during the winter months, with a continual procession of east bound low pressure areas resulting in predominantly westerly gales and storms.[38]

The consequences of marine disaster due to these factors were certainly not confined to the North American trade, although the most controversy surrounded these instances of disaster, but also happened to other trade routes used by timber-laden vessels. Those vessels navigating the Baltic did not suffer the extent of the

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[35]*Ibid.*, QQ.140-141, pp.14-15; Mr Peter Courtnay.

[36]*Ibid.*, QQ.350-352, p.25; Mr Alexander Bridport Becher assistant to the hydrographer of the Admiralty, lieutenant of the *Fairy*.

[37]*Ibid.*, Q.162, p.16; Mr Peter Courtenay.

[38]*Ibid.*, QQ.145-146, p.15.

Atlantic hardships as the relevant adjacent coasts were that much closer and traffic particularly as the incoming vessels crossed the North Sea, was infinitely greater:

> ....at that period of the year (autumn/winter)....an immense number of vessels are generally passing and re-passing through the North Sea which is a narrow sea; and I think the crews are usually saved within a few days after the ships are disabled....[39]

The Weir Insurance Club as a representative example of northern insurance clubs for instance would not prohibit deck-loads in the Baltic trade, although some did. The practice of captains in the Baltic trade was that they mostly carried two tiers in the summer and one in the winter,[40]this did not affect premiums but they were loaded by five percent against such practices in the North American trade between 1st October and 1st March. The cases of absolute starvation were not as widely reported from the Baltic as the Atlantic but there were some cases of great sufferings from the cold, ships floating about for two to three weeks in a water-logged state before the crew had been saved by other vessels.[41]

The problem of deck-loads was not exclusively confined to the timber trade, in many cases the deck-load consisted of the provisions and water for the vessel. Captain Gordon described an incident of a passenger ship bound for South America with such provisions and water stowed on deck in order to make room for more freight. Upon encountering heavy weather in the Irish Channel the decks were cleared, the provisions and water washed away. She was obliged to take on more supplies having reached the South American coast as several passengers were onboard; having done this and upon regaining open water she encountered further heavy weather and was subsequently lost and all 27 passengers and crew perished but one man.[42]

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[39]*Ibid.*, Q.901, p.53; Mr Alfred Janson: Underwriter.

[40]*Ibid.*, Q.1135, p.71; Mr A.S. Ord. See also QQ.445-446, p.30; Capt. William K. Maugham: dockmaster at the London Docks.

[41]*Ibid.*, QQ.900-902, p.53; Mr Alfred Janson (Although gales as opposed to ice seem to be the prominent cause of Baltic wrecks - see QQ.388, p.27; Mr John Rutherford: managing underwriter to the London Assurance Corporation.

[42] *Ibid.*, Q.499, p.34; Arthur Willis Esq.: Underwriter at *Lloyd's*.

Not only were timber-laden vessels the subjects of disaster but quite frequently they were the cause of others' disasters from collisions at sea when unwary vessels collided with those "floating heaps of desolation". In the case of the *Virago* some 20 years on, a vessel loaded with teak from Moulmein in the Indian Ocean to Queenstown, Ireland became water-logged and abandoned on the 5th March 1858, 155 miles SW of Cape Clear. Her subsequent history illustrates the great danger of these vessels to other mariners. On the 6th March she was passed by the American liner *Eagle*; on the 17th of the same month a steamer reported having seen her whilst on passage from Rotterdam to Gibraltar; on the 5th April she was passed by the *Naiad* on passage from Palermo to Milford; and on the 15th the *Samarang* on passage to Tenby passed by her; by the 18th she was seen 160 miles off the Lizard "in a very dangerous position" by *Champion of the Seas*; and again on the 3rd of May the *Alhambra* steamer on her voyage to Southampton met with her at lat. 47 deg.; about the same time and place she was seen by the *Peru* steamer "....and appeared as if run in to"; the final report sent on the 29th May by telegraph stated that she was stranded near Brest and her cargo was being discharged.[43]

The often miserable fate of the timber-laden vessels and their crews appeared from the report of the 1839 Timber Ship inquiry to have been largely due to the carrying of deck-cargoes - with many of the witnesses directly criticising the practice - especially over the winter voyage. The whole of the Atlantic trade in timber appeared to be suffering from too hard a commercial drive to gain profits at whatever cost to the lives of many mariners whose fate had often been extreme hardship or death. A Bill[44]was prepared and brought in on the basis of the inquiry report by George Palmer and Hodgson Hinde on the 8th July 1834 proposing a temporary cessation of the carrying of deck-cargoes in the North Atlantic timber trade between September 1st of that year and May 1st 1840. During the second reading of the Bill suggested government intervention to prevent deck-cargoes prompted debate and although government interference with the shipping interest

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[43]*Quarterly Review*, No.104, July-Oct 1858, "Shipwrecks", p.182.

[44]*Bill to prevent Ships clearing out from British N. American Ports loading their Cargo of Timber on Deck*, BPP 1839 (389) V.491. Also see 2 & 3 Vict. 1839 cap. 44.

had usually been met with derision and distrust, on this occasion it wasn't. Chapman stating that:

> ....this was a Bill required by humanity, and requested by the shipowners themselves, and therefore he was glad that there was no opposition. The object of the Bill was to relieve old ships by doing away with deck-loads which were carried in no other trade.[45]

During the debate on the second reading of the Bill Mr Warburton relevantly alleged that the Committee had "slurred over everything", that they had concluded in their report that "good vessels were frequently lost in proportion, as bad vessels".[46] Whilst admitting to the evidence on deck-cargoes, he had analysed the figures given for losses and reported of 78 vessels lost, 44 were lost going out, therefore he concluded that their loss could not be attributed to the carrying of deck-cargoes but that bad vessels had occasioned these losses, besides the evidence concerning deck-cargoes there was a strong body of evidence attributing the disasters to the bad quality of the vessels employed. The Bill eventually received royal assent on August 17th 1839 and prevented the carrying of deck-cargoes during the autumn voyage. In the following year on 4th June 1840 the Bill was further extended to cover autumn-winter voyages from the 1st September to May 1st 1842. This time it was drafted to include the transport of timber (mahogany) from Honduras, but allowed provision for the necessary carrying of ship's spars on deck and the occasional need to transfer to the deck-cargo from below in the case of springing a leak in the ship's hull.[47] On the 6th April 1842 a further Bill concerning the carrying of deck-cargo extended the then current provisions until May 1st 1845.[48] In 1845 the Bill was further continued until 1st May 1852,[49]the masters of

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[45]PD *Hansard* (Commons), 3rd Series, XLIX, col.422.

[46]*Ibid.*, col.421.

[47]*Bill to continue, extend and amend Act for preventing Ships clearing out from British N. American Ports loading their Cargo of Timber on Deck*, BPP 1840 (348) III.663. Also see: 3 & 4 Vict. 1840, cap.36, p.138.

[48]*Bill for preventing Ships clearing out from Ports in British N. America, or Honduras, from loading their Cargo of Timber on Deck*, BPP 1842 (147) IV.309. Also see: 5 & 6 Victoria 1842, cap.17, p.114.

such vessels engaged in the trade having to procure a certificate from the Clearing Officer of the port that all the cargo is below deck - the penalty being a fine "not exceeding One hundred Pounds".

Despite the controversy surrounding the forbidding of the carrying of timber as a deck-load with its dangerous consequences and subsequent Acts of Parliament outlined from 1840 onwards; the legislation was not immediately extended to the West India trade. Thomas Edwards, secretary to the Royal Society for the Preservation from Shipwreck had reported to the 1843 Shipwreck Committee that the *Naiad* had been reported lost and all but one of the crew had perished. *Lloyd's List* dated 30th December 1842 gave the following statement:

> ....the *Naiad*, Pearson, from Halifax N.S. to Demerara, was capsized during a heavy squall, 22nd September, in latitude 29. She righted next day, full of water, and with loss of her spars except the foremast, and was fallen in with 11th ult., in latitude 58, by the *Shawmutt*, Kimball, arriving at Boston; which vessel took from her the only surviving crew, after being 50 days in the fore top....

It would appear from this statement that despite the legislation being in force, and specifically directed to "....ships clearing out from Ports in British North America...." (Nova Scotia) it did not apply to those vessels leaving such ports and bound to the West India Islands at that time and that further legislation extending the scope of the Acts to the West India Islands was needed.

7(ii) Shipwreck through fire by lightning: No mention is made in either the 1836 or the 1843 Shipwreck Inquiry as to the losses of vessels by lightning, of which in many cases there was no record or trace. Until the adoption in 1842 of the permanent lightning conductor in the Royal Navy, many vessels both in the Royal Navy and the Merchant fleet listed as lost without trace were probably destroyed by lightning and fire. Between about 1790 and 1840 there were 280

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[49] *Bill to continue and amend Act for preventing Ships clearing out from Ports in British N. America, or Honduras, from loading their Cargo of Timber on Deck*, BPP 1845 (370) VI.191. Also see: 8 & 9 Vict. 1845, cap.45, p.392.

cases of Royal Naval ships recorded as being struck and damaged by lightning, 240 cases officially recorded and 40 on other authority.[50] Although this thesis is concerned primarily with merchant ships, the experience and consequent actions by the Royal Navy has great relevance for instances of shipwreck in the merchant fleet. In the log-books of the naval ships that had experienced lightning during the 50 year period toward the mid-century, many harrowing accounts exist of masts being "shivered", and consequently lost with fatalities and injuries, for example *Chichester*, Revenue Cutter at Kilkerran Bay coast of Galway at anchor on the 7th February 1840:

> ....a flash of lightning blazed over the vessel, accompanied by a tremendous peal of thunder, which caught the topmast, and cut off a piece of spar; a shower of splinters from the mainmast fell on the deck; the masthead was completely carried away, and the mast scooped out and charred; the electrical discharge pierced the deck, threw down the bulkhead between the cabin and galley, and destroyed the officer's berths, smashed all the dishes and glasses on the cabin table, displaced the heavy iron grated sky-lights on deck and raised the main deck a full six inches off the beams, threw out the bulwarks in many places. Filled the vessel with smoke, and destroyed the magnetic power of the compasses.... .[51]

Again, from the log of *Pelican*, Bay of Honduras 10th September 1806, off Belize at anchor:

> ....the ship struck by lightning, which shivered the main-topmast and topgallentmast, so as to render them unserviceable, and splinter the mainmast....

And from Capt. Ward's private journal, commander of the *Pelican*:

> The previous evening had been calm, and the heat oppressive, scarcely an air of wind, soon after midnight pitchy dark clouds came off the land with a little whirl of wind. The ship became speedily enveloped in vivid discharges of lightning , which seemed to pour down on the earth and sea with fearful

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[50] See App. No.1, p.12, *Papers relative to shipwrecks by Lightning, prepared by Sir S. Harris, and presented to the Admiralty*, BPP 1854 (453), XLII.553.

[51] *Ibid.*, No.38, App. No.1, p.18.

> brilliancy, leaving intervals of intense darkness. This lasted for about an hour.[52]

Finally, from the log of *Zebra*, East Indies, 27th March 1838, Straits of Malacca, standing along shore:

> The ship was struck by lightning; the electrical fluid shivered, in its course, the main - topgallantmast and topmast; secured the wreck, and came into 24 fathoms; found head of topmast and part of topgallantmast lying across the topsail-yard; the body of the topmast, from three foot above the cap, had fallen on deck.... .[53]

These are merely three examples in a list of 280 instances of ships wrecked by lightning. Of the hundreds of cases of vessels simply reported as lost, many may have been destroyed by lightning. Of the cases listed, 40 - more than a sixth, had been set on fire in some part of the masts, sails or rigging and placed in great danger.

Despite greater documentation applying to Royal Naval ships, the merchant service suffered equally if not more as they lacked the assistance of a fleet and were more often single ships engaged in competitive commerce in a potentially hostile environment. Again, as with Royal Naval ships, merchant ships may have been completely destroyed and lost without trace. A particularly alarming and sad case in this respect was that of a vessel lost in July 1848 listed as "unknown", she was seen to be struck by lightning off Boulogne and "consumed within sight of the coast".[54] How many more such instances as this went completely un-witnessed? Of those cases that are recorded the descriptions are harrowing, between 1820 and 1858, 33 ships varying between 300 to 1000 tons were totally destroyed by lightning, and 45 greatly damaged.[55] Examples include: *Maise*, August 1852, Struck off Malta; ship went down, crew perished;[56]*George and*

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[52] *Ibid.*, No.33, App. No.1, p.32.

[53] *Ibid.*, No.240, App. No.1, p.50.

[54] *Ibid.*, No.6, App. No. 6, p.61.

[55] *Quarterly Review*, 104, July - October 1858, p.179.

[56] *Op. cit., Papers relative to shipwrecks.....*, App. No.6, p.61.

Mary, May 1849, set on fire off Scarborough, destroyed in three hours;[57] *Orwell*, February 1838, set on fire at sea, towed burning into Liverpool.[58]

In most of the cases listed the circumstances surrounding the stricken vessels were quite desperate. In the case for example of the 650 ton passenger ship the *Sir Walter Scott*, lost in the Bay of Biscay in June 1835, lightning shivered the foremast, entered the forecastle, and completely raked the vessel, set fire to the cargo so thoroughly that the captain, crew and passengers roused from their beds, hurried at once into the boats; within one hour the ship went down.[59] In the case of the *Madras*, damaged by lightning in May 1834, she:

> ....had a hole a foot square struck through her side, upper deck was burst up from side to side, rigging and ropes cut and burned; chain sheets knocked to pieces, links strewed the decks; all the larboard side of the ship was on fire. Two cartridges of gun-powder exploded and two barrels set on fire externally; but these, with others, were speedily thrown overboard: "the escape of the vessel was truly miraculous". She was struck by lightning at sea on her voyage to Calcutta, by two successive discharges, the first shook the spars, the second damaged the hull.... .[60]

Prior to 1854 at least 18 merchant ships varying from 30 to 800 tons were known to have been totally destroyed by lightning besides the many which were disabled through the loss of topmasts and rigging. The attitude of mariners to the problem has to be understood in the context of contemporary knowledge of electricity and the principles of electrical discharge. In the early years of the nineteenth century every piece of metal on-board the ship was considered as an attracter of lightning and a source of potential destruction. The customary practice when lightning was considered to be imminent was to put wet swabs into the ship's pumps and over the doors of the magazines in the case of ships of war, with a view to sealing them off to keep out the lightning. From around 1820 to 1840 this was considered to be the most effective preservation from the effects of lightning, at the same time a

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[57] *Ibid.*

[58] *Ibid.*

[59] *Ibid.*, p.62.

[60] *Ibid.*

lightning conductor in the form of a small wire or chain was hoisted into the rigging, but not until the lightning was upon them.

The effective solution came from Snow Harris, who in the years prior to 1820 had perfected an idea for a fixed lightning conductor which he proposed to the Board of the Admiralty. Harris's researches had been widely published.[61] His system consisted of a series of fixed conductors leading down the mast connecting with the keelson bolts and through to the copper sheathing on the outside of the vessel whereby the lightning's electric charge could run straight to "earth". Harris's idea was that fixed conductors in collaboration with other lines of metal passing through the ship should form:

> ....in an electrical sense, as one uniformly conducting mass; so that when lightning strikes upon any point, the explosive form of action vanishes, the electrical discharge has unlimited room for expansion in all directions and no damage can arise to the ship.... [62]

The initial application of this method was for many years accompanied by prejudice and fear as it was thought that the presence of a fixed conductor high in the rigging of the ship would actually "draw" down the lightning upon it.

The Admiralty's findings upon the use of Harris's system together with other forms of lightning conductors proposed which in effect had been on trial with them for a period of 10 years from 1830 to 1840 initially in 10 ships, were published in the report of a naval and scientific commission appointed to examine and report upon the suitability:

> ....we again beg to state our unanimous opinion of the great advantages possessed by Mr Harris's system of conductors above every other plan, affording permanent security at all times and under all circumstances against the injurious effects of lightning, effecting this protection without any nautical inconvenience or scientific objection whatever; and we

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[61] For example in the "Transactions of learned societies"

[62] *Op. cit., Papers relative to shipwrecks.....*,Q.9, p.5.

> therefore most earnestly recommend its general adoption in the Royal Navy....[63]

Despite it having already been in service for 10 years the Admiralty did not immediately condone usage throughout the fleet on grounds of possible cost saving by the use of conductors of a more temporary nature:

> That conductors upon Mr Harris's principle would be fitted in some ships; in others, conductors in various forms of fixed rigging would be applied; and that the result of experiment would determine which of all the forms would be preferred....[64]

Thus two years later and after many more shipwrecks by 1842, after the wire ropes and other temporary conductors had failed to meet requirements, Harris's measures were carried into effect by the Admiralty upon the recommendation of the Naval and Scientific Commission with immediate consequence that "damage from the destructive agency of lightning vanished from the records of the Royal Navy". By the mid-century owners of merchant ships had began to adopt the model and the *Quarterly Review* was moved to report:

> ....When it is remembered that the treasure clippers trading between Australia and this country often bring home nearly a million sterling, in addition to a large complement of passengers, it does seem remarkable that the lightning apparatus is not considered as essential to their equipment as the boats; especially as they have to traverse an ocean where thunder storms are of common occurrence. The cost of the whole apparatus is not above £100, and if the cupidity of the merchant is not sufficient to induce him to supply it, we think that Government should compel him, in order to insure the safety of the stream of passengers who annually leave our shores....[65]

Clearly it was to take some time between the example of the Royal Navy (drawn out long enough in itself) and the indifference of the merchant navy regarding the degree of importance placed upon saving their ships, passengers and cargoes for

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[63] Letter from Lord Viscount Melgund, dated 7th November 1840, quoted in *Op. cit., Papers relative to shipwrecks.....*, Q.16, p.7.

[64] *Ibid.*, also see Report, "Shipwreck by lightning", 24th January 1840.

[65] *Quarterly Review*, "Shipwrecks", 104, July- October, 1858.

the sake of fitting their vessels with permanent conductors. The whole episode may be indicative of both the deep seated intransigence of the Royal Navy to anything new, no matter how proven; and an even worse case of neglect to matters of safety and welfare in the merchant navy.

By 1854 Harris's system was being specified in the contracts for mail ships, his invention had gained wide acceptance:

> Private companies, and owners of many fine merchant ships, have begun to adopt the same method. The ships of foreign powers building in this country are nearly all fitted with conductors, as in the public service so that, in fact, the general shipping interest, the merchant and shipowner, the private builder, and powerful private companies are all being benefited by Sir Snow Harris's long and anxious labours.

7(iii) Rocks, shoals and the significance of the lantern: The placing, erection, manning and maintenance of lighthouses and other forms of beacon in areas of danger to shipping, usually concerning rocks and shoals had been of great significance to the alleviation of shipwreck from earliest times. In the first half of the nineteenth century important developments were made toward this provision and its consequent ability to warn ships of eminent danger. In the opening years of the nineteenth century the provision of lighthouses seemed somewhat anarchic. Many had been built as and when circumstances demanded that apathy to cases of shipwreck could not remain any longer. The provision of lighthouses had often been prompted by humanitarian motives, however it appeared that they were capable of being a highly profitable form of investment. Lighthouses, with proprietors often in the form of private individuals were in many cases built upon land leased from the Crown and could extract a payment from ships which had to pass the light. These dues were often far more than was needed to actually maintain the light, consequently there arose a situation not wholly conducive to the alleviation of shipwreck where the provision of lights and their maintenance was actually opposed by the shipowners in some instances due to the high costs imposed upon them.

In the years that followed the Napoleonic wars the shipping interest, certainly in the coasting trades gradually became more and more competitive; this along with an increasing amount of shipping dissatisfaction with the existing system of light provision regarding costs[66] helped to fuel a reforming movement concerning lights. It was made especially poignant by the fact that many other countries at the time provided and maintained lights from their own exchequer. In 1835[67] Joseph Hume[68] estimated during a debate in the House of Commons that the shipping interest were paying £240,000 in light dues per year when in fact the costs of upkeep on the lights was only £40,000.[69] Despite possible exaggeration the point was not lost on the shipping interest.

Following inquiries made as to the provision of lighthouses in 1822 the Select Committee of the House of Commons on Foreign Trade recommended the leases of certain lighthouses to be purchased back by Trinity House. By the consequent Act (3 Geo.IV, cap.3) various lights were actually purchased back and a movement started to centralise the control of all lights under the power of Trinity House (with the consent of the Crown) to reduce, modify or relinquish light dues in their control. Little interference occurred with the affairs of Trinity House over these matters until the Inquiry of 1834 into lighthouses.

The consequent report of that inquiry (chaired by Joseph Hume) went into the whole problem of lighthouse administration in minute detail. Hume knew of the tendency to generate profits in certain cases of lighthouse proprietorship and reference was made by the committee in their report to the few private individuals who had been favoured by the ministers and sovereigns of the day as being given the means (in enabling the provision of a lighthouse) to tax the trade of the country.

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[66] See for example *Select Committee appointed to inquire into Shipwreck of British Vessels, and the Means of Preserving Life and Property of Shipwrecked Persons*, BPP 1843, (549) IX, Mins. of Evidence, QQ.1427-30, p.89; Capt. Henry Mangles Denham RN, FRS: Commander in Royal Navy and surveyor.

[67] PD *Hansard* (Commons), 3rd Series, XXVII, col.253.

[68] Joseph Hume, see *Dictionary of National Biography*, Vol.X, p.230.

[69] PD *Hansard* (Commons), 3rd Series, XXVII, p.247.

This exposure of private gain at the expense of an efficient lighthouse provision appealed to humanitarian sentiments. The true utility of the lighthouse could not be left to the motives of profit and local need as the necessity arose, for if shipwreck in this context were to be alleviated then lighthouse provision needed to be under the jurisdiction of one accountable and responsible provider. To this end Hume brought about a Bill in 1835 with a view to carrying out the recommendations of the Committee of 1834. Its principal direction was to vest "all the lighthouses on the coasts of the United Kingdom in the Corporation of Trinity House, with power to the Corporation to purchase the lighthouses then held by private individuals". However opposition was too strong, Hume had to withdraw the Bill. Again as with the outcome of the 1836 Shipwreck Committee Report the power of vested interests and the considerations of money affected a more humanitarian outcome; this time the government was placed in an awkward position, for as landlord it leased land worth several thousands of pounds a year. Hume persisted and introduced another Bill the following year. The government now had to concede on the matter of lighthouse ownership and having induced Hume to withdraw his Bill introduced one of its own which received the sanction of His Majesty on the 13th August 1836. By the consequent Act (6 & 7 Will. IV, cap.79) the basis for a comprehensive and centrally controlled system of lighthouses in England was established. At the same time responsibility for Scotland was allowed to continue with the commissioners for Northern Lights (26 Geo. III, cap.101), and for Ireland with the Ballast Board in Dublin (52 Geo. III, cap.115).

Examples of lights that came into being during the first half of the nineteenth century include: Eddystone (1807), originally a chandelier of candles it soon adopted Argand's burners and parabolic reflectors of silvered copper when Trinity House took it over; South Stack (1809); Bell Rock (1811); Carlingford (1830); Skerrymore, commenced construction in 1838 and St. Catherine's began service in 1840. There had been various forms of lighthouse in the vicinity of St. Catherine's Point the most southerly point of the Isle of Wight, and one of the greatest hazards in the Channel, since St. Catherine's Oratory was built in 1328, however none of the previous attempts were really effective as they were of low construction and invariably covered in hill fog. The loss of the West Indiaman

Clarendon on October 11th 1836 was to break the complacency of centuries when wrecks had brought great advantage to the islanders. The tragedy had claimed the lives of her ten passengers and three of her crew of sixteen and brought about local demands to Trinity House for a new lighthouse. St. Catherine's light was begun in 1837 and entered service in March 1840.[70] In Scotland the Commissioners for Northern Lights brought in a Bill to erect a lighthouse on Bell Rock in 1802 which passed into law in 1806. Again disaster and tragedy had inspired action. Bell Rock, that lay right in the fairway to the Firths of Forth and Tay, had been the cause of much loss of property and life. Great danger accompanied the erection of the light as there was only a short time between the ebbing and flowing tides during which the rock was accessible to the workmen. The resulting tower was 100 feet in height and 42 feet in diameter at its base and 15 feet in diameter at the top. The light, a revolving red and white light, was first exhibited on the night of the 1st February 1811.[71] South Stack lighthouse near Holyhead is a crucial mark for vessels navigating the Irish Sea or calling at Holyhead. The islet of South Stack is separated from Holyhead mountains by a 100 foot wide chasm between steep and contorted rock formations dating from the pre-Cambrian era. A petition was sent to Charles II in 1665 calling for a light to be placed at South Stack, but it was not until 1809 that a lighthouse was built, designed by Daniel Alexander and equipped with oil lamps magnified by reflectors on the catoptric principle. In 1840, a railway track was added so that a lamp could be lowered down the cliffs when fog or low cloud obscured the main tower. In Ireland a remarkable lighthouse was built near Cranfield Point at the entrance to Carlingford Lough. The Carlingford light was constructed on the Hawlbowling Rock with foundations twelve feet below high water mark. This light, a fixed light from oil burned in Argand lamps was first exhibited on December 20th 1830.[72] The Skerryvore Rocks lie in the track of shipping of Liverpool and Clyde some 12 miles WSW of the seaward point of the Isle of

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[70] See J.C. Medland, *Shipwrecks of the Wight*, (1986).

[71] See Alan Stephenson, *A Rudimentary Treatise on the history, construction and illumination of lighthouses*, London (1850), pp.13-15.

[72] *Ibid.*, p.15.

Tyree in Argyllshire. The Commissioners of Northern Lighthouses had considered the idea of erecting a lighthouse on these rocks some time prior to the summer of 1838 when operations were actually commenced: "Skerryvore will be a most desolate spot for a lighthouse, the Bell Rock and Eddystone a joke to it".[73] Landing on Skerryvore rocks was a dangerous feat in-itself, as they were worn smooth by the Atlantic waves. All the materials had to be specially transported for which piers had to be built at Mull and Tyree, barracks built for the quarrying of granite, and at Tyree a harbour built to accommodate a small vessel to service the needs of the lighthouse. A steam tug had to be built to transport the building materials from the quarry to Skerryvore rocks. The first seasons toil in preparing to build the lighthouse was obliterated by a storm on 3rd November 1838 that swept all traces away. Eventually it was built containing double the stonework of Bell Rock and not much less than five times that of Eddystone, the Skerryvore tower rose 138 ft 6 inches with a base diameter of 42 ft and 16 ft at the top.[74]

These examples are but some of the technical responses to the many dangerous rocks and shoals that had claimed the lives of many vessels and their crews; how many such vessels that may have been lost on inshore rocks and may have disappeared without trace as "foundered at sea" it would be vain to conjecture. Dangerous rocks and shoals around the coast were gradually becoming identified as being in need of some form of beacon and it was the work of Trinity House to identify and answer the needs of mariners concerned along these passage routes. By the time of the report from the Select Committee on Lighthouses in 1845 there were in existence in England 175 lights consisting of 65 fixed lights and 25 floating, the light on the Breakwater at Plymouth and 84 harbour or local lights of which 9 were floating. This situation compared favourably in terms of increased provision of lights since 1834 when there had been a total of 126 lights. As a result of the 1836 Act,[75] vesting all lighthouses

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[73] Sir Walter Scott, see Ian Cassels, *No more paraffin - oilers*, p.53.

[74] See the account of building the Skerryvore lighthouse in *op.cit.*, *A Rudimentary Treatise.....*, pp.15-24.

[75] 26 Geo. III, cap.101 for Scotland; 52 Geo. III cap.115 for Ireland ; 6 & 7 Will. IV, cap.79 for England.

and seamarks on the coast of England in Trinity House, Trinity House was granted consent to purchase the five remaining private lighthouses of Harwich, Dungeness, Winterton, Hunstanton and Orford formerly held by lease from the Crown, also to purchase the Smalls and Longships held by proprietors under leases granted by the Master Wardens and Assistants of the Corporation of Trinity House; in addition the Skerries, Spurn and Tynmouth Light. The harbour lights on the coasts of the United Kingdom, despite being initially under the jurisdiction of local authorities were also by the Act ultimately the responsibility of Trinity House.[76]

As well as the political move away from private ownership and towards centralisation in Trinity House together with an increase in the amount of lights, the first half of the nineteenth century witnessed technical developments that moved the effectiveness of lights beyond that of mere candle power. In order to produce a strong steady light it was necessary to have a strong illumination and given this to then concentrate these rays toward a single point. Even as late as 1816 when the Commissioners of Northern Lights assumed control of the Isle of May light in the Firth of Forth it had shown a coal fire. At the turn of the century Eddystone lighthouse had still derived its light from candles; and the light at Harwick in 1801 had a rough brass plate to the landward side in order to reflect the coal fire illumination. Gas from pit coal had been tried but was not suitable for the majority of lighthouses, which were often situated in remote places. Toward the mid-century most British lights were run on sperm oil whereas French lights were run on colza oil derived from a species of wild cabbage, and also olive oil. Hume had recommended the use of colza oil at the time of the 1845 Inquiry into Lighthouses as being half the cost of sperm oil. Toward the end of the eighteenth century there had occurred two important developments: Monsieur Argand, had invented a lamp with a double current of air that improved dramatically the art of illumination; at about the same time Monsieur Teulere the engineer-in-chief for the province of Bordeaux had improved the design of silvered parabolic reflectors which concentrated rays in a small area, the catoptric

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[76] Harbour lights in England and Scotland, previously the responsibility of local authorities and others (41 Geo. III cap.86) now became the responsibility solely of Trinity House.

system.[77] At the same time the dioptric system had received further development, this used lenses (rather than reflectors) to reflect light rays into a beam. Augustin Fresnel is generally credited with this invention by his explanations in 1822, but had only in fact developed the prior work of Condorcet.[78] Much interest followed in the wake of Fresnel's system; the Dutch followed the French in taking up its use. The Commissioners of Northern Lighthouses were interested enough to send Robert Stephenson to France to report on the light followed by Alan Stephenson in 1834. The resulting report induced them to remove the reflecting apparatus of the revolving light at Inchkeith and replace it with a dioptric system. The success of this light, first shown on 1st October 1835, caused the Isle of May light to be modified in a similar manner by 22nd September 1836. Trinity House soon followed the trend towards the new dioptric system by employing Mr Robert Stephenson to superintend the construction of a revolving light at Start Point in Devon. By the 1840's the Stephensons had made a further improvement by combining aspects of the two systems using both reflectors and lenses: the hotophotel system.

Of the 175 lights in England in existence by 1844, 50 were public general lighthouses (equal to a total of 674 burners), other lights included 11 dioptric of first order (equal to 14 burners each), 4 dioptric of second order (equal to 9 burners each), and 25 floating lights (equal to 288 burners): making a total quantity of light displayed in terms of burners to 1152.[79] In Scotland there were 25 lighthouse stations of which 4 were double (Isle of May, Pentland Skerries, Pladda and Girdleness). Of the 29 public general lights the responsibility of the Commissioners for Northern Lights, 14 were catoptric fixed lights, 9 catoptric revolving lights, 3 dioptric revolving lights and 3 catoptric intermitting lights.[80]

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[77] In a memoir dated 26th June 1783 he had proposed the combination of parabolic reflectors with Argand lamps ranged on a revolving frame for the Corduan lighthouse and is generally credited with their invention. See *op. cit.*, *A Rudimentary treatise.....*, Pt. 1, p.74.

[78] Condorset had first suggested the building of lenses in separate pieces in Eloge de Buffron, 1773. See "The Dioptric System of Lights", *op. cit.*, *A Rudimentary treatise.....*, Pt.II, p.3,

[79] See *Report of the Select Committee on Lighthouses*, BPP 1845 (607), App. No.7, p.484.

[80] *Ibid.*, App. No.24.

The number of lights in Scotland since 1833 had increased from 25 to 29 and by the mid 1840's three new lighthouses were in the course of construction: at the entrance to Cromarty Frith, at the entrance to Beauly Loch, opposite Fort George and on the headland opposite Cove Sea Skerries on the coast of Elgin. The total number of burners in 1844 was 492 giving some idea of the comparative coverage against the English coast.[81]

In Ireland under the direction of the Ballast Board in Dublin the amount of lights had increased from a total of 40 public general coast lights and harbour lights (in 1834) to 60 by 1844 consisting of 27 public general coast lights, three floating lights and 29 local or harbour lights with a total number of 799 burners.

The provision of lights was considered to be good by mariners at the time. Capt. Denham RN during the Lighthouse Inquiry of 1845 bore testimony to the efficiency of the lights of the United Kingdom.[82] Anthony Ridley, Chairman of the Shipowner's Society giving testimony to the 1843 Shipwreck Committee considered that the lights on the coast of England were better than at any other time.[83] Captain Washington, a marine surveyor: "generally speaking, the lights, lightvessels, buoys and beacons are efficient, the lights brilliant, and the lighthouses clean and of high order....".[84] Captain Moore, 23 years in the Atlantic trade stated that he considered the English lights, on the whole, better than those of the United States.[85] In general the provision of lights was well thought of, [86]

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[81] *Ibid.*, App. No.30.

[82] *S.C. Lighthouses* (1845), Q.3034,

[83] *Select Committee appointed to inquire into the Shipwreck of British Vessels, and the Means of Preserving Life and Property of Shipwrecked Persons*, BPP 1843, (549) IX, Mins. of Evidence, Q.3140, p.206; Antony Ridley: Chairman of the Shipowner's Society.

[84] *S.C. Lighthouses* (1845), Q.2301; Captain James Washington.

[85] *Ibid.*, Q.1186; Captain George Moore.

[86] *S.C. Shipwrecks* (1843), Q.2051, p.127; Mr Robert Anderson: Hon. Secretary of the Shipowner's Association. Also, *Ibid.*, Q.3399, p.224; Capt. Samuel Sparshott: Commander of the Navy and Deputy Comptroller of the coast-guard.

despite there being no provision of lights along the north Cornish coast[87] and Bristol Channel from Lundy Island to Longships lighthouse. Also according to the *Chart exhibiting Lighthouses and Lightvessels on the coasts of Great Britain & Ireland in 1845*[88]- virtually the entire west and north-west coast of Scotland with the exception of Scalpa lighthouse (between the Isles of Harris and Lewis) Barra Head and Stornaway in the Islands, Lismore Isle to the south mainland off Mull and Cape Wrathe in the north, was bereft of lights. There was also a need for more lights along the English east coast,[89] together with the area between Dungeness and Calais.[90]Dissatisfaction with the rate of light dues persisted. However there were serious criticisms concerning the provision of lights in the Channel. It was not the case according to contemporary comment that these lights were insufficient but that there were so many that errors of navigation ensued as one was mistaken for another. One witness to the 1843 Shipwreck Inquiry considered the Channel "as well lighted as Regent Street is", but there seemed to be a need for some form of light in mid-Channel, a guiding beacon between the coastal lights of England and France. There also seemed a necessity to be able to distinguish the French lights from the English lights with a greater accuracy and confidence; apparent confusion caused by this type of error had been the cause of several shipwrecks. In the *Quarterly Review* of 1858 mention was made of the continuing poor state of English lights compared to the French "Lord Clarence Paget justly observes, the voyager leaving Folkstone will clearly appreciate the difference between the two systems by comparing the dioptric light flashing from the far distant Cape Griz Nez and the feeble spark of the English reflector light close to him at Dungeness". [91]

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[87] *Ibid.*, Q.1670-75, p.106; Capt. John Washington RN. Also, Q.1682-86, Q.1691, p.107; Mr Johnston Hicks: master of a vessel in the coasting trade. Also, Q.4840-47, p.304; Mr David Williams: inspecting commander of the coast-guard station at Padstow, Cornwall.

[88] *S.C. Lighthouses* (1845).

[89] *Ibid.*, Q.1518, p.98; Capt. John Washington.

[90] *Ibid.*, Q.1431-1433, p.89; Capt. Henry Mangles Denham RN, FRS.

[91] *Quarterly Review*, 104, 1858, p.189.

As steam ships became more prevalent other problems ensued with lights as steamers were showing lights equally as powerful as those in lighthouses of the inferior order and in the lightships. A state of confusion then arose between the fixed and the moving lights. In February 1858 the *Leander* an American barque whilst moving down St. George's channel observed a light thought to be Tuscar Rock; it transpired that this light was that of the screw steamer *North America* coming head-on and a collision ensued that sank the *Leander* with nearly all her crew. In the same context, the fixed light in the Nore lightship had to be changed for a revolving one to enable the distinction from the many powerful lights exhibited on steamers either at anchor or moving along the Thames.

Chapter Eight

The direction of reform

8(i) Toward the mid-century, the idea of reform - not just a political concept: The path of commerce and industry following the end of the Napoleonic Wars was very much the result of developments that had begun in the eighteenth century but could not be fully realised in the wartime. Consequently, the development of industry, democratic movements, nationalism etc. bustled through with a confused momentum in the years of peace following 1815.

Houghton has described the time from the 1830's to the 1870's as amongst other things an age of transition; destruction, re-construction and doubt, doubt about the nature of man, society and the universe coupled with a Puritan revival and optimism with a new political economy. For many these factors coupled with the rise of a critical spirit meant change as ancient and venerated authority became the subject of free judgement of reason and consequently the possibility of reform.[1]

The spirit that infused the age was "earnest, hopeful, strenuous and foggy.....pulsating with energy, aglow with hope, and tormented by conscience".[2] The flames and smoke of the factories had a counterpart in the flame and smoke that swirled in the minds of the people living under their shadow. It manifested itself in the world of politics essentially during the struggle between the old aristocratic landed regime and the new individualistic forces such as the factory owners. The discontent of these classes at being shut out from political power began to make itself felt. Everywhere the cry for reform was heard: law reform, educational reform, fiscal reform, reform of the laws against Non-conformists and Roman Catholics, Parliamentary Reform. The key to many of the issues of the day lay through Parliamentary Reform. Parliamentary Reform represented in itself

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[1] See W.A. Houghton, *The Victorian Frame of Mind 1830-1870*, Oxford (1957).

[2] D. Cecil, *Melbourne*, Constable, London (1965), p.228.

a watershed regarding the distribution of power and influence and was at the same time an example of the ability to bring about change. The 1836 Inquiry into the Causes of Shipwrecks could be interpreted in this vein; the agitating for improvement from humanitarian values after years of neglect which had culminated in unprecedented levels of shipwreck linked in part with nefarious practices in the shipping industry. It did not succeed in bringing reform but it did stir consciences and implemented the start of a process of reform of shipping practices. As such it could be regarded as a foundation that was to be drawn upon during the second half of the century from shipping interests in support of British economic and commercial endeavour. For without the 1836 Inquiry and the eventual consequences that followed, it could be argued that Britain's shipping strength may not have been all that adequate to the task it was to be drawn upon to perform during the second half of the century.

Politically, the increasing use of the select committee to bring facts before the public and parliament served as the basis of much reform in nineteenth century England; the 1836 Inquiry into the Causes of Shipwreck, the 1839 Inquiry into the Losses of Timber-Laden Ships and the 1843 Inquiry into the Causes of Shipwreck, being the major exposures of malpractice in shipping. Despite the only real immediate outcome being the Act of 1839 prohibiting the use of deck cargoes on ships sailing from British North America, the foundations of further reform had been laid. In 1843 parliament had appointed another Select Committee on Shipwreck. One might argue that little could be achieved to surpass the work of the 1836 Shipwreck Committee whose efforts seemed to have been largely in vain. However as with most reforms change needed to be borne out of some crisis or eminent threat of danger. Such a crisis had occurred in January of 1843 when during the winter gales some 240 ships had been wrecked with the loss of 500 lives.[3] According to Admiral Dundas[4] the 1843 Shipwreck Committee was

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[3] See *The Times*: 28th December 1843, p.3, col.c; January 19th 1843, p.3, col.a; 21st January 1843, p.5, col.f; 23rd January 1843, p.6, col.b; February 18th 1843, p.6, col.e. Also see *Illustrated London News* January 21st 1843, p.42, "The Late Hurricane", also in the *Illustrated London News* for January 28th 1843, p.58 there is an account of the loss of the *Conqueror.*

appointed in consequence of the losses at sea in the winter of 1842-43. The wrecks of the winter storms of 1842-43 had brought the issue of shipwreck to the public attention once again. Captain Pechell[5] stated that the grand object of the committee was to ascertain the causes of wrecks such as that of the *Erin,* one of a spate of steam-boat disasters that until that point in time had gone largely without inquiry or investigation,[6] a situation that according to Captain Chappell[7] should not have been allowed to prevail and that there was now a necessity for an inquiry to be held into with every fatal case of steam-boat accident of which there were mounting numbers including the fates of the *Pegasus* and the *Columbia.* Despite the earlier recommendations of the 1831 *Select Committee on Frequent Calamities by Steam Navigation*; essentially concerned with steam vessels on the Thames and especially in the "Port of London" concerning limitation of speed, need for adequate strength of construction, need for fixed signals to distinguish a steam vessel at night and the problem of steam vessels moving together and creating excessive wash, accidents persisted.[8] Steam vessels were no less susceptible to shipwreck than sailing vessels; many of them were hopelessly under-powered and incapable of manoeuvre in driving high seas. The *Wave Queen* for example, on Tuesday 28th September 1852 after several attempts to negotiate the entrance to Newhaven Harbour eventually was driven ashore:

> ....we tried to run in between the piers, but in the heavy sea the vessel would not steer and we drifted broadside into the breakers and took the ground to the eastward of the harbour....[9]

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[4] BPP 1843, (549) IX, Mins. of evidence, *Select Committee appointed to Inquire into the Shipwreck of British Vessels, and the Means of Preserving Life and Property of Shipwrecked Persons*, Q.750, p.51.

[5] *Ibid.*, Q.718, p.49; Capt. Edward Chappell RN: Post-Captain in the Navy

[6] See *Illustrated London News* for example Saturday January 14th 1843, p.27, wreck of the steamship *Monk.*

[7] *S.C. Shipwrecks* (1843), Q.679, p.46. Also see *The Times*, December 9th 1843, p.5, col.e.

[8] BPP 1831 (335), *Select Committee on Frequent Calamities by Steam Navigation.*

[9] E.H. Cree, *The Cree Journals, The voyages of Edward H. Cree, Surgeon RN as Related in His Private Journals 1837-56*, Ed. M. Levian, Webb & Bower, Exeter (1981).

Other developments towards the middle of the nineteenth century which occurred after the 1836 Inquiry, besides the rise of steam-power, included the dramatic increase in emigration, and the plight of the foundering emigrant ship was a classic Victorian disaster much reported. Between 1847 and 1853 for example, 59 emigrant ships to America were lost.[10] The summer of 1849 was a particularly bad one, the brig *Hannah* (287 tons) for example, struck an ice-berg on the way from Newry to Quebec[11]as did the *Maria* bound from Limerick to Quebec and only nine survivors were left from the crew and 111 passengers.[12] Later that same month the brig *Charles Bartlett* of Plymouth Mass. bound from London to New York was run down by the Cunard steamer *Europa* (1918 tons), only 42 of the brig's 142 passengers were saved. The list is extensive and due to the reporting of such instances of shipwreck together with other narratives of the day the plight of mariners was illuminated and ideas of reform hastened, a classic example being the case of the *Ocean Monarch.*[13]

8(ii) The 1843 Inquiry into the Causes of Shipwreck: In its manner and approach the appointed committee of the 1843 Inquiry went about its business much as the 1836 Inquiry. Just as in the 1836 Inquiry, the list of witnesses drawn to give evidence before the committee included many of the best minds of the day in the cases of shipping practices, inventions and perceived improvements. However whereas the 1836 Inquiry covered numerous aspects of shipwreck from the construction of ships as laid down by the questionable earlier *Lloyd's* rules,

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[10] See *Fourteenth General Report of the Colonial Land and Emigration Commissioners*, H.C., 1854, Vol. 28.

[11] *Illustrated London News*, June 2nd 1849, p. 382. The *Hannah* had on-board 200 emigrants, mainly agricultural labourers, their wives and children.

[12] *Ibid.*, July 17th 1849. Details of both the *Hannah* and the *Maria* from *Lloyd's Register of Shipping*, 1850.

[13] *The Ocean Monarch. A Poetic Narrative, With an Original and Authentic Account, in Prose. of the Loss of this ill fated vessel....*by James Henry Legg. Liverpool: Deighton and Langton; London: Smith, Elder (1848). Contained in Liverpool Record Office and relating to the tale of the loss of the best documented wreck of the time *Ocean Monarch* which burned and sank in the Mersey, barely out of Liverpool with the loss of 176 lives August 24th 1848.

through cases of actual shipwreck and disaster to result in an extensive list of improvements, a truly comprehensive plan for reform suggested, the 1843 Inquiry seemed to have extended and built upon that plan in a smaller but nevertheless highly detailed number of areas. The reports from the committee were divided into two.

The first report was based upon evidence covering some 400 pages of expert testimony from 69 witnesses giving their evidence over a period of 23 days. They included such notable personages as the Duke of Wellington, Captain Robert Fitzroy RN and the civil engineer William Cubitt. The first report covering the first area of inquiry centred upon the loss of British vessels and the means of diminishing that loss in the future; it focused upon six essential points: (a) The character of ships; (b) The competency of masters and mates; (c) The facility of obtaining good pilots; (d) Harbours of refuge; (e) Lighthouses, beacons etc.; lastly, (f) Charts and compasses. The second area of inquiry covered the means of preserving the lives and property of shipwrecked persons. Seemingly a different approach from the 1836 Inquiry, it appeared to be far more concerned with and illuminated a far greater spectrum of means to prevent shipwreck and detailed exposition of actual shipwrecks with a view to gain greater knowledge. The 1843 evidence seems dominated by questions over pilotage in the most delving manner, especially with the affairs of the Cinque ports and particularly Dover. Also with questions about details of forms of breakwater (again particularly concerning Dover), and therefore may be seen as a more particular and defined inquiry into shipwreck seeking to improve matters within more specific areas or with improvements to specific problems.

The second report followed on the 15th August within a week of the first. A very short document in comparison, it was concerned with the specific problems of steamers and was instigated by the wrecks of two steam vessels, the *Pegasus* and the *Columbia*. It drew upon 21 pages of evidence from four witnesses during a single day (and in a sad but timely way, used the loss of the *Pegasus* and *Columbia* to underline the principal recommendations made regarding steamers in the first report).

8(iii) The 1843 Inquiry, first report, first area of inquiry; (a) The Character of Ships, including evidence presented in the second report: Taking the detail of the first report on the first area of enquiry - the shipwreck of British vessels. Having obtained Returns of British Ships lost during the years 1841-3 from *Lloyd's*, and also the loss of timber-laden ships from British America to Europe from September 1839 (the date from which the Act took place prohibiting deck-loading[14]) the committee had been able to make a comparison from the evidence pointing to a drop in shipwrecks, in the cases of general loss in 1841-2 compared with 1833-5 in proportion to the registered tonnage, and secondly in the particular case of timber-laden ships in 1840-1 compared to 1836-8. With the notable exception of one incident, the *Naiad* reported on 14th December 1842 from Halifax to Demerara where only one man had survived out of a crew of 17 and had been taken from the wreck 50 days after the 22nd of September when the ship had capsized during a heavy squall. The horrible instances of cannibalism that had occurred during the years prior to the Act of 1839 seemed to have ended. By 1843 there had been a reduction in the losses of timber-laden ships since the legislation of 1839, in each year, from 56 to 23.

The character of ships was the first of six essential points referred to by the committee. They acknowledged the work of *Lloyd's Register Society for British and Foreign Shipping* formed from the previously defunct underwriter's green book and the shipowner's red books. By 1843 *Lloyd's* had become established as a respected institution and shipowners were generally ready to submit their ships and stores to the examination of the surveyors of the society for the purpose of classifying them according to their real quality in the Register book. The establishment of *Lloyd's* as a point of reference as to quality albeit via a somewhat tortuous route had been an incredibly important step toward the integrity of the British merchant fleet as it formulated the basis for strength and durability in construction of vessels and enabled a new confidence in ordering and dealing with ships.

Charles Graham had been appointed secretary to *Lloyd's Register Society* and had been examined before the committee that had sat in 1839 on the

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[14] Saturday August 17th 1839, 2 &3 Vict. cap. 44.

shipwreck of timber-laden vessels. During the 1843 inquiry he was able to verify that the work of the surveyors at *Lloyd's* had been going on satisfactorily and that the number of ships classed "A" (generally new ships) had increased progressively: in 1836 - 2,789; 1837 - 3,186; 1838 - 3,782; 1839 - 4,401; 1840 - 5,226; 1841 - 5,962; and in 1842 - 6,321. Graham considered this to be evidence of increasing confidence of the owners in coming to the Society to have their ships classified.[15] In addition to this increasing confidence in the Society, the subscribers to the register book had increased also, to 993 by 1842. It was about this time that *Lloyd's* had introduced regulations for the newly introduced steam vessels, however because of the severity of the examination and the prevailing attitude amongst steam vessel operators that their personnel were extremely competent persons, very few were submitted to examination by *Lloyd's* before 1843, an exception being the General Steam Navigation Company .

In considering the character of ships the 1843 Shipwreck Committee drew attention to the condition of "Ships of War and Government Packets"[16] which had foundered at sea from the year 1816. An illustration that it was not just merchantmen that were going down.

From the earliest origins in 1737 steam driven vessels had progressed via the pioneer experiments of Jouffroy d'Abbans, John Fitch, Symington and the *Charlotte Dundas.* The first steam auxiliary *Savannah* crossed the Atlantic in 1819; and the *Sirius* did so under sustained steam power for the first time in 1838. [17] There followed the transition from wooden to iron hull construction and from paddle to screw propulsion; both embodied in the *Great Britain* of 1843. Steam vessels were therefore by 1843 becoming increasingly widespread and were said to require legislation in themselves in regard to the superintendence in the case of

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[15] *S.C. Shipwrecks* (1843), Q.4024, p.259; evidence of Charles Graham: Secretary to *Lloyd's* Register Society.

[16] Return dated 24th February 1843. Also see BPP 1843 (166), *Return of Hired Convict Ships, Transports, Packets and Warships that foundered at Sea since 1816*, and BPP 1843 (222), *Amended Return of Hired Convict Ships, Transports, Packets and Warships that foundered at Sea since 1816.*

[17] See W.A. Baker, *From paddle-steamer to nuclear ship - a history of the engine powered vessel*, London (1965).

passenger carriers and increasing regulations in order to maintain safety. The Commission on Steam Navigation in 1839 had drawn up lists of steamers lost by "stress of weather or by want of skill and competency in the master"[18] presented in a report covering the years 1829-39. The Shipwreck Committee of 1843 sought to recommend "the propriety of an inquiry being instituted as to the necessity of introducing an Act of Parliament, placing all steam vessels carrying passengers under the superintendence of competent persons, to be appointed by government".

The cases in 1843 of the loss of the *Pegasus* and *Columbia*,[19]served to underline all that had been discussed concerning the safety of steam vessels. The *Columbia* had struck a rock in the Bay of Fundy during intense fog, when unbeknown to her pilot and captain she had incurred a very unusual current for which insufficient allowance had been made.[20] In the case of the *Pegasus*, she was wrecked on Goldstone Rock between Holy Island and Fern Island off the Northumberland coast due to pilotage, concerning an error in identifying lights.[21]

In the Second Report of the 1843 Shipwreck Committee the idea of fitting sea-going steamers with paddle-box boats irrespective of lifeboats and ship's boats took precedence over other suggestions on safety, although Shannon the Captain of the *Columbia* did not seem to accept their suitability in rough water,[22] followed by the idea of watertight bulkheads. The practice of giving way to starboard (helm aport) had been growing with steamer captains on the north-east coast when meeting head-on, this met with approval from the committee. As did the use of lights "two lights, one on the funnel which shows three different lights, a red light on the starboard side, a green light on the larboard side, and a bright

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[18] *S.C. Shipwrecks* (1843), Q.1448, p.92.

[19] See *Ibid.*, 2nd Report, p.3.

[20] *Ibid.*, see evidence of Mr Neil Shannon: Captain of the *Columbia*, 2nd Report, Mins. of evidence, Q.6363-6515, p.5.

[21] See evidence of Mr Robert Hildgard: passenger on the *Pegasus* at the time of the incident, *Ibid.*, 2nd Report, Mins. of evidence, Q.6516-6610, pp.11-14; and of William Brown: mate of the *Pegasus*, *Ibid.*, 2nd Report, Mins. of evidence, Q.6611-6727, pp.14-18; and of William Hood engineer of the *Pegasus*, *Ibid.*, 2nd Report, Mins. of evidence Q.6728-6797, pp.18-21.

[22] *Ibid.*, Q.6491, p.10; Mr Neil Shannon: Captain of the *Columbia.*

light in the centre; the second light was over the bows, a bright light"[23] already used along the north-east coast of England and as far up to Dundee and Leith in Scotland this practice was spreading due to "local" regulations issued from Kingston-on-Hull in 1842.

Paddle-box boats for use in accidents involving steam vessels were seen as imperative to the safety of passengers and crews; they were the invention of Captain George Smith RN who on the 20th August 1838 first contrived the idea of making a boat to be carried by way of the paddle boxes on steamers substituting a boat for the existing covering of the paddle wheel. By June 1843 Smith's boats were in service on 20 merchant paddle steamers and 20 men-of-war. Paddle-box boats represented a huge capacity for life-saving that could be utilised with no real sacrifice of deck space. The Admiralty at the time expressed itself greatly in favour of their use. Smith maintained that the paddle-box boat could be in the water in as little as 75 seconds to three minutes depending upon the crew. Several examples existed of life-saving at time of shipwreck by way of Smith's boats, one such was the case of the *Isis*. She was abandoned off Bermuda during a heavy gale when the crew and passengers left her by way of Smith's boats and these 102 persons proceeded to the *Medway* in a heavy sea during conditions that ordinary ship's boats could not have sustained. There was also the case of the wreck of the *Solway* where people had actually jumped from deck height into the paddle-box boats, a feat that may have proved disastrous in a conventional craft. There was no doubt from the evidence and cases cited that the paddle-box boat was a success amongst the newly up and coming steamers. Smith had a patent for his design but had never received any expenses or remuneration from the Admiralty, nor did he ask for any. He gave the patent right to all the merchant vessels that he fitted with paddle-box boats and had not received anything for the vessels fitted.[24]

As far as steam vessels were concerned the Act in 1846[25]for the regulation of steamers gave the Board of Trade the right to appoint surveyors for passenger

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[23] Evidence of William Brown: mate of the *Pegasus, Ibid.*, 2nd Report, Mins. of evidence, Q.6722, p.18.

[24] See Appendix F, "List of vessels fitted with paddle-box boats".

[25] 9 & 10 Vict., cap.100. (especially clauses X, XIX and XXI)

ships and to inquire into accidents, and in so doing gave the Board jurisdiction over a limited amount of shipping. The Steam Navigation Department of the Board of Trade was the first inkling of the later Marine Department that had been demanded in the earlier report of the 1836 Shipwreck Committee.[26] Thus legislation by piecemeal progress was enacted concerning steamships covering such detail as amongst other things: watertight partitions, the carrying of ship's boats, the carrying of fire-hoses and the carrying of ship's lights at night.

8(iv) The 1843 Inquiry, first report, first area of inquiry; (b) The competency of Masters and Mates: The question of competency of masters and mates brought the shipowners into direct confrontation with the prevailing climate of opinion. The issue had rumbled on since the earlier recommendations of the 1836 Shipwreck Committee when examination of masters and mates was one of the key measures recommended to improve the merchant service. By the time of the 1843 Shipwreck Committee much of the controversy concerning examination of masters and mates had been brought to a head with Captain Fitzroy's Bill.[27] Fitzroy, a former commander of the *Beagle* from 1828 to 1836 on the survey of the Straits of Magellan and member of parliament for Durham,[28] considered "that ships which are not struck by lightning, nor disabled by fire, nor by any causality which is not within man's power to control are lost upon known coasts by the mismanagement of those in command of them".[29] On 29th July 1842 Fitzroy proposed a Bill concerning examinations of officers of merchant vessels which was to become the cornerstone of a controversy. In Fitzroy's Bill recommendation was made that boards should be appointed for the examination of masters and chief mates of merchant vessels, and detailed suggestions were made

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[26] *Report of the Select Committee appointed to Inquire into the Causes of Shipwrecks*, BPP 1836 (567) XVII.373, Q.25, p.VIII.

[27] BPP 1842 (501), *Bill for requiring and regulating Examination of Masters and Chief mates of Merchant Vessels.* Also see PD *Hansard* (Commons), 3rd Series, LXV, cols.764-6 (29th July 1842).

[28] Capt. R. Fitzroy (1805-65), See *Dictionary of National Biography*, Vol. VII, pp.207-9.

[29] *S.C. Shipwrecks* (1843), Q1, p.1; Capt. Fitzroy RN.

regarding the appointment of examiners and the subjects and the nature of examination; in all some 54 clauses of immense detail. *Lloyd's Register* and the insurance companies generally had objected to the Bill,[30] essentially because it was felt to vest too much power in Trinity House (clauses three and four) as a body of examiners. To many both inside and outside the industry it made perfect sense to examine a man as to his competence, however the shipowners generally considered such compulsory examination an unnecessary interference with their business and of their selecting such persons as they thought would serve them best.[31] A strong opinion of *laissez-faire* thought amongst the shipping interest suggested that it would be wrong to legislate for the protection of seamen. This opinion had found expression in an article in the *Economist* which advocated "voluntary" examinations, but at the same time tactfully suggested that whilst the principle of examinations was desirable there should not be interference between employer and employed. Clearly indecisive, the article finished advocating the encouragement of swimming!

> As one of the natural and easily applicable preventives - not of shipwrecks, but of the most melancholy of their consequences, we recommend more instruction to youth, and more extensive permission to them to practice, in the art of swimming....[32]

Admirable indeed, but clearly not aimed at the root of the problem of shipwreck. Against the arguments of the *Economist* and members of the shipping interest, the *Westminster Review* considered the protected shipping interest the nation's spoiled child "which is come to maturity half instructed and reckless". It was of the opinion that the increasing number of shipwrecks that were declared unavoidable would not have been so were it not for the ability of masters and seamen. It considered that a large number of the reported losses "must be laid to the sheer default of the shipowner and his servants".[33] The only effective way to resolve the dilemma was legislative enactment and the establishment of local boards for the

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[30] *Ibid.*, Q.1467, p.94; Capt. H.M. Denham RN FRS.

[31] *Ibid.*, Q.3454-55, p.227; Capt. Pechell (committee member).

[32] *Economist*, "Disasters at Sea", 9th November 1844.

[33] *Westminster Review*, XLII (1844), p.60.

purposes of examination of ability and character. The 1843 Shipwreck Committee recommended, as had done the 1836 Shipwreck Committee that examinations took place for the qualifying of masters and mates; that schools were established for teaching navigation and that in the case of loss of ships an inquiry should take place. There was nothing new in this after seven years. Systems of examination were also commonplace at the time in other countries:

> I have seen that in those countries where the captains and mates are examined, the captains are very excellent men; sober and attentive to their duties, and evidently well educated; possessing much superior education to what we generally find in our own country.[34]

In France, Prussia, Denmark and Norway systems of examination had been established with great success. In Denmark for example the examination was considered extremely effective with ship's mates expected to be as well instructed as cadets of the Danish Royal Navy.

The shipowners of the north of England considered themselves perfectly competent to examine their own masters as they had generally spent many years at sea themselves and thought they knew the qualities to look out for.[35] It was considered that those not able to examine their own masters should be able to employ others for the purpose,[36] for it had been the practice in Liverpool at least that when a merchant owned a ship and he was not competent to examine the master, he employed an old sea-captain to do it for him.[37] Many connected with the merchant service saw the necessity for a board of examination, some advocating a board in each port with various recommendations as to who should man the boards ranging through "Government men" and "old commanders", to "an Elder brother of Trinity House". Objections to the idea of boards to examine masters and mates were made on the grounds of little confidence in the outcome.

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[34] *S.C. Shipwrecks* (1843), Q.145, p.16; Mr John Mitchell: Convenor of the City of Edinburgh Chamber of Commerce & Manufactures.

[35] *Ibid.*, Q.1933-1936, p.122; Mr Robert Anderson: Shipowner, Secretary of Shipowner's Association (South Shields).

[36] *Ibid.*, Q.1958-1961, p.123.

[37] *Ibid.*, Q.2416, p.159; Joseph Straker Esq.: Shipowner, Shipbuilder & dockowner.

One witness to the 1843 Shipwreck Inquiry considered that "after reading Hamilton Moore any man could pass an examination in 24 hrs".[38] Some considered that the boards would have no effect at all with "no advantage resulting from an examination of masters and mate".[39]

On balance many seemed to attest the usefulness of education, "the propriety of encouraging the increase of scientific knowledge," at least as being conducive to the prevention of shipwreck, if not the eventual examination of masters and mates. In this respect the provision of nautical schools at least at the major seaports was a prime recommendation of the 1843 Shipwreck Report "to be supported by a small tonnage duty, to be levied on the vessels belonging to such port".[40]The following year an article in the *Economist* indicated:

> Education in particular, both professional and general, would lead to the extinction of that preposterous superstition which rests content with ascribing all evils in life - evils, in ninety-nine cases out of a hundred, capable of removal, by knowledge and energy - to a "mysterious providence", and raises such bars to the progress of humanity in every shape....[41]

In addition to the recommendation regarding examination of seamen, the committee also recommended that an inquiry into the causes of loss of ships should take place on all occasions. Again following from the 1836 recommendations:

> ....a plan for the institution of Courts of Inquiry to examine into the circumstances of every shipwreck that occurs, as far as may be practicable, with power to pronounce a verdict of censure on the owners or commanders of all those vessels where the result of the inquiry should establish the fact of such wreck being occasioned by any fault or deficiency on the part of either....[42]

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[38] *Ibid.*, Q.890, p.60; Joseph Somes Esq.: Shipowner.

[39] *Ibid.*, Q.3679-3680, p.238; Capt. Charles Ingram: Shipowner (ex - East India Service).

[40] *Ibid.*, Report, p.iv, "Competency of Masters and Mates".

[41] *Op. cit.*, "Disasters at Sea".

[42] *S.C. Shipwrecks* (1836), Report, p.xi; "Remedies Proposed or Suggested", No. 36: Courts of Inquiry.

It is indicative of the lack of speed of progress or apparent disinterest in these matters that the Shipwreck Committee of 1843 should have had to propose an inquiry into the causes of loss of ships when such a proposal had more intricately been stated some seven years before and as yet nothing had been done. However the fact that the issue had stood the test of time could be taken as strong evidence that the reform would come about sooner rather than later. Nevertheless there were still, even at this stage dissenting voices. Anthony Ridley, chairman of the Shipowner's Society stated that his objection to any investigation as to the cause of the loss of ships was that it would be prejudicial to the interests of the owners .[43] This had been the very point of Fitzroy's Bill, to have men examined so that they did not have to depend entirely on the judgement of particular shipowners who may have been biased. To this effect Fitzroy recommended what he considered to be the highest authority in the land, that of Trinity House, to chose the principal examiners and to make matters more impartial recommended that the remaining three examiners of the board of four be qualified in such a manner as to cover all eventualities: as such one of them had to have commanded a vessel for at least seven years and should have been in the Pacific and Indian Ocean; another should have been at least seven years in the coasting trade and the remaining examiner was to have commanded a steam vessel for at least three years and to have been at sea for a total of at least seven years. In all, surely a most demanding and impartial board of combined experience and merit. The need at the time was for an impartial statement of competence that individual shipowners or organisations could not question, however even given the seemingly just nature of Fitzroy's recommendations the shipowners still could not accept outside interference.

8(v) The 1843 Inquiry, first report, first area of inquiry; (c) The facility of Obtaining Good Pilots: The 1843 Committee considered the question of pilotage, of obtaining good pilots more important to the security of shipping than anything else. This can be adduced by the amount of witness statement in the evidence given to this topic. Out of some 6000 plus paragraphs of evidence as

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[43] *S.C. Shipwrecks* (1843), Q.3078, p.202.

much as twenty percent of it was given over to the discussion of pilotage and in particular with reference to the Cinque Ports and the "British" Channel. It can only be interpreted that such an increase in shipping had taken place from the time of the 1836 Report and the committee were so well aware of this that the question of pilotage as a precaution against possible shipwreck now took pre-eminence. Indeed according to the statistics, total shipping registered in the UK had increased from around 20,000 ships at the time of the 1836 Inquiry to around 24,000 by 1843.[44] Steamships with which the committee were especially concerned totalled around 220 registered in 1836 whereas by 1843 the figure had increased to around 350. These ships had to be in excess of fifty tons to be recorded, the statistics do not give any indication of the vast amount of smaller vessels. Captain Denham RN, FRS in his evidence to the 1843 Shipwreck Committee stated that Great Britain had nearly 800 steam vessels, not including the colonies nor even Channel Island vessels, and reiterated the fears of many at the time that "to this moment we have no supervision of the vast steam marine this country is in exercise of; there is no inspection".[45] Pilotage was indeed important but was only of significance for shipwreck in coastal waters where pilots operated in the vicinity of major seaports. However it was one area of consideration that the 1836 Committee had not pursued with any real rigour, its evidence on the issue had only three paragraphs. Why did the 1843 Committee give so much emphasis to this subject? Pilotage had become an issue by 1843, the commercial interests of the country and security of shipping were seen to rest greatly with a good pilotage system. Several Boards existed to control the pilots at various port areas. Along the south-east coast of Sussex and Kent, the Cinque Ports were under the authority of a Board controlled by the Lord Warden, who in 1843 was the Duke of Wellington. Trinity House and other Boards controlled major ports such as London, Newcastle and Hull. At Hull the Humber was considered a perfect example of lighting and bouyage, with great improvement attributed to the

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[44] See Appendix B, "The growth of Merchant Shipping during the first half of the nineteenth century".

[45] *S.C. Shipwrecks* (1843), Q.1443, p.90.

direction of the Trinity Board in London.[46] Other areas, especially smaller ports such as Yarmouth, Boston, Wisbeach and Lyn had commissioners who examined with regard for local interests, nevertheless the idea of association with an Elder Brother of Trinity House was aspired to.[47] At Liverpool pilots were appointed by a pilot committee, not under the jurisdiction of Trinity House. The pilots at Liverpool had served an apprenticeship of seven years and all had to undergo a very strict examination by a committee called the Pilot Committee that consisted of old captains of ships - men of respectability and great experience.[48] North Sea pilots had to pass the Trinity Board or one of the five local Boards and were competent to take vessels to the Dutch coast, at the same time Dutch pilots competed for trade as far west as Cowes[49] in the Channel, their vessels containing as many as 100 pilots in all.[50] In the case of Glasgow there was apparently no pilotage at Glasgow, it was confined to Greenock as far as the Clyde was concerned and those pilots received their licence from local magistrates.[51] Newcastle had a Trinity House at the head of the Tyne to control pilotage, a system which appeared to run most satisfactorily[52] although the number of pilots was limited. In Sunderland pilots were essentially river pilots and were appointed by the Trinity House in Newcastle.[53]

The 1843 Committee considered that although these arrangements were as effective as could be expected in their local setting, due to the great increase in

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[46] *Ibid.*, Q.1498, p.96; Capt. John Washington RN.

[47] *Ibid.*, Q.1499, p.97.

[48] *Ibid.*, Q.6264-6269, p.398; Thomas Sands Esq.: Chairman of Liverpool Dock Committee. See also *Ibid.*, Q.5550, p.353; John Gladstone Esq.: Merchant & Shipowner at Liverpool.

[49] *Ibid.*, Q.3607-3608, p.234; William Van Houten Esq.: President of Shipwreck Committee in Holland.

[50] *Ibid.*, Q.3611-12, p.234.

[51] *Ibid.*, Q.6157-61, p.391; Alexander Wardrop Esq.: Merchant and Manager of Scottish Marine Insurance Company. See also *Ibid.*, Q.569-571, p.41; Mr J.B. Cumming: Surveyor for *Lloyd's Register* at Greenock.

[52] *Ibid.*, Q.2369-70, p.157; Joseph Straker Esq.

[53] *Ibid.*, Q.626-27, p.44; Mr John Brunton: Shipwright Surveyor to the Port of Sunderland.

shipping a Commission of competent persons should visit the various pilot stations of the United Kingdom once in three years and report back to the Board of Trade "any arrangements or alterations that may appear to them calculated to promote the security of shipping and the commercial interests of the country". Therein lay the key to the sudden upswell of interest in pilotage - the vast increase of vessels and "commercial interests of the country". Commerce was increasing at an unprecedented rate and exports in particular were thriving. According to the overseas trade statistics, the trendline for a selection of exports e.g.: non-ferrous metals and manufactures, machinery, hardware's and cutlery, cotton goods, and woollen goods were all increasing steeply from the middle of the 1830's and onward toward the end of the century.[54]

The context of increasing trade was summed up in the changes relating to the Cinque Ports. Pilotage in the "British" Channel was under the jurisdiction of two pilot cutters based at Dungeness, one containing the pilots of Dover[55]and another cutter from Deal. There existed a cutter from Ramsgate and Margate stations. These vessels between them contained pilots from three branches of Cinque Ports pilots, between 50 and 52 residing at Dover, a similar number at Deal (two separate branches) with Ramsgate and Margate forming a branch between them of four pilots each by the then current regulation, making three distinct branches under the wardenship at Dover. Pilots at Dover and Deal were divided into upper and lower books.[56] Their cutters, one from Dover and one from Deal were based off Dungeness to satisfy the need for pilotage in the Channel.[57]These vessels containing eighteen pilots in each cruised from ten to fourteen days in the Channel to the east of Dungeness, where it was claimed 1,540,000 tons of shipping passed every year.[58]Already allegation had been made that the system was inadequate when Admiral Warren in 1831 had been ordered

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[54] See B.R. Mitchell, *Abstract of British Historical Statistics*, Cambridge (1962), pp.302-4.

[55] *S.C. Shipwrecks* (1843), Q.14, p.3; Capt. Robert Fitzroy RN.

[56] *Ibid.*, Q.4154-56, p.269; Capt. Peter Fisher RN: Captain of Sandown Castle and member of the Court of Lode Manage.

[57] *Ibid.*, Q.4205, p.273.

[58] *Ibid.*, Q.4210, p.273.

with his squadron in the Downs to go off the coast of Holland and could not find a pilot[59]and they were obliged to get smugglers to show them the way![60] It may have been the case that pilots were intentionally limited in number so as to keep their remuneration levels higher. Many at the time argued in vain for a free trade in pilots so as to have 30-40 boats cruising rather than merely two. Hovelling boats, that is unlicensed and unofficial services of pilotage from boatmen, usually fishermen who knew the local waters, were the only viable alternative to waiting for the pilots of the cutters in a system that demanded by law that a pilot be taken on to negotiate that area. Although there had been a Bill passed by the House of Commons in 1834 (it had been thrown out of the Lords) concerning the work of the boatmen in giving payment according to services rendered in assisting the pilotage, nothing material had been realised by 1843. As such if the hovellers boarded a vessel to give assistance with pilotage (which they were prepared to do as far west as the Isle of Wight - even the Lizard given the right incentive) as soon as an official pilot was put aboard they lost their right to payment.[61] On this basis it was claimed by many that shipwrecks were occurring and vessels being lost including the *Conqueror*[62] and the *Reliance*[63] because not enough pilots were available in the Channel, and those that were, were the product of rather tight knit associations of men where new situations had passed from father to son. And

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[59] *Ibid.*, Q.120, p.13; Capt. Robert Fitzroy RN.

[60] *Ibid.*, Q.1243-44, p.76; Edward Boys Esq.: Commander in the Royal Navy.

[61] *Ibid.*, Q.4566, p.293; Mr Regan Davison: Licensed boatman and author of the memorial of the hovelling pilots and boatmen of Dover. Also see Wellington Papers 2/215/38: "The memorial of the licensed and other Boatmen of the Town and Port of Dover", in which frustrated by their efforts at gaining lawful employment a petition was sent to the Lord Warden of the Cinque Ports concerning their hardship and injustice.

[62] *S.C. Shipwrecks* (1843), Q.5661 & Q.5684-85, p.362. See evidence of Henry Abchurch, cuddy servant aboard the *Conqueror* who claimed that they could not get any other pilot but a fisherman.

[63] The *Reliance*: built 1827 at 1515 tons, she was wrecked off the coast of France 32 miles westward of Boulogne, she would have taken a pilot aboard if one was available. See *Ibid.*, Q.5826-7, p.370; Mr Robert Dixon: a carpenter on-board the *Reliance*. Also, *Ibid.*, Q.5929-32, p.374. Also, *Ibid.*, Q.5939, p.374, where in the evidence of Robert Dixon, a fisherman was asked to come on-board because a pilot could not be found.

whilst many more were capable of fulfilling the examination criteria they were prevented from doing so by the system in place[64] which determined that there should be no more than a total of 120 pilots to serve the Channel from the Cinque Ports. The Duke of Wellington, Lord Warden of the Cinque Ports[65]claimed during the evidence of the 1843 Shipwreck Inquiry that ship's masters were not always interested in procuring the services of a pilot although required to do so by Act of Parliament, and that those pilots who were employed could not expect adequate payment if more men were employed. The idea of pursuing the boatmen's (hovellers) claims to a fair payment for services rendered until or unless a pilot presented himself was recommended for legislative enactment by the 1843 Committee. The local arrangements of the Cinque Ports had worked well for many years but the increasing trade may have been seen to have put a pressure on the system beyond which it could not deliver an effective pilotage.

Evidence also reached the 1843 Shipwreck Committee regarding pilotage on the River Hoogly, at Calcutta, India by a Captain Ingram where many ships had been lost by the inadvertence of the local pilots - again a pilotage system brought into question by the frequency of shipwrecks in the area.

8(vi) The 1843 Inquiry, first report, first area of inquiry; (d) Harbours of Refuge: The subject of harbours accessible at all times of the tide as refuge in case of storm had been a main issue in 1836. Many persons then had recognised the utility of building such harbours on stretches of exposed coast that otherwise would have served as a graveyard for ships such as Holyhead Bay (North Wales). The case of Holyhead[66] was still being discussed in 1843 when Capt. S. Sparshott stated that there was no better situation on that coast than Holyhead and that

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[64] *Ibid.*, Q.4550, p.292; Mr Regan Davison.

[65] For detail appertaining to Wellington's wardenship of the Cinque Ports see Wellington Papers 215-240 (Cinque Ports) 22nd January 1829 to 23rd May 1853.

[66] See BPP 1808 (133), *Report on the proposed pier at Holyhead*; BPP 1847 (446), *Report of the Commissioners appointed to inquire into the Expediency of making a Harbour of Refuge at Holyhead*; BPP 1847 (516), *Report of Commissioners appointed to inquire into Mr Rendle's Plan for the proposed harbour at Holyhead.*

Holyhead with the construction of a harbour of refuge would be of great service to the mercantile interest.[67] In 1843 the subject had developed to include ideas for fixed and floating breakwaters that would serve as the necessary protection for ships to shelter in the lee of in time of storm. Many had acknowledged the continued need for harbours of refuge as losses continued to mount.[68] The cause of shipwrecks in the Channel was attributed directly to want of harbours of refuge by Captain Joseph Needham Tayler to the Committee of the 1843 Shipwreck Inquiry who recommended Mount's Bay under the lee of the Lizard, Portland and Dungeness as well as Dover to be developed into harbours of refuge. However not everyone saw the need for them, Anthony Ridley maintained that a ship would be better at sea than running for a harbour that might be upon a dangerous coast and hence the inclination of the master to use a harbour of refuge might well inadvertedly place him and his ship in danger.[69]

On the east coast Hartlepool and Redcar were still considered the most suitable locations for harbours of refuge as a prior recommendation in 1836 had suggested.[70] Captain John Washington acknowledged the "great want of harbours of refuge on the east coast" stating that there was nothing from the Forth to the Humber (approx. 200 miles) and nothing apart from Harwich between the Humber and the Thames, and between the Thames and Portsmouth nothing at all.[71]

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[67] *S.C. Shipwrecks* (1843), Q.3498-500, p.229; Capt. Samuel Sparshott. Also, *Ibid.*, Q.5585-87, p.356; John Gladstone Esq.: Merchant and shipowner at Liverpool. Also, *Ibid.*, Q.5993-95, p.375; Sir John Rennie: Civil Engineer. Also, *S.C. Shipwrecks* (1836), Q.1177-79, p.76; Capt. Hugh Evans: Harbour Master at Holyhead.

[68] *S.C. Shipwrecks* (1843), Q.9, p.3; Capt. Robert Fitzroy. Also, *Ibid.*, Q.205, p.20; Mr John Mitchell.

[69] *Ibid.*, Q.3139, p.206; Anthony Ridley Esq.

[70] *Ibid.*, Q.1074, p.68; Joseph Somes Esq.: Shipowner. See *also S.C. Shipwrecks* (1836), App. No. 9, p.378: "Port William - a plan for the formation of an Asylum Harbour at Redcar by William Cubitt".

[71] *S.C. Shipwrecks* (1843), Q.1573-78, p.101; Capt. John Washington RN.

Of all the suggestions, Dover was the most favoured place as many thousands of ships passed it each year.[72] The Downs a few miles to the south of Dover, a four mile channel between the notorious Goodwin Sands and Deal, had been a favoured anchorage for generations of ships using the Channel but was of limited use with the wind in the west-south-west as vessels would be detained there, and in case of war it was certainly not considered safe. The Duke of Wellington had suggested that two harbours were needed between Portsmouth and the Downs for the protection of shipping in case of storm and war. Of the need for protection in the case of storm in the Channel there was little doubt, but the means of providing it brought controversy over the merits of fixed versus floating breakwaters. In the case of Dover as elsewhere cost limitations presented a case for the construction of a breakwater that was said to be one twentieth of the cost of a permanent harbour. Captain Bullock, who had been employed by the Admiralty to survey parts of the coast with regard to harbours of refuge had reported the necessity of one somewhere between Portsmouth and the Nore,[73]made to the 1843 Committee a suggestion that Dover should have a floating breakwater in opposition to William Cubitt's plan for a fixed harbour.[74] At the same time a proposition for Brighton by means of a floating breakwater was presented by Captain J.N. Tayler[75] and there were many other suggestions including: James Steward's plan for a harbour of refuge at Dover by means of the construction of two solid piers;[76] Captain John Groves who had made a 50ft long

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[72] *Ibid.*, Q.4783, p.301; Thomas Dodd Esq.: North Sea Pilot. Also, *Ibid.*, Q.1579-1582, p.101; Capt. John Washington RN.

[73] *Ibid.*, Q.4393, p.284; Capt. Frederick Bullock: employed by the Admiralty in surveying part of the coast.

[74] See *Ibid.*, Q.4402, p.285 and especially Q.4046, p.261, that outlines William Cubitt's plan for Dover concerning "A Report on the Construction of a Harbour for the purposes of Refuge and National Defence at Dover, so as to be available for use in Three Years from its commencement, at an outlay of £500,000; and permanently and entirely completed in Fifteen Years, at a gradual average outlay of £100,000 per annum", 5th June 1841. Also see App. No.10, p.62, and diagram facing p.260.

[75] *Ibid.*, Q.2168, p.139; Capt. Joseph Needham Tayler RN CB. Also , diagram facing p.140.

[76] *Ibid.*, Q.839, p.57; and see diagram facing p.56; James Steward Esq.

experimental floating breakwater at Dover which unfortunately broke from its moorings in a gale on the 13th June 1843;[77] John Johnson, who proposed a fixed breakwater as a basis for a harbour of refuge of "...cast iron, put together with flanges and filled with concrete" to be used "from the western extremity of the coast of Sussex to the South Foreland";[78] Joseph Broad had a plan for a fixed breakwater adapted especially for Brighton constructed of wooden piles filled in-between with concrete;[79] a similar idea was presented by Amon Henry Wilds;[80] Captain Adderley Sleigh came up with a plan for a floating breakwater composed of a floating angular artificial beach;[81] Captain John Watson Pringle proposed a floating tethered breakwater of fir;[82] Sir John Rennie posed the possibility of utilising the Goodwin Sands as a harbour of refuge at Trinity Bay by artificially causing the existing banks to pile higher to form a sea barrier;[83]and again on the Goodwin Sands opposite the Kent coast at Deal a harbour of refuge had been proposed by William Bush based upon the sinking of caissons to be filled with concrete.[84]There was certainly no shortage of suggestions.

Many ideas and plans were put forward to the 1843 Committee who in their final summing up strongly recommended the immediate attention of the government and legislature. They abstained from recommending particular locations for harbours feeling that these final decisions should be arrived at by a

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[77] *Ibid.*, Q.2719, p.176; Capt. John Groves: Rifle Brigade.

[78] *Ibid.*, Q.3156, p.207; and see diagram facing p.206; John Johnson Esq.

[79] *Ibid.*, Q.3686, p.238; and see diagram facing p.238; Joseph Broad Esq.

[80] *Ibid.*, Q.3788, p.245; and see diagram facing p.246; Amon Henry Wilds: Architect.

[81] *Ibid.*, Q.5199-5233, pp.325-27; see diagram facing p.323; Capt. Adderley Sleigh RN.

[82] *Ibid.*, Q.5235-5243, pp.327-28; see diagram facing p.327; Capt. John Watson Pringle: Royal Engineers.

[83] *Ibid.*, Q.5956, p.375; and see Q.1643, pp.104-5 where at Harwich a removal of cliff had caused a "natural" beach to be built; Sir John Rennie: Civil Engineer.

[84] *Ibid.*, Q.2798, p.182; and see diagram facing p.182; Mr William Bush.

more scientifically competent board of engineers and constructors. They considered though that the solid breakwater was a better design than the many examples of moveable or floating breakwaters put forward, some of which may have been considered extremely dubious for the purposes intended (one was inspired by the effects of giant seaweed in calming seas as was claimed to be the case with the marine plant *laminaria buxinlas* in the vicinity of the Cape of Good Hope; Major Samuel Parlby who proposed the notion suggested simulating its effects by way of artificial banks of floating spars tethered by chains, to protect an open area of water such as Madras Roads or a pierhead such as that at Brighton[85]).

In all, the Committee considered that as large an appropriation of national funds should be devoted yearly to the construction of harbours of refuge in such localities as the specialist committee might recommend. It would not be an inexpensive project, in his evidence to the committee Tayler said "....and then it is stated by the Chancellor of the Exchequer, that to make three harbours of stone would cost six millions of money; and as 250 harbours are reported to be required for the protection of Great Britain, it would be impossible of course to do that".[86]

8(vii) The 1843 Inquiry, first report, first area of inquiry; (e) Lighthouses and Beacons etc.: The Cornish coast more than any other stretch of coastline around the country was considered in dire need of additional lights as aids to navigation especially the north-west around Towan Head where a small pier also existed that might have been extended to create a harbour of refuge.[87] The 1843 Committee acknowledged the work of Trinity House, but intimated strongly the desirability of placing more lights along the north Cornish coast especially, and also at Cockle Gat at the entrance to Yarmouth Roads. Given the interest of Trinity House it seems incredible that private vested interests should oppose the

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[85] *Ibid.*, Q.3784, p.244; and see extensive diagrams facing p.244; Mj. Samuel Parlby: Bengal Artillery (Ret.d).

[86] *Ibid.*, Q.2133-34, p.135; (the number stated in the House of Commons as suggested by the returns) Capt. Joseph Needham Tayler RN CB.

[87] *Ibid.*, Q.4834, p.303; Mr David Williams: inspecting commander of the coastguard station at Padstow, Cornwall.

placing of lights on the north coast of Cornwall but this was the case with the Bristol shipping interest who would have had to pay an additional rate.[88] However this was far from the case nationally given the expense of providing lights, Joseph Somes an extensive shipowner of the day stated that he never grudged payment for lights and would have encouraged more lighthouses if they could be distinguished one from another.[89] In the winter of 1842-43 on the north coast of Cornwall between the 16th September 1842 and 27th January 1843 twenty-three vessels had been known to have been wrecked, of which 16 were lost with all crew. The commander of the coastguard station at Padstow (district extending from Hayle Harbour west to Bude east) Mr David Williams did not know of any other part of the coast where there were so many wrecks of coasters as there were on the north-west coast of Cornwall. The case for a light that would warn mariners of imminent danger and also serve as a beacon to navigation had a high priority with the 1843 Committee. The chief problem with the provision of lights had been the extraction of payment, whilst the Trinity Board would erect a light they did it only when circumstances showed it to be "cravingly necessary" and when the whole trade came together in saying "This is a light we ought to have, and ought to pay for". Only by agreement with the shipping interest could a toll be collected by virtue of new lights - and herein lay the problem - for many wished to see the Trinity Board in possession of the power to erect lights as and where they considered necessary and that payment for them should have been incurred not from the choice or judgement of the shipping interest but due to the judgement of Trinity House acting on behalf of the lives of seamen everywhere.

Many ideas were presented to the committee on the placing of lights especially with reference to the arrangements in the Channel between the English and French coasts, for distinguishing one light from another was a problem. Lights on the French coast at Gris Nez had been mistaken for Beachy Head[90] and suggestions for a separating lighthouse or ship at the Ridge or Varn bank in the

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[88] *Ibid.*, it would appear widespread to object against new lights on the basis of payment; see Q.4842, p.304. Also, *Ibid.*, Q1427-28, p.89; Capt. Henry Mangles Denham RN FRS.

[89] *Ibid.*, Q.1076, p.68; Joseph Somes Esq.: Shipowner.

[90] *Ibid.*, Q.829, p.56; James Steward Esq.

Channel came from several witnesses who saw this as a means of finally distinguishing lights of one side from the other side of the Channel.[91]

New ideas for lighthouses had been presented to the Committee: William Bush had taken out a patent for a new method of lighthouse construction based upon a sinkable cast-iron vessel that would ultimately be filled with concrete;[92] Capt. Sir Samual Brown presented a plan for a "Bronze Columnar Lighthouse," the entire structure being made out of bronze on the basis that it would be the most resistant material to corrosion;[93] James Steward had conceived a plan for a lighthouse to be built on the Varn or Ridge. None of these ideas had been thoroughly tested, hence the Committee could not formulate an opinion as to their worth, however it demonstrates the wealth of ideas that was swirling about at the time for the alleviation of shipwreck.

The Committee were impressed by two lighthouses that had been erected by Alexander Mitchell a civil engineer of Belfast. His lighthouse design: a structure held down by screw piles with the solid portion above the waves so that the wave's effort and force passed across the screw piles without affecting the main body of the structure was erected at Fleetwood-on-the-Wyre (15th November 1839 and lit on 6th June 1840) and at Maplin Sands (in the summer of 1838).[94] A beacon erected by Captain Bullock upon the southern edge of the Goodwin Sands had stood for three winters at very little expense, it consisted of a jib-boom of a frigate fixed into the sand and later covered upon the lower part with copper to help prevent the abrasive action of the sand.[95]

In addition to these proposals the committee learned of sound beacons and recommended their further use near or adjacent to lighthouses. Goldsworthy Gurney had given evidence regarding the development of sound beacons and the

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[91] *Ibid.*, Q.2216, p.143; Capt. James Needham Tayler RN CB. See also, *Ibid.*, Q.829, p.56; James Stewart Esq. Also, *Ibid.*, Q.2797, p.182; Mr William Bush. See also (for arguments against) Q.1346-49, p.81; Edward Boys Esq.

[92] *Ibid.*, Q.2799-801, pp.182-83; and see diagram facing p.182; Mr William Bush.

[93] *Ibid.*, Q.6108-14, p.385; and see diagram facing p.385; Capt. Sir Samual Brown RN.

[94] *Ibid.*, see diagram facing p.342.

[95] *Ibid.*, Q.4446-51, p.287; Capt. Frederick Bullock RN.

use of parabolic phonic reflectors that could enable a ship fitted with the corresponding equipment to find out the direction of the sound warning.[96] The public airing of such developments and ideas could only have assisted in enabling the further diffusion of inventions and practices for better safety at sea.

8(viii) The 1843 Inquiry, first report, first area of inquiry; (f) Compasses and Charts: The problem of compass deviation caused by the presence of iron in ships had been well known since the turn of the nineteenth century, however the solution was far from conclusive by the time of the 1843 Inquiry, with many ship's masters completely ignorant of the specific effects of iron on their navigational intentions. Two methods of overcoming these false readings evolved during the first half of the nineteenth century. One involved a table of deviation from which proper compass readings could be calculated, the other the fixing of magnets in places around the ship in an attempt to magnetically reverse the incorrect reading. The latter method was developed by Poisson in the 1820's for use in wooden ships and was later adapted by George Airy for iron ships with compass adjustment on-board the vessel carried out by local instrument makers whilst the former method involved the manoeuvre of the vessel to align up with known bearings along a dockside whilst creating a table of deviation to enable the correction when out at sea.[97] In the 1843 Shipwreck Inquiry minutes many such cases of deviation and subsequent shipwreck had been reported but there seemed to be a confusion between deviation (due to local magnetic attraction in the vessel, as described above) and variation (due to magnetic irregularities on the earth's surface; that can only be compensated for by applying known differences depending where upon the globe the mariner is). Consequently when asked about the compass irregularities Captain Fitzroy on behalf of the Royal Navy answered the question by describing compass needle movement acting in the southern hemisphere that appeared to be from between 3-18 degrees between north and

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[96] *Ibid.*, Q.2699-2702, p.175; Goldsworthy Gurney Esq.

[97] See Fig.5, "Magnetic Bearings of Vauxhall Chimney, as Painted on the Dock Walls, Liverpool," p.88, in "Compasses all Awry - The Iron Ship and the Ambiguities of Cultural Authority in Victorian Britain," by Alison Winter, *Victorian Studies*, Autumn 1994, Vol.38, No.1.

south poles out of line. In enquiring as to the use of non-magnetic binnacles as a possible remedy for this error he acknowledged various experiments being made but "....no one as yet has succeeded". A difference such as 3-18 degrees between the north and south poles on a vessel with a fixed number of guns (mass of iron) would surely have been due to variation not deviation; the deviation being a localised constant factor. Enquiry was made as to ascertaining the nature of variation "....because if it varies in every steamship or man-of-war according to the number of guns she has, or according to the loading...." - again this must be referring to (local) deviation, not strictly variation. It would appear that knowledge existed of a change in compass reading from that of the true course but as yet, whilst aware of the changes caused by masses of iron there seemed to be incomplete knowledge of the causes and remedies of deviation and at the same time of the distinct difference between deviation and variation.[98] Captain E. Chappell had attested to the advantage of placing compasses high above the deck as contributing to their greater accuracy recalling experiments made by Professor Barlow in elevating a compass 14 feet above the deck to give perfect accuracy, however Captain H.M. Denham thought "there was little attention paid generally in the merchant service to the local attraction of the vessel".[99] It would appear that whist knowledge existed of compass error the solutions were far from disseminated amongst seamen.

In the case of charts many instances of old, inaccurate, unauthorised and misleading charts had been evident.[100] The imperfect state of the charts in use by the merchant marine was well documented in the evidence of Captain Denham who considered many to be "...worse than useless" and that the only way to ensure a good chart was to have the stamp upon it of the Admiralty hydrographer or the Trinity Board. Not all use of charts attracted such adverse criticism, the shipowner and chairman of the Shipowner's Association of Liverpool, George

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[98] See definitions in G.G. Watkins, *Coastwise Navigation*, Stanford Maritime, London (1974), pp.66-68.

[99] *S.C. Shipwrecks* (1843), Q.1443, p.90; Capt. Henry Mangles Denham RN FRS.

[100] *Ibid.*, Q.3292-3, p.218; Capt. James Barber. Also see, *Ibid.*, Q.1569-1572, pp.100-10; Capt. John Washington RN.

Kendal assured the committee that he examined his ships to see whether they had the latest edition of the charts, particularly those in the China trade. Captain James Barbour considered the carrying of proper charts to be a requirement for insuring a ship for a voyage. However the general consensus of opinion amongst the witnesses was that the carrying of up-to-date reliable charts may have been far from generally the case within the mercantile marine. One witness, Captain John Washington considered that the carrying of good charts should be a case for the legislature and that one of the chief problems in the supply of good charts had been the limited means available in the Hydrographic Office to publish the surveys made.[101] The committee naturally recommended the need for constant and general revision of charts as a "....great boon to the Mercantile Marine and called for shipowners to ensure their masters had the latest authorised edition of charts". Whilst it may have certainly been the case that incorrect charts were responsible for a great deal of shipwreck it could also have equally been the case that many instances of shipwreck by human error were blamed on bad charts. The situation had not changed dramatically in the years following the inquiry even in the case of the prestigious *Great Britain* that first took to the water that same year on 19th July 1843. By September 1846 she had run ashore in Dundrum Bay, County Down, Ireland[102]and there was controversy over the accuracy of charts when her captain claimed to have been confused by a new lighthouse not shown on his charts. The captain's defence maintained that St. John's Light, placed two or three years previously was not inserted in the most recent charts of the Irish Channel procurable at Liverpool and that as a result it was confused for the light at the Calf of Man. But in reality these lights were at least thirty miles apart, and it is incredible to suppose a steamer should have been so much out of her reckoning within a few hours of leaving port.[103]

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[101] *Ibid.*, Q.1569-71, pp.100-101.

[102] See E.C.B. Corlett, "The stranding of the SS Great Britain in Dundrum Bay", *Mariner's Mirror*, Vol.LXI, No.1, February 1975, pp.117-126.

[103] *Quarterly Review*, 104, July-Oct 1858, "Shipwrecks", pp.185-6.

8(ix) The 1843 Inquiry, first report, second area of inquiry; Lifeboats and Rescue lines: The second point of inquiry concerned the means of preserving the lives and property of shipwrecked persons. Initially this highlighted several aspects of contemporary practice including the rescue of crew by lifeboat or by means of the rescue line. The Deputy Comptroller and several officers of the coastguard gave evidence that pointed to the need to effect communication with the stranded ship either by lifeboat or mortar/rocket powered line. Developments in the use of rockets since the 1836 Inquiry[104] had taken place with the emergence on the scene of Mr A.G. Carte, an ordnance storekeeper from Hull who had developed a rocket system thought by some to be superior to that of Dennett.[105] The coastguard had carried out numerous tests on Manby's mortar and Carte's and Dennet's rocket systems.[106] The committee had concluded that both the mortar and rocket rescue systems should be available for use at coastguard stations and that each had its own merits. Despite the apparent superiority of the rocket in range, if not directional stability, the coastguard still held Manby's mortar in high esteem as it was capable of firing a grapple shot that could easily be pitched over a trailing line from a vessel in distress thereby easing the ability to make the vital connection and infinitely exceed the normal range of the mortar.[107] Mr David Williams, inspecting commander of the coastguard station at Padstow, Cornwall had both Manby's mortar and Dennett's rockets at his disposal and claimed Manby's mortar to have had the furthest range. Captain David Peat had a decided preference for the rocket, having fired them both together and concluded that the

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[104] See W.B.C. Probert, "The evolution of rocket based maritime rescue systems in the first half of the nineteenth century", *Mariner's Mirror*, Vol.83, No.4, November 1997, pp.434-449.

[105] See *S.C. Shipwrecks* (1843), App. No. 14, pp.85-6; a copy of a letter to the Comptroller General of the Coastguard (14th September 1842), in which Commander James Pulling, the inspecting commissioner would have preferred Carte's rockets to Dennet's on stations not already supplied.

[106] *Ibid.*, pp.81-91.

[107] *Ibid.*, Q.4877, p.305; Commander James Pulling: employed by the coastguard to test their rockets and mortars.

rocket went about 60yds further than the mortar.[108] It appeared that there was little to chose between them.

The committee considered that hardly any ships or steamers were sufficiently prepared and equipped with the necessary means of saving life in case of shipwreck. The carrying of ship's lifeboats was in its infancy at that time, and still very much a novelty that might never have caught on in the minds of many. However several examples did exist at the time of the successful use of the lifeboat, in particular the lead taken by the East India Company. Captain James Barber attested to the use of a specially adapted boat, stating that often whilst at sea he had encountered other ships that did not even carry a single ship's boat in which to board other vessels; Captain Charles Ingram had carried and used a lifeboat perfected by George Palmer;[109] Captain William Bell had derived great utility from a boat fitted on the principle of a lifeboat in situations where no other boat could have been used.

In the early years of the nineteenth century few if any sailing ships and steamers appeared capable of saving all of the lives of those on board in the event of tragedy. Little consideration was given as to what might have been done to help anyone falling overboard in the case of heavy weather and storms. In order to make the merchant service more efficient, humane and decidedly a better occupation means for life-saving and preservation had to be developed and instilled. The most obvious of these means was for vessels to carry at least one boat "fitted upon the principles of a life-boat, kept ready for lowering down in case of need".[110] Slowly other initiatives and ideas developed. By 1843 life saving designs had emerged in the form of varied inventions including several forms of lifeboat, the lifejacket and means of projecting a rope communication

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[108] *Ibid.*, Q.3824, p.248; Capt. James Peat: in command of coastguard from Dover Castle to Rye Harbour.

[109] See *Ibid.*, App. No.16, for a diagram and description of Mr Palmer's lifeboat.

[110] *Ibid.*, First Report, p.viii. By 1858 some eight years after the provision of the Merchant Shipping Act of 1850 many so called lifeboats were considered useless - see *Quarterly Review*, p.199, 104, July-Oct 1858.

from the shore to the affected persons.[111] When the question of shipwrecked property was raised many alarming attitudes and practices came to light. Many cases of shipwreck occurred in rural and sometimes desolate locations. Victims of shipwreck were therefore at the mercy of the "country people", locals who more often than not considered the occurrence of a shipwreck a chance gift from which despite there being laws against it, the plunder was considered just reward for those prepared to scramble for it. Upon the Isle of Wight (see above Chapter Two-2(iv)) for example Lieutenant John Bulley (commanding officer at Hatherfield Coastguard Station) had talked to country people about the practices and been told "....we always consider it right whenever these things come on shore to take home what we can get....".[112]Some even promising to repay debts when the next shipwreck occurred. Bulley had personally experienced the frustration of dealing with people who saw it as a God given right to steal, as had Lieutenant William Vicary the coastguard commander at St. Catherine's IOW and had experienced the plunder of shipwrecked property. In the case of the wreck of the West Indiaman the *Clarendon* (Blackgang Chine, IOW, October 11th 1836) Bulley had drafted in several special constables to prevent theft; the women at the scene were allegedly worse than the men. The back of the Isle of Wight was typical of what was then a rural area. The dreaded Atherfield Ledge for example, scene of many many shipwrecks over the years was miles from any real source of authority apart from the local coastguard whose job it was to try and protect such property. Much the same situation occurred in Devonshire; Commander James Pulling whilst inspecting commander of Dartmouth district coastguard had incurred the same attitude "....they have an idea that whatever comes on shore is a sort of Godsend to them....".[113] Again at Rottingdean on the Sussex coast Commander John Wheatley commander of coastguard reported similar experiences; in every instance of property from wrecks found on the shore there had been a disposition on the part of the country people to seize it unless

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[111] See *S.C. Shipwrecks* (1843), Appendix No.16, p.100; which gives details of ten of the inventions of the day .

[112] *Ibid.*, Q.4941, p.310; Lieut. John Bulley RN.

[113] *Ibid.*, Q.4906-9, p.307; Commander James Pulling RN.

prevented from doing so by the coastguard. Captain David Peat commander of coastguard at Dungeness, Kent reported the same problem: plunder on the part of the country people "....so much so, that in some instances but for the coastguard, they would not have left any more property than would have just paid its own expenses....",[114]here wreck plunder was assumed to be the right of all "....why, you have prevented our smuggling, and now you will not let us take what God sends us....". The main problem as far as the only source of authority was concerned, the coastguard, was that it did not have direct authority to interfere. If by chance during a wreck plunder the coastguard had caused such injury to any of the country people that death ensued then they would have been liable to a charge of murder.[115] Only in cases where articles from wrecks were subject to customs duty could they have effectively pursued their quarry. The Lord Warden of the Cinque Ports, the Duke of Wellington also stated that "....not withstanding the strictest orders given by him within the jurisdiction of the Cinque Ports plunder still takes place....". He also stated that the responsibility for wrecked property was strictly the jurisdiction of the Lord High Admiral which was in fact the Admiralty, but in reality the Admiralty as the authority for the coast did not maintain any kind of presence, and as responsibility fell on persons on the spot, these were more often or not revenue officers or the coastguard.[116]The 1843 Shipwreck Committee recommended that there should be a regular register and account of all such wrecked property from wrecks vested in Government.

It is interesting to note that in the case of some other nations, arrangements were already in place for such disasters. In France for example as can be gleaned from evidence in the case of the wreck of the *Conqueror* the government could take charge of all shipwrecked property until the rightful owners could claim it

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[114] *Ibid.*, Q.3830, p.249; Capt. David Peat RN.

[115] *Ibid.*, Q.3407, p.225; Capt. Samuel Sparshott.

[116] See *Ibid.*, Q.5245, p.329. Also Wellington Papers, 2/239/23; In many cases associated with the Cinque Ports shipwreck or casualty was the result of grounding on the numerous sandbanks in the area; in these cases cargoes were often thrown overboard to lighten the ship in the hope of re-floating her. The distinction was often very fine between acquisition of property thus and deliberate plunder.

back.[117] In Holland according to the evidence of Mr Van Hooten, again it was the government who took charge of shipwrecked property on behalf of their owners until such time as it became the property of the Dutch government if it was not claimed.[118] In the light of these arrangements it was recommended that if possible an international arrangement be made for a reciprocal humane treatment of shipwrecked persons and their property.

Finally on the subject of preserving the lives and property of shipwrecked persons the committee called for a better code of maritime law that would more ably define the duties of master and seaman on-board merchant vessels. Its principal aim was the further increase in the security of shipping and the general comfort and health of seamen and of preventing desertion, it was to eventually come about in the Merchant Shipping Acts of the 1850's.

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[117] The French had already established a Marine Board (as had been one of the principal recommendations of the 1836 Shipwreck Committee) and it was through this medium that wreck property was dealt with. See *S.C. Shipwrecks* (1843), Q.5741, p.365; Mr James Selfe: Overseer. Also *Ibid.*, Q.5002-6, p.315; John Powell Esq.: marine insurance business.

[118] *Ibid.*, Q.3515-24, p.230; William Van Houten Esq.: Dutch marine insurance business.

Chapter Nine

Toward the Merchant Shipping Act of 1850

9(i) A Marine Board: The most important development in the alleviation of shipwreck and indeed in the whole efficiency and workings of the merchant service was to be the creation of a marine board. Originally brought to prominence by James Silk Buckingham derived from the 1836 Shipwreck Inquiry and pursued by many during the ensuing debate it had been subsequently crushed in the interests of the shipowners (see above Chapter Six-6(iv)).[1] The concept of a marine board finally came about as a result of the Mercantile Marine Act of 1850. Since the 1836 Report pressure had been slowly mounting for wholesale reform in the mercantile marine; in the arguments of Buckingham's crusade for marine reform; in the mounting pressure for examinations of marine officers, that received its highest profile in the Bill of Captain Robert Fitzroy; in the results of the investigation of the condition of the merchant service by the Foreign Office, instituted by James Murray; and in the increase of steam powered shipping and the need for special legislation. With the failure of Fitzroy's Bill to secure examinations in 1842[2] the next major influencing pressure toward reform had come from the Foreign Office in the form of a letter enquiring about the condition of British ships and their crews.

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[1] During the debate overwhelming support was given to the notion of a marine board, see BPP 1836 (567), *Report of the Select Committee appointed to Inquire into the Causes of Shipwrecks*, XVII.373, Rep.p.viii, Rep.p.x. Also, Q.710-15, p.49; Q.753-64, pp.52-53; Q.773-779, p.54-55; Mr George Coleman: ex officer of East India Company. Also, *Ibid.*, Q.1154-56, pp.74-75; Q.1171, p.75; Capt. Hugh Evans: Harbour Master at Holyhead. Also, *Ibid.*, Q.3156, p.200; Mr John Marshall: agent of the Emigration Committee. Also, *Ibid.*, App. No.1, p.269; "Suggestions for constituting a Marine Board", Mr George Coleman. Also, see PD *Hansard* (Commons), 3rd Series, XXXVIII, col.1222.

[2] BPP 1842 (501), *Bill for requiring and regulating Examination of Masters and Chief Mates of Merchant Vessels.* Also see PD *Hansard* (Commons), 3rd Series, LXV, cols. 764-6.

Murray's acquaintance with Fitzroy and others associated with the merchant service had given him cause for concern over the condition in which many British ships plied the seas. This awareness coupled with Murray's position in the Foreign Office, his brilliant initiative and the fact that he was aware that government had failed as yet to enact any reforming legislation caused him to feel that the government were not fully aware of the great damage being done to the shipping capability of the country by the lack of regulation. Murray became one of the leading figures in the run-up to legislation on 1st July 1843 when upon his own initiative he wrote to the British consuls in foreign ports in an attempt to collect evidence concerning the bad name that British ships and British seamen were getting. He hoped that this evidence would help to bring matters to a head and thereby bring about legislation. He wrote:

> ....I am anxious to obtain any information which your long experience may enable you to supply me with, respecting the character and conduct of British Shipmasters and Seamen; and shall be exceedingly obliged to you for any communication upon this subject. I am particularly desirous of gaining information in regard to instances which have come under your observation of the incompetence of British Shipmasters to manage their vessels and their crews; whether arising from deficiency of knowledge of practical navigation and seamanship or of moral character, particularly want of sobriety; also to the different conduct of crews, when commanded by good, indifferent or incompetent Masters; showing therefore the advantage as regards preserving the character of British seamen, of their being commanded by a class of persons who should combine with skill in their profession a knowledge of the means of properly maintaining authority on-board their ship. My object is to show the necessity for authoritative steps on the part of Her Majesty's Government to remedy what appears to be an evil detrimental to, and seriously affecting the character of our Commercial Marine and therefore advantageous to Foreign Rivals whose merchant vessels are said to be exceedingly well maintained and navigated.[3]

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[3] BPP 1847-8 (913), *Papers relating to the Commercial Marine of Great Britain.* p.156, (Murray's letter dated 1st July 1843 took five years to be published).

Couched in these terms Murray appeared to be inviting adverse criticism by outlining the possible areas of failure, which he presumed from the reports that he had already received were going to be the case. Indeed it was a shrewd assumption. The reports of the consuls were damning giving an impression of widespread incompetence. The implication in relation to shipwreck was that inferior and dishevelled merchant crews were most susceptible to losing their cargo through wreck because of incompetence, drunkenness or plain lack of navigational education. Of the many damning reports one of the most enlightening came from the Consul at Paraiba (Brazil) "....shippers now give such a decided preference to the merchant vessels of Sweden, Denmark, Sardinia, Hamburg and Austria that they are rapidly engrossing the carrying trade of Brazil....". Other reports from all over the world revealed that this was far from being unique to Brazil.[4]

Murray's letter to the Consuls in 1843 had been intuitive for several reasons: not least had been the anticipation of the abolition of the Navigation Acts in June 1849. The state of the British merchant service needed to be improved if it was to be able to compete on a global scale. However in the cause of alleviating shipwreck it was plain from the mass of evidence that something had to be done to impose greater rigour into the habits of the shipowners, their masters and men. As earlier recommendations had suggested, what was needed was one central department to pull together the administrative responsibilities for merchant shipping at that time divided between nine departments, with one consolidating statement of legislation to pull together all the piecemeal strands of haphazard laws that dealt with the subject. With these ends in mind Murray wrote to Lord Canning to propose a Marine Board much as Buckingham and others had already proposed at least eight years earlier. The proposal was rejected, a record in the minute book of the Board of Trade stated "....consideration postponed....".[5] Seemingly agitated by the appearance of so much inflammatory evidence against the mercantile marine, the Board of Trade itself set up a Commission in 1847 to enquire into the state of the merchant service. The Foreign Office was asked to undertake a similar investigation as that instigated by Murray in 1843. Its findings

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[4] *Ibid.*, reply No. 70, Consul Newcomen to Mr Murray October 27th 1843.

[5] Sir Hubert Llewellyn Smith, *The Board of Trade*, (1928), pp.103-4.

were much as Murray had discovered from his earlier letter to the Consuls; only three of which out of 75 had been able to report that they felt that the state of British shipping had improved. The Consuls later reports indicated that it was largely a case of lack of efficiency in running their vessels that troubled the operators of British ships; given an increase in efficiency they might have been able to compete in a system of free trade.[6] In reality the British mercantile marine had probably relapsed gradually over the years under the shelter of the Navigation Acts until their repeal in 1849. Talk of crisis within the industry ensued and despondency (much aggravated by the competition of others, particularly the Americans in the China Seas) among British shipowners was at an unprecedented low.

In 1848 Henry Labouchere (who had become president of the Board of Trade for a second time in July 1847) had given shipowners long enough to act upon what was now undeniable evidence of negligence in the safety of their ships and crews.[7] Murray had by the end of 1847 taken what may be considered a humanitarian response to the evidence he had collected:

> ....The condition of the sailor, and the necessity of improving our system of navigation and management now observable in our merchant vessels, so as to ensure their not losing ground, as compared with foreigners, would appear to require the exclusive attention of a competent department; for it is clear that individuals however much their personal interests may be concerned, cannot, or will not, make inquiries, or take the necessary steps.... .[8]

In concluding he stated:

> ....At present, if a British sailing vessel is wrecked, comparatively little inquiry is made into the subject, although scores of persons may suffer

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[6] *Papers relating to Commercial Marine* (1847-48), p.293.

[7] Henry Labouchere stated in Parliament that it would be "advantageous". See PD *Hansard* (Commons), 3rd Series, XCVI, cols. 670-3.

[8] *Papers relating to Commercial Marine* (1847-48), p.294. November 22nd 1847; Murray's memorandum prior to the Foreign Office's own circular to Consuls abroad.

> death; whereas if an accident happens on the railroad, and a person is killed, a judicial as well as official investigation is required....

With the repeal of the Navigation Acts it became imperative that the shipowners should either carry out changes regarding the condition of their ships and crews or have Parliament enact such changes for them. They had not been forthcoming, as sheltered behind the protective legislation of the Navigation Acts they were often technologically behind the times and were equally reticent regarding the provision of welfare to seamen. During the early part of 1844, William Ewart Gladstone then President of the Board of Trade indicated that there could be legislation for tests of competence for masters and mates.[9] A system of voluntary examinations had begun on 19th August 1845 by an Order in Council to be carried out by various branch boards (e.g.: Sub-Commissioners of Pilotage, Trinity House, and the Ballast Board of Dublin). The Order in Council specified the contents, however the exam varied from one board to another.[10] By May 1847 less than 300 men had gained master's certificates whilst just in excess of 50 mates had qualified.[11] These examinations were not considered a successful means of gauging competence due to their voluntary nature.[12] Almost imperceptibly the drive toward reform was happening, albeit piecemeal. In 1846 the need for an overriding central department had become more and more apparent. Steam ships were the subject of Acts (8 & 9 Vict. cap.116; 9 & 10 Vict. cap.100) in that year giving the Board of Trade the right to approve the appointment of surveyors in the case of passenger vessels and the right to make an inquiry whenever accidents occurred. Due to its jurisdiction over steam vessels from the 1846 Acts, the Board of Trade now had a Steam Navigation Department: here was the embryonic Marine Department.

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[9] *The Times*, 28th March 1844. p.5.

[10] BPP 1847 (526), LX, *Instructions to Bds. for Examination of Masters and Mates of Merchant Vessels; List of Persons to whom Certificates of Qualification have been granted,* pp.351-357.

[11] *Ibid.*, pp.361-366.

[12] BPP 1847 (392), *Select Committee to inquire into Operation and Policy of Navigation Laws*, Third Report, p.290; evidence of Charles Graham: secretary to *Lloyd's Register.*

The shipowners themselves could have brought about changes, they had had long enough and enough incentive to have done so.[13]They could have insisted upon examination of masters and mates for example; but instead a government pledged to free trade was left to enact the reforms first suggested by the 1836 Shipwreck Committee Report, enlarged upon by Buckingham in 1837 and reinforced by Fitzroy, Murray and others in the intervening years. It wasn't until 1848 that the reports of 1843 and 1847 and Murray's memoranda were presented to Parliament, during the peak of discussion on the Navigation Acts. The abyss from which British shipping practices had to heave themselves was made even deeper by the controversy surrounding the Laws. The shipowners, protectionists to a man (in as much as they were advantaged by this), had grown used to the situation despite the eroding effect of reciprocity treaties. *The Times* stated that because the British shipping interest was far greater than that of any other country it would eventually suffer more by retaliatory foreign navigation laws than by competition.[14] *The Economist* in several articles during the 1840's tried to persuade the shipowners that protection could offer them very little in the long term and that the reciprocity treaties had benefited them.[15] By 1849 reform was imminent, on the 12th July two weeks after the repeal of the Navigation Acts, Labouchere gave notice of two Bills[16] the contents of which were to be discussed

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[13] See R.H. Thornton, *British Shipping*, Cambridge (1939), p.82. Also W.S. Lindsay, *History of Merchant Shipping and Ancient Commerce*, London (1876), Vol. III, p.27-8; J.H. Clapham, *An Economic History of Modern Britain*, Cambridge (1926), p.438-41. Several other inducements occurred e.g.: 23rd March 1847 the Admiralty issued an order that no ship would be chartered by them unless the master and mates held the necessary certificates, see *Nautical Magazine,* 1847 XVI, p.364.

[14] *The Times*, 19th August 1847, p.4. Also see *Quarterly Review*, 1848 LXXXIII, p.295.

[15] *The Economist*: No. 46, 13th July 1844, pp.985-6; No. 48, 27th July 1844, pp.1033-4; No. 50, 10th August 1844, pp.1081-2; No. 71, 4th January 1845, p.3; No. 188, 3rd April 1847, p.379; No. 208, 21st August 1847, pp.955-7; No. 222, 27th November 1847, pp.1366-7.

[16] PD *Hansard* (Commons), 3rd Series, CVII, cols. 212-48. Also see BPP 1849 (570), *Bill for improving Condition of Masters, Mates and Seamen in Merchant Service*. Also BPP 1849 (500), *Bill to amend Laws relating to Pilotage* (as amended by Committee, BPP 1849 (530)).

by the shipowners and public during the recess and covered three main areas of reform: light dues, pilotage and the qualifications of masters and mates.

The light dues up until that point had been controlled by local boards, now it was proposed that a central government board be put in place of the local boards. The responsibility for the examination of masters and mates which up until that time had been voluntary was to be replaced by a compulsory examination held under the auspices of the Board of Trade who had been given a directive to create a Department of Mercantile Marine - the concept of a Marine Board was becoming a reality.[17] Labouchere had felt the need for government interference for some time prior to giving notice of the two Bills[18] and from the contents of a letter received from Sir Dennis le Marchant (Permanent Secretary to the Board of Trade) at the end of June 1849 it seems likely that reform may have been a matter of discussion at the Board of Trade by the time of the Bills.[19] Le Marchant's memorandum laid specific emphasis on the need for reforms concerning personnel as opposed to the needs and forms of ships, especially in the light of massive desertion from the merchant service. He had emphasised: the need to raise the condition of the higher ranks; measures to ensure adequate protection of seamen against exploitation and encouragement to remain with the merchant marine. These emphases were wholly apt, for with the safety record of ships and the arduous conditions to be put up with it was a wonder that Britain had any credible

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[17] *Ibid.*, cols. 227-229, especially col. 229: "....a department of Mercantile Marine....".

[18] In June 1848 Labouchere was quoted as saying "...some department of the public service, specially entrusted with the care of all questions relating to the mercantile marine, and possessing professional assistance ....is of very great importance to this country..." the idea of a marine board had seemingly by then taken root. On the 6th June 1848 Labouchere had clarified the situation to the *Select Committee on Miscellaneous Expenditure* regarding the control and administration of the Mercantile marine of Great Britain and the pressing need for a mercantile department of the Board of Trade: "They are dealt with partly by the Admiralty and partly by the Board of Trade; principally by the Board of Trade; but we have no professional assistance at the Board of Trade of our own, competent to enable us to come to a correct decision, very frequently, upon the points that arise with regard to them....". See BPP 1847-48, (543), XVIII, *Select Committee on Miscellaneous Expenditure*, Pt. I, p.428, Q.5619, p.429, Q.5626.

[19] See P.G. Parkhurst, *Ships of Peace*, New Malden (1962), pp.154-66.

merchant service left at all. If better education could be ensured then slowly a safer, less shipwreck-prone and more efficient service could ensue.

On the 11th February 1850 Labouchere introduced the Bill concerning the qualification of masters and mates.[20]The shipowners, not surprisingly, did not generally think much of it; having recently coalesced to meet the onset of the repeal of the Navigation Laws their mood was united and hostile. Many believed that having endured the exposure to the repeal of the Navigation Laws that they ought to be left alone, for they perceived a very real threat from the *laissez-faire* policies then in vogue, which would inevitably expose them to the full rigour of foreign competition. *The Times*, which throughout the century had repeatedly upheld the cause of marine reform, believed that objections to Labouchere's Bill were inevitable from this quarter and warned that there might be an attempt to destroy it on the basis of anti-government alliances. [21] The condition of seamen and their exposure to the dangers of shipwreck was however a national issue by this time which *The Times* sought to emphasise, not really understanding how the interests of shipowners could be jeopardised by forcing them to hire competent officers. *The Times* in the interests of British seamen argued that the Bill should "....not be left to the mercy of the casual, or interested, or purely mischievous obstruction....".[22]

The shipowner's opposition to the Bill, their vehemence and hostility towards what they described as "....a paltry, puerile and trashy piece of legislation...."[23] forced the government to change its proposals and withdraw it on the 20th April and substitute a revised Bill.[24] The essential features of the original Bill were retained i.e. compulsory examinations, public shipping offices (that should put an end to crimping), and a Marine Department of the Board of Trade. The opposition of the shipowners to the original form of the Bill had forced the

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[20] PD *Hansard* (Commons), 3rd Series, CVIII, cols.666-699, 11th February 1850.

[21] See *The Times*, 12th February 1850, p.5, 4th March 1850, p.4.

[22] *The Times*, 11th March 1850, p.5.

[23] *The Times*, 18th April 1850, p.3.

[24] *Journals of the House of Commons*, CV, 20th April 1850, p.243.

government to make concessions in the case of local boards rather than risk the possibility of no legislation at all. Local boards had been the idea of the Liverpool Chamber of Commerce in a move towards arriving at a workable compromise. Where local boards were to be instituted at ports with over 30,000 tons of shipping in the foreign trade they were to posses the powers claimed by the Liverpool Chamber of Commerce and the new plan required that the central board nominated four of the proposed twelve members of the local boards (to fix plans of examination and to appoint examiners[25]) six to be elected by local shipowners and the remaining two to be the mayor and a stipendary magistrate of the port. The idea that this would have produced a more democratic and balanced local board was not to be always the case for often the officials of the towns concerned were already members of the shipping interest. The concession to have local boards at the major ports thereby gave the shipping interest a hold over decision making at these locations which amounted to nothing less than shipowner's associations under a different name and hence handicapped the policies of the new Marine Department from the outset. This was to be the price of getting the major Bill through Parliament that was to become law on the 1st January 1851. The concession to allow local boards was as far as the government was concerned against its interests in trying to make the consequent measures completely impartial. However opposition persisted and Labouchere had "implored" the House not to defer the second reading.[26] The Bill had received its second reading on 20th June. Centralisation had advanced as far as was going to be tolerated and despite the need for more changes, for the time being at least Labouchere made a "strategic retreat from centralisation" with the support of the more sympathetic London shipowners such as Sir William Clay, Richard Green, humanitarians, and of *The Times*.

The Mercantile Marine Act of 1850 had been born out of a background of human degradation in shipwreck, controversy, self-interest, vehement opposition, humanitarian support, commercial fears and political bargaining. Government intervention at a time when *laissez-faire* had been the order of the day had been

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[25] PD *Hansard* (Commons), 3rd Series, CXII, cols. 110-13, 20th June 1850.

[26] *Ibid.*, p.110.

necessary to ensure that masters and officers were not to be placed at a permanent disadvantage compared to those of other nations and hence threaten Britain's traditional place as one of the greatest seafaring nations in the world. The Act was lengthy containing 124 clauses officially entitled: *An Act for improving the conditions of masters, mates and seamen and maintaining discipline in the Merchant Service.* The Board of Trade through its Marine Department had now amongst many other provisions, powers to compel masters and mates to be certificated; ships to carry logs; to ensure the provision of amongst other things, compensation for seamen discharged before a voyage, of Sailor's Homes etc. Considering that the government seemed reluctant to intervene in the 1830's and early 1840's it may seem hardly surprising that the 1850 Act with all of its comprehensive detail and ramifications for shipping safety has been regarded as momentous.[27]

9(ii) The "great" Merchant Shipping Act of 1854: Although the provisions of the Merchant Shipping Act of 1850 were directed at the welfare of seamen they did not immediately see it that way. The shipowner's complained that their business was being affected by an over-concern for the conditions of seamen. Conversely seamen did not think much of it either, for several made petitions to Parliament complaining about the new provisions: provisions that had been made with their safety and protection from crimps in mind.[28] Lodging-house keepers had stirred up agitation in the north-east as the provision of the new Act curtailed their livelihood, eventually resulting in a seaman's strike relating to the supply and signing of seamen. The protest movement had spread to other ports after an attack on the shipping offices at North Shields on 24th January 1851, by February 24th London seamen were meeting to consider appropriate action to redress their grievances against the Act. Labouchere maintained that the provisions of the Act were in the interests of seamen and refused to be swayed. By May the danger to

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[27] 13 & 14 Vict. cap. 93: *Mercantile Marine Act, 1850.*

[28] See *The Times*, 30th January 1851; also BPP 1851 (497) LII, *Abstract Returns to Bd. of Trade relating to Merchant Seaman's Fund.*

the government had lapsed as the fears of the seamen were unfounded and complaints against the Act were obviously the work of provocateurs.[29]

The Mercantile Marine Act of 1850 was soon followed by the Steam Navigation Act of 1851.[30] This gave the newly founded Marine Department of the Board of Trade the power to appoint surveyors of steamships. By 1854 there were 48 different Acts or parts of Acts for the regulation of the merchant service; it was clear that the time had come for these laws to be consolidated into one single Act and this was effected by the Merchant Shipping Act of 1854.[31] The "great" Merchant Shipping Act of 1854 greatly enhanced the powers of the Marine Survey Service with some 548 clauses consolidating much earlier shipping law that hitherto had emerged piecemeal. It recast the laws relating to the limitation of shipowner's liability, ship registry, tonnage measurement, and wreck inquiry. In Clause V the Act was divided into ten parts covering:

I. The Board of Trade and its general functions.

II. British Ships: their Ownership, Measurement and Registry.

III. Masters and Seamen.

IV. Safety and Prevention of Accidents.

V. Pilotage.

VI. Lighthouses.

VII. Mercantile Marine Fund.

VIII. Wrecks, Casualties and Salvage.

IX. Liability of Shipowners.

X. Miscellaneous matters.

The provisions of the 1854 Act in respect of preventing shipwreck and dealing with matters following incidence of shipwreck were extensive. In respect of Part IV - Safety and Prevention of Accidents for example were laid down rules as to Boats and Life Buoys (clause CCXCII), rules as to lights meeting and passing

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[29] See PD *Hansard* (Commons), 3rd Series, CXVI, col. 508. Also *ibid.*, CXIV, col. 1167.

[30] 14 & 15 Vict. cap. 79: *An Act to consolidate and amend the Laws relating to the Regulation of Steam Navigation, and to the Boats and Lights to be carried by Sea-going Vessels.* (7th August 1851)

[31] 17 & 18 Vict. cap.104: *An Act to amend and consolidate the Acts relating to Merchant Shipping.* (10th August 1854)

(clause CCXCV), rules covering the build and equipment of steamships (clause CCC) etc. In Part VIII for example, covering Wrecks, Casualties and Salvage; rules were laid down for inquiries to be instituted in cases of wreck and casualty (clause CCCCXXXII), the appointment and duties of receivers were laid out (clause CCCCXLVIII) and comprehensive instructions given for all circumstances surrounding shipwreck. Now cases of shipwreck no longer had to go unaccounted for. The Act was considered so comprehensive in its provisions for safety and efficiency to transform the old practices of the merchant marine (and in turn create an environment in which the dangers of shipwreck could be effectively reduced) that many expressed derision toward the extent of state intervention in its provisions to the effect that it became the subject of a popular sea shanty:

You'll do no good by grumbling,
You know how well you're whacked,
With lime juice and vinegar,
According to the Act.....

You'll do no good by grumbling,
I'll tell you for a fact,
They can sew you up and dump you
According to the Act.[32]

[32] Part of an old shanty referring to the 1854 Merchant Shipping Act. See *Seafarers and their Ships*, HMSO (1963), Pt. I, The Safety of Ships, p.28. Referred to in R. Hope *A New History of British Shipping*, Ch.16 p.290. Also listed in *Shanties from the Seven Seas* as the "Lime Juice Ship" p.58, collected by Stan Hugill, London (1961).

Chapter 10

The Humanitarian, Technical and Political Response to Shipwreck in the first half of the nineteenth century: The 1836 Inquiry and its aftermath

Conclusion

The closing words of a near contemporary account of mercantile shipwreck in the first half of the nineteenth century stated: "The sweet little cherub that sits up aloft, to watch o'er the life of poor Jack, is public opinion".[1] As the second half of the nineteenth century progressed that cherub had become very wide awake. What made public opinion change so drastically in the first half of the nineteenth century so as to go from a state of apathetic disregard for the plight of merchant-mariners after the Napoleonic Wars to eventually cause the enactment of the Merchant Shipping Act of 1854?

By the close of the Napoleonic Wars on June 18th 1815 public opinion regarding the value of life had been seemingly numbed by over forty years of war, the previous 22 years being with France; the continued and everyday association with death, deprivation and for many the resultant poverty had not unnaturally hardened them to a situation of human suffering amongst mariners. This could have been regarded after all as but just one aspect of a nation not only at war but undergoing the process of industrial revolution, a nation that allowed child labour, transportation and still advocated hanging for a large number of offences. In a wholly maritime sense much of this attitude towards death, deprivation, desperation and apparent dis-interest towards human suffering can be gleaned from the actions of the early nineteenth century wreckers who carried out their operations to a greater or lesser extent all around the coast. The wreckers actions

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[1] *Notable Shipwrecks - being Tales of Disaster & Heroism at Sea*, Re-told by Uncle Hardy, London (1879), Ch.XXII, p.328.

are documented widely as having plundered from the ships that had come to grief.[2] Not considered to be widespread, there was also evidence in some areas of taking that process a step further and actually causing shipwreck by deception. Though the actions of wreckers may have shocked the nation[3] and instilled a need for reprisal, that reprisal was not always essentially based upon humanitarian feeling but economic necessity driven by merchants in fear of loss of property.[4]

The humanitarian response to the problems of the early nineteenth century has been considered by some to have been derived from other forces, in themselves contributors to social change. The Victorian jurist Albert Venn Dicey identified Benthamism and evangelicalism as major components of humanitarianism. The then contemporary ideas derived from the social philosophy of Jeremy Bentham, the starting point of which was individuals and their feelings and in which the central emphasis was upon the diminution of pain and increase of pleasure epitomised by the idea of the greatest happiness for the greatest number, whilst certainly a contributory factor to humanitarian interests was only one of many but was nevertheless extremely significant. For Bentham and the Philosophical Radicals were considered by many to be to a great extent responsible for the prevailing ideas that helped bring about the social and political changes of nineteenth century England. Another extremely significant factor was the rise of evangelism. It was a contributing factor in a climate of social change toward the mid-century as the great revival in religion and personal piety

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[2] See J.G. Rule "Wrecking and Coastal Plunder", *Albion's Fatal Tree - Crime and Society in Eighteenth Century England*, p.180, Penguin (1975).

[3] For example such reports as: "A letter received at *Lloyd's* yesterday morning states that about 100 wreckers, engaged in plundering the *Jessie Logan* at Boscastle, attacked the revenue officers and coastguard, but were beaten off, and nine of the ringleaders secured". *The Times*, 21st January 1843, p.3, col. c.

[4] See BPP 1839 (169), *First Report of the Commissioners appointed to inquire as to the best means of establishing an efficient Constabulary Force in the counties of England and Wales*, pp.56-66, "Plunder of Wrecked Vessels and Property".

prevalent in the first half of the nineteenth century helped to promote new social attitudes (amongst which the call for "decent" standards of behaviour[5]).

Specific responses to shipwreck could initially have been manifested in the application of some invention from an innovative and technical mind of the day, sometimes working with the incentive of an offered prize, but as Dicey had indicated the origins go far beyond a merely technical expression. There was the increasing awareness beginning in the eighteenth century of a causal chain connecting the actions of readers with the suffering of subjects concerning the pains and deaths of ordinary people that such narratives as the realistic novel, the autopsy, the clinical report and the social enquiry (especially the "Blue Books") began to create a wider understanding of suffering by the early part of the nineteenth century. It was almost certainly in this regard that the Royal Humane Society was originated on 17th April 1774, many of its founders being physicians and surgeons.[6]

Whilst the human body is the common denominator of those who suffer and those who perform acts of mercy either by a common bond concerning physical pain and its alleviation or by a higher allegiance to a religious ideal (Houghton had identified a Puritan Revival from 1830[7]) as Christ commanded "Verily I say unto you. Inasmuch as ye have done it unto one of the least of these my bretheren, ye have done it unto me",[8] by the early part of the nineteenth century these concepts were beginning to coalesce. The individual body, the corpse in the human narratives of the eighteenth and early nineteenth centuries had taken on an importance and power of its own to drive the imagination of those associated with it in an objective manner as to attempt to illuminate their

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[5] Clearly a backlash to the extremes of social behaviour in Regency England. See V. Murray, *High Society, A Social History of the Regency Period*, Viking (1998).

[6] See *A short history of the Royal Humane Society* by P.J. Bishop.

[7] See W.E. Houghton, *Victorian Frame of Mind 1830 - 1870*, p.22, Ch.1 "Character of the Age", London (1957).

[8] *The Holy Bible* (Authorised King James version), Matthew, 25.40.

own lives and shed light on the mystery of their own feelings. In Laquer's[9] reasoning from Hume (see above Chapter One-1(iii))), Laquer's "sympathetic passions" are derived from Hume's idea of ownership engaging the emotions as the mechanism by which humanitarianism may proceed. This idea of ownership and hence "engaged emotions" leading to humanitarian acts can also be interpreted as prevalent in contemporary Christian teachings - "we are one body for we all share in the one bread" - which is a contemporary derivation of a much longer statement of the *Book of Common Prayer* used by the Victorians, and containing the inherent idea of a common bond between men through Christ. Christian virtue and feeling by the turn of the nineteenth century had produced a powerful incentive to action and compassion regarding suffering where other forces especially political as yet remained dormant.[10] There was continually announced from the pulpit, written in editorials and tracts, mention of the inner strength and purposefulness that could be derived by individuals from a Christian faith that set a high store on the values of hard work, personal integrity and a dedication to the general welfare of all mankind. This Puritan revival combined with a social philosophy such as that of Bentham and exposed to increasing amounts of fact concerning suffering that were emerging from the new narratives of the day; the "Blue Books", the Select Committee in particular and especially in the context of shipwreck the first exposure to the vast amount of information that resulted from the 1836 Shipwreck Inquiry; the idea of change and reform in shipping practices so as to try and prevent shipwreck, alleviate suffering and preserve the life of "Poor Jack" had been instigated. Victims of shipwreck may have in fact been amongst the many to have benefited from the upsurge in humanitarian sentiment. Other objects of the many reforms of early nineteenth century England included agricultural labourers, factory and mine workers, but

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[9] See T.W. Laquer, "Bodies, Details and the Humanitarian Narrative", *The New Cultural History*, University of California Press (1989).

[10] Amongst many other examples Henry Trengrouse was at least driven in part by Christian virtue; in his letters to The Royal Humane Society he writes: "....through my instrumentality in the hands of providence....". See Archives of the Royal Humane Society - letter from Henry Trengrouse at No. 2, Villiers Street, Strand. April 13th 1818 to T.J. Pettigrew Esq., Secretary to the Royal Humane Society.

the mariner's plight was especially drawn out and more often final as in the many cases of loss concerning the timber-laden ships and seemingly drawn out by the intransigence of vested interests whose actions could only be modified by conformity to political expedients.

The political instigation to change in public opinion had come from those who had petitioned the government for the first inquiry into shipwreck in 1836 for which its thwarted chairman J.S. Buckingham seemingly drained every last vestige of capability to evoke change against the vested interests of the day and a government apparently indifferent to the plight of shipwrecked mariners. The initiative was essentially in a Benthamite tradition from the point of view of the seamen with the political ground softened up by such writers as the political economist J.R. McCulloch in examples such as *The Edinburgh Review* article "On the Frequency of Shipwreck" which did much to dispel apathy toward the cause and inform public opinion of the true nature of the disasters. Politically and economically the shipping interest had been to a large extent cosseted by the Navigation Acts which ensured its protection and the exclusive exportation of British goods in British vessels, and so until the eventual erosion of the Navigation Acts by the various reciprocity agreements and their final repeal in June 1849 the almost total absence of foreign competition had caused a smugness amongst the shipowning fraternity and hardened any inclination to oppose change. The *Westminster Review* had described the protected shipping interest as "...the nation's spoiled child.....which is come to maturity half instructed and reckless".[11] The fact was that the shipping interest had to see and accept the need for change or have change forced upon them.[12] In the case of the timber carrying ships the horrors of their particular experience of shipwreck brought early reform by the Act of 1839 (see Chapter Seven-7(i))) but only seemingly because of the extent and knowledge of such a clear situation of disregard for human life. Other reforms such as the carrying of adequate lifeboats (Merchant Shipping Act of 1854, 17 & 18 Vict. cap. 104) had to wait. The greatest stumbling block to

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[11] *Westminster Review*, XLII, 1844, p.60.

[12] For example in the practice of carrying ship's lifeboats they seemed by and large hopelessly inadequate, and in giving men dry space for accommodation.

marine reform at this time would appear to have come from the shipping interest itself, a politically cohesive protectionist parliamentary group who voted together and were generally alert to trespassers on their interests. Their principal argument and retort to the threat of intervention and the onset of change being that the merchant navy had been a nursery for generations of Royal Navy seamen and to have run counter to their interests by intervention in their affairs would have affected the supply of seamen.[13] It would appear that this argument could not have been resisted too much by a government fearful of its consequences and in the atmosphere of a peace secured and held largely by the superiority of its Navy. This and the fact that with so much in need of reform a single reform might have seemed futile and pointless. This was the problem (as outlined above in Chapter Six-6(iii)) with formulating action on the basis of the 1836 Shipwreck Inquiry findings. The indicated measures were too complex to package into a single acceptable Act for change. Many measures proposed that could have contributed to the early alleviation of shipwreck were therefore put aside. This can be said of Buckingham's plea in 1837 for a Marine Board. Real awareness and consequent change from an undesirable situation has historically often been preceded by shock and disaster; such was the situation that eventually brought about the 1836 Shipwreck Committee[14] and the same can be said for its successor the 1843 Shipwreck Committee.[15] Public opinion changed slowly, modified by continued

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[13] Until 1793 the merchant navy were not allowed to crew their ships from the cheapest market; in 3 & 4 Will. IV, cap.54, sect 12 (*An Act for the Encouragement of British Shipping and Navigation* (28th August 1833)) three quarters of the crew and the master had to be British subjects in order to be registered a British ship. See also S. Jones, "Blood Red Roses - The Supply of Merchant Seamen in the nineteenth century", *Mariner's Mirror*, Vol. LVIII, (1972), pp.429-42. Also, R. Taylor, "Manning the Royal Navy: the reform of the recruiting system, 1852-1862", *Mariner's Mirror* Vol.XLIV, (1958), pp.302-14. Also, the *Pamphleteer*, London (1824), "Substance of a Letter to Lord Melville (written May 1815) with the outlines of a plan to raise British Seamen".

[14] *Edinburgh Review* in 1835 prior to the 1836 Shipwreck Committee had reported the loss of 800 vessels, being one thirtieth part the whole number of ships belonging to the British dominions - as being either entirely lost or driven on shore. *Edinburgh Review*, LX, "On the Frequency of Shipwrecks", p.340.

[15] The storms of January 1843 did much to instigate this inquiry, see above Chapter Eight-8(i).

exposure to reports of death and disaster in pamphlets and the national press emanating from periodic crises often the result of storms that served to expose weaknesses in ship construction and manning.

Adam Smith's concept of *laissez-faire* espoused in the late eighteenth century had become an exercise in political power by the late 1830's. The notion that the state should not interfere in the actions of individuals with regard to commerce etc., but that the collective decisions of individuals would be not only in their best interest but also in that of the state. Thus in an atmosphere of *laissez-faire*,[16] by June 1849 the state repealed the Navigation Laws. The time from 1830 to 1870 has been described as one of positive and aggressive individualism,[17] with competition for trade amongst British shipping interests so intense that freight rates had been lowered in the early part of the century to enable commerce to continue. As the content of the 1836 Shipwreck Inquiry has revealed this was often at the expense of other needs of the ship: chandlery items, up-to-date charts, navigational equipment and so forth. By no means all shipowners were opposed to reforms[18] but for the majority the evidence points to a strong current of *laissez-faire* thinking precluding consideration of legislation designed to protect seamen whilst at the same time the upholding of protectionist policies toward trade.[19] *Laissez-faire* thinking in the case of the state working supposedly against the interests of the shipowners as in the demise of protection against foreign shipping was unacceptable to them and yet they were content to use arguments of the same

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[16] Although some would argue the concept was a myth purported by new forms of enterprise in their politico-economic war against the landed gentry. See J. Bartlet Brebner, "*Laissez -Faire* and State Intervention in Nineteenth Century Britain", *The Journal of Economic History*, Vol.VIII and supplement, pp.59-73.

[17] See Oliver Macdonagh, *Early Victorian Government*, Ch.1, p.7.

[18] John Gladstone, a patriarch of Liverpool shipping aided Fitzroy in drafting his Bill (BPP 1842 (501) *Bill for requiring and regulating Examination of Masters and Chief Mates of Merchant Vessels*). Also see *Select Committee appointed to Inquire into Shipwrecks of British Vessels, and the Means of Preserving Life and Property of Shipwrecked Persons*, BPP 1843, (549) Mins. of Evidence, QQ.5533-5, p.350; Q.5593. p.357; John Gladstone.

[19] See *The Economist*, 9th November 1844.

principle against the greater interests of the state and the provision of welfare to seamen.

The situation by the 1830's concerning the alleviation of shipwreck could hardly have been worse. A mercantile marine was using vessels which had been demonstrated to be of questionable construction in a commercial situation in which domestic competition was intense enough to preclude any surplus profits being reinvested into new equipment. Such trade as there was being supported for the most part of the period in question by government interference in the market forces by way of the Navigation Acts and reciprocity treaties that could be argued to have brought about a large degree of apathetic indifference to questions of the safety and efficiency of their seamen; to the plight of whom the government remained largely indifferent. From the point of view of the shipowners in the economic limitations following the Napoleonic Wars they not unnaturally viewed further encroachments on their *status quo* with contempt and anxiety. However with slowly increasing trade the number of ships was also increasing[20]and accordingly the seamen put at risk by a lack of legislation increased likewise.[21] Here then was a situation of often intense misery and potential danger for all the seamen concerned, and with the occurrence of shipwreck being almost a daily event somewhere around the coast.

As well as having the humanitarian and political aspects outlined, the nineteenth century could be described as a period of immense innovation and invention concerning matters of a technical and engineering nature. This thesis has sought to present some of these developments viz. lighthouses, rocket and mortar line rescue systems etc. The recasting of *Lloyd's Registry* in 1834 with its new rules regarding the construction of ships did much to remedy the chaos of the previous episode in their history. From the onset of the nineteenth century such

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[20] See Appendix B.

[21] It was not until the establishment of The General Register Office of Merchant Seamen in 1835 that the actual numbers of merchant seamen could be ascertained. Established under 5 & 6 Will.IV, cap.19 (30th July 1835): *An Act to amend and consolidate the Laws relating to Merchant Seamen of the United Kingdom, and for forming and maintaining a Register of all the Men engaged in that Service.*

men as did design and build lifeboats; develop mortar and rocket assisted rescue apparatus; enable the development of steam powered vessels, lighthouses, lightships; the inventors of lifejackets and life support equipment; the architects and builders of harbours of refuge and mechanisms to take the power out of waves and enable a quite anchorage; engineers and scientists of all persuasions - worked ceaselessly to develop means of life support and preservation. This technical response, more often than not at their own expense, of the inventors and innovators in conjunction with the organised institutions of lifesaving and preservation such as the Shipwreck Institution, Shipwrecked Fishermen & Mariner's Royal Benevolent Institution, Royal Humane Society and so forth enabled the growing humanitarian feeling to be realised in a practical expression of rescue, something hardly possible at the time that Manby witnessed the loss of the *Snipe*. It can be seen that in many cases irrespective of political incentives this equipment was gradually taken up e.g.: local humane societies ordered and financed lifeboats to the designs of established inventors. Technical innovations that did receive political attention and support had in most cases achieved recognition through being thoroughly proven in the presence of eminent persons usually high ranking army and naval officers on behalf of the government. Such was the case for example for the deployment of the mortar and rocket rescue apparatus.

The detailed exposition of the 1836 Shipwreck Inquiry had demonstrated the amount of concern and controversy surrounding the issue at the time. Revealing passionate pleas for the arguments surrounding marine insurance, the desperate need for proper training and examination of masters and mariners, and most essentially the controversy surrounding the need for an all-powerful marine board to oversee the affairs of the mercantile marine. The accounts of some of the witnesses in particular uncovered a depth of feeling concerning the alleviation of shipwreck that could not have gone unaccounted for indefinitely, despite there being no tangible outcome to the Inquiry. The 1836 Inquiry is best understood therefore as the basis upon which all other evidence was built concerning suffering by shipwreck until the consequent piecemeal Acts that followed resulted in the Merchant Shipping Act of 1854.

Despite the plea of Buckingham in 1837 for a central Marine Board to oversee the affairs of the merchant navy and act as a basis for amalgamating all the initiatives, inventions and innovations of scientists and engineers in the interests of the humanitarian response to shipwreck - nothing had immediately followed. Incidence of shipwreck grew as did commerce into the 1840's and by 1843 again as the result of widespread disaster following a series of storms a further inquiry was instigated. Much had happened in the intervening years with respect to the attitude toward loss of ships, trade had increased to such an extent (as demonstrated by the Cinque Ports pilots being overwhelmed) that the loss of a ship and her crew now meant far more than merely the lives of her sailors but the loss of a valuable cargo all of which seemed far harder to tolerate. By the time of the 1843 Shipwreck Inquiry the nation had fully emerged from the social and economic depression following the Napoleonic Wars and had began to look to her commerce in a far more paternal and materialistic manner. In the 1843 Shipwreck Inquiry the distinct emphasis as shown upon pilotage, harbours of refuge and the need for trained men who could be relied upon to realise the value of a cargo could be argued to far outweigh considerations of such other matters as ship construction and insurance arrangements that had characterised the 1836 Inquiry. Indeed the next stage in the slow piecemeal process of reforming the merchant marine to lessen the risk of shipwreck came to be an essentially economic intervention on the part of the Foreign Office; neither political nor humanitarian in its motivation but in the national interests in the face of potential foreign rivals to the carrying trades that could be no longer tolerated. It may have helped to awaken a political impetus to change; a decidedly economic light was cast upon the deficiencies of English vessels, as shippers were reported by Consuls the world over to be giving preference to the merchant vessels of virtually everywhere but Britain. National economic consideration regarding the British merchant fleet now from a political standpoint far outweighed considerations of *laissez-faire* based politics and the ideas of self-sufficiency and autonomy that the shipowners harboured, and with it their apparent indifference to the plight of their sailors and the occurrence of shipwreck. If they would not reform themselves for humanitarian purposes and consequent efficiency then by

the 1840's it appeared that economic considerations would bring politically based reform upon them.

Thus it was that the Board of Trade set up the commission of 1847 to enquire into the state of the merchant service. The measures so painstakingly identified to alleviate shipwreck by the 1836 Shipwreck Committee were also those measures that could form the basis of a safe efficient fleet that could be reliably depended upon to carry the products of British industry to the world. Indeed if these measures had not been identified and ultimately brought about, if not by humanitarian plea then by economic necessity it could be argued that the might of the British merchant fleet in the second half of the nineteenth century - a fleet second to none in world terms, may never have come about and Britain's economic strength could have been seriously jeopardised.

Purely humanitarian initiatives had kept a semblance of hope amongst the shipwreck-susceptible sailors of the merchant fleet for many years. Even after political action, reform in the shape of the 1854 Merchant Shipping Act, the culmination of ideas originating through the Select Committees particularly in the Shipwreck Inquiries brought about by economic need; humanitarian initiatives largely through the actions of volunteers still formed the basis of rescue services under the auspices of the Shipwreck Institute and local humanitarian societies amongst others. Many other forces, such as the American merchant fleet whose required standards were much higher than the British and whose vessels had undergone considerable development to enable them to carry more cargo faster, contributed to the change from 1850 and it was these sources that forced the British merchant fleet under the parameters of the Merchant Shipping Acts to reform. By the mid-century despite having to wait until the 1860's for shipwrecks to peak a change in public opinion had been brought about by humanitarian driven reform, and was made into widespread acceptance by political action through economic expedients. This change in public opinion was given practical expression by the inventors and innovators of the day and enabled "Poor Jack" to look upon the prospect of shipwreck with the thought that it was less likely to happen and that when it did, did not always have to mean near certain death.

BIBLIOGRAPHY

I Primary Sources

1. Manuscript

Archives of the Royal Humane Society

Archives of SS *Great Britain* Project

Wellington Collection Papers, Hartley Library, University of Southampton

2. Printed Archives

Archives of the Royal Society for the Encouragement of Arts, Manufactures & Commerce (Royal Society of Arts)

Archives of the Royal National Lifeboat Institution

Nineteenth Century Microfiche Collection, Hartley Library, University of Southampton

3. British Parliamentary Papers

BPP 1801-2 (37), Select Committee of Petition of Henry Greathead relating to his Life-boat.

BPP 1808 (133), Report on the proposed pier at Holyhead.

BPP 1810-11 (215), Report of Committee of Artillery Officers at Woolwich on Captain Manby's Invention for Saving Lives of Shipwrecked Mariners.

BPP 1813-14 (309), Papers relating to Captain Manby's Plan for Saving Lives of Shipwrecked Mariners.

BPP 1816 (409), Papers relating to Capt. Manby's Plan for Relief in Cases of Shipwreck.

BPP 1825 (415), Letter reporting result of inspection of Henry Trengrouse's invention.

BPP 1825 (489), Report of Committee of Pilotage on the invention of Henry Trengrouse.

BPP 1831 (335), Select Committee on Frequent Calamities by Steam Navigation.

BPP 1834 (195), Bill to amend laws relating to Merchant Seamen of the UK and for forming a Register of Men in Service.

BPP 1834 (590), Report of the Select Committee on Lighthouses.

BPP 1835 (398), Bill for vesting Lighthouses on Coast of UK in Corporation of Trinity House and for making provisions respecting Tolls and Duties.

BPP 1835 (603), Report of the Select Committee of the House of Commons on Accidents in Mines together with the minutes of evidence.

BPP 1836 (567), Select Committee of the House of Commons to Inquire into the Causes of Shipwrecks.

BPP 1839 (169), First Report of the Commissioners appointed to inquire as to the best means of establishing an efficient Constabulary Force in the counties of England and Wales.

BPP 1839 (273), Rep. on Steam Vessel Accidents to Committee of Privvy Council for trade.

BPP 1839 (333), Select Committee to inquire into Shipwrecks of Timber Ships.

BPP 1840 (348), Bill to continue, extend and amend Act for preventing Ships clearing out from British N. American Ports loading their cargo of Timber on Deck.

BPP 1841 (52), Session 2, 1841 Census of Population.

BPP 1842 (147), Bill for preventing Ships clearing out from Ports in British N. America, or Honduras, from loading their cargo of Timber on Deck.

BPP 1842 (501), Bill for requiring and regulating Examination of Masters and Chief Mates of Merchant Vessels.

BPP 1843 (166), Return of Hired Convict Ships, Transports, Packets and Warships that foundered at Sea since 1816.

BPP 1843 (222), Amended return of Hired Convict Ships, Transports, Packets and Warships that foundered at Sea since 1816.

BPP 1843 (549), Select Committee appointed to inquire into Shipwreck of British Vessels, and the Means of Preserving Life and Property of Shipwrecked Persons.

BPP 1844 (587), Abstact Return pursuant to Act for taking Account of Population of Great Britain, Occupation Abstract, Pt. I, England and Wales 1841.

BPP 1845 (370), Bill to continue and amend Act for preventing Ships clearing out from Ports in British N. America, or Honduras from loading their cargo of Timber on Deck.

BPP 1845 (607), Report of the Select Committee on Lighthouses.

BPP 1847 (392), Select Committee to inquire into Operation and Policy of Navigation Laws.

BPP 1847 (446), Report of the Commisioners appointed to enquire into the Expediency of making a Harbour of Refuge at Holyhead.

BPP 1847 (516), Report of Commissioners appointed to inquire into Mr Rendle's Plan for the proposed harbour at Holyhead.

BPP1847 (526), Instructions to Bds. for Examination of Masters and Mates of Merchant Vessels; List of Persons to whom Certificates of Qualification have been granted.

BPP 1847-48 (171), Report by Committee of House of Commons of Northern Lighthouses relative to Rep. by the Examining Comm. on Harbours of Scotland.

BPP 1847-48 (543), Select Committee on Miscellaneous Expenditure.

BPP 1847-48 (913), Papers relating to the commercial marine of Great Britain.

BPP 1849 (500), Bill to amend Laws relating to Pilotage.

BPP 1849 (530), Bill to amend Laws relating to Pilotage as ammended by committee.

BPP 1849 (570), Bill for improving the Condition of Masters, Mates and Seamen in the Merchant Service.

BPP 1851 (497), Abstact returns to Bd. of Trade relating to Seaman's fund.

BPP 1852 (247), Admiralty Register of Wrecks and other Casualties on the Shores of UK, 1850 and 1851.

BPP 1854 (453), Papers relative to Shipwrecks by Lightening, prepared by Sir S. Harris and presented to the Admiralty.

BPP 1856 (2024), Abstract Returns of Wrecks and Casualties on the Coasts of the UK, 1855.

Fourteenth General Report of the Colonial Land And Emigration Commissioners. H.C. 1854, Vol.28.

4. Statutes

The Statutes (Public and General) of the United Kingdom of Great Britain and Ireland

5. Parliamentary debates

PD *Hansard* (Commons), 3rd Series

6. Published letters and memoirs

Anon.: *Diary of a resident of St. Ives*, in the possesion of Col. T. J. Chellow, a resident of St. Ives, (quoted in Cornish Seafarers, Hamilton-Jenkin A.K. (1932)).

Anon.: "One long connected with the shipping interests of Liverpool", published in the Liverpool Telegraph and Shipping Gazette 11th June 1847, (quoted in *Passage to America*).

Buckingham, J.S.: *Autobiography of James Silk Buckingham*, 2 Vols., Longman, Brown, Green and Longmans, London (1855).

Childers, S.(Ed.): *William Richardson; A Mariner of England, An account of the career of William Richardson from Cabin boy in the merchant service to Warrant officer....1780-1819 as told by himself*, Murray (1908).

Cree, E.H.: *The Cree Journals, The voyages of Edward H. Cree, Surgeon RN as Related in his Private Journals 1837-56*, Ed. Michael Levien, Webb and Bower (1981).

Derrick, C.: *Memoirs of the rise and progress of the Royal Navy*, London(1806).

7. Newspapers and Periodicals

Berwick Advertiser

Blackwoods Magazine

Calcutta Journal

Colonial Review

Commercial Gazette

Cornhill Magazine

Dublin Evening Post

Economist

Edinburgh Review

Gentleman's Magazine

Illustrated London News

Leeds Mercury

Liverpool Paper

Liverpool Telegraph

Mariner's Church Sailor's Magazine

Monthly Magazine

Morning Chronicle

Norfolk Mercury

Oriental Herald

Original

Quarterly Review

Shipping Gazette

The Times

Westminster Review

West Briton

8. Journals (concerned with maritime affairs)

Nautical Magazine

Journal of the House of Commons

Mariner's Mirror

9.Contemporary (and near contemporary) printed sources - books

Anon.: *Annals of Lloyd's Register: Being a Sketch of the Origin, Constitution and Progress of Lloyd's Register of British and Foreign Shipping*, London (1884).

Ballingall, J.: *Sea Insurance the Cause of Shipwreck*, London (1834).

Ballingall, J.: *The Mercantile Navy Improved*, London (1832).

Bray, J.: *An account of wrecks (1759-1830) on the north coast of Cornwall,* edited and transcribed by A.K. Hamilton Jenkin (1975) from British Museum, Add. M.S. 37826.

Dalyell, J.G.: *Shipwrecks and Disasters at Sea; or historical narratives of the most noted calamities and providential deliverances which may have resulted from maritime enterprise, with a sketch of various expediants for preserving the lives of mariners*, 3 Vols., London and Edinburgh (1812), Printed by George Ramsey & Co. Ltd.

Dana, R.H.: *The Seaman's Manual - A Treatise on Practical Seamanship*, I. Moxton, London (1841).

Dana, R.H.: *The Seaman's Friend*, London (1845).

Defoe, D.: *The Life and Adventures of Robinson Crusoe*, first published 1719, 1890 Ed. W.P. Nimmo, Hay.

Dickens, C.: *The personal history of David Copperfield*, London (1857), Oxford University Press (1971).

Dickens, C.: *Bleak House*, London (1853), Oxford University Press (1971).

Elliot, G.: *The Mill on the Floss*, (1860), Clarenden Press, Oxford (1980).

Elliot, G.: *Felix Holt the Radical*, (1866), Clarenden Press, Oxford (1980).

Elliot, G.: *Middlemarch, a study of provincial life*, (1872), Blackwood (1873).

Gilmore, J.: *Storm Warriors, or Lifeboat Work on the Goodwin Sands*, Macmillan & Co., London (1874).

Hardy, Uncle: *Notable Shipwrecks - being Tales of Disaster and Heroism at Sea,* Re-told by Uncle Hardy, London (1879).

Lauder, T.D.: *An Account of the Great Floods of August 1829 in the province of Moray and the adjoining districts*, 3rd Ed., Elgin M'Gillivray (1873).

Lindsay, W.S.: *A History of Merchant Shipping and Ancient Commerce*, 1816-1874, 4 Vols, Sampson, Low, Marston & Co., London (1876).

Marshall, J.: *Statements as to the Proceedings of the Committee for Classing the Mercantile Marine*, London (1829).

Marryat, F.: *Peter Simple*, (1834), (Serialised in *Metropolitan Magazine* from June 1832 until December 1833).

Marryat, F.: *Mr Midshipman Easy*, (1836), (One instalment appeared in *Metropolitan Magazine* in May 1836).

Redding, C.: *A history of Shipwrecks and Disasters at Sea, from the most authentic sources*, Whittaker Treacher & Co., Ave Maria Lane, London (1833-1835).

Rushkin, J.: *Harbours of England.*

Rushkin, J.: *Modern Painters*, 1843-1860.

Stephenson, A.: *A Rudimentary Treatise on the the History, Construction and Illumination of Lighthouses*, London (1850).

Swift, J.: *Gulliver's Travels*, (first published 1726), Oxford University Press (1986).

10. Contemporary (and near contemporary) printed sources - pamphlets

Anon.: "Directions for Navigating In and Throughout the North Sea.....", London (1816). (Reproduced in *For Those in Peril*, National Maritime Museum, HMSO (1963)).

Congreve, W.: "Details of the Rocket System Shewing the Various Applications of this Weopon both for Sea and Land Service, and its different uses in the Field and in Seiges", London (1814).

Hillary, W.: "An appeal to the British nation..... , *Pamphleteer*, London (1824), also by Whittaker, London (1824).

Hillary, W.: "A Plan for the Construction of a Steam Lifeboat, also for the Extinguishment of Fire at Sea", Whittaker, London (1824).

Legg, J. H.: "The *Ocean Monarch.* A Poetic Narrative, With an Original and Authentic Account in Prose of the Loss of this ill-fated Vessel", Deighton and Langton, Liverpool and Smith and Elder, London (1848). (from Liverpool Record Office)

11. Contemporary (and near contemporary) printed sources - articles

Anon.: "Advocating voluntary examinations for masters and mates of the merchant navy, *Economist*, 9th November 1844.

Anon.: "Memorial of Robert Owen("Late of New Lanark") to the Right Honourable the Lords of Her Majesty's Treasury", A Supplementary Appendix to the First Volume of the *Life of Robert Owen*, Vol.IA, (1858).

Anon.: "On the Frequency of Shipwreck", *Edinburgh Review*, p.342, LX, January 1834-35.

Anon.: "Remarks on the late storms of October 25-26th and November 1st 1859", *Proceedings of the Royal Society*, pp.222-224, X, London (1860).

Anon.: "Sailors", pp.211-212 & pp.218-221, *Original*, 1835.

Anon.: "Shipwrecks", *Quarterly Review*, pp.185-86, 104 July-October 1858.

Fitzroy, R.: "Notice of the Royal Charter Storm in October 1859", pp.561-67, *Proceedings of the Royal Society*, X, London (1860).

Fothergill, A.: "On the Preservation of Shipwrecked Mariner's", *Gentleman's Magazine*, p.131, February 1802, Vol.I, Pt.72.

Manby, G.W.: "Reflections on Shipwreck", Yarmouth (1838).

Oastler, R.: "Yorkshire Slavery", *Leeds Mercury*, 15th October 1830.

Tegg, T.: "The Loss of the Anson" quoted in *For those in Peril*, National Maritime Museum, HMSO (1963).

12. Statistics of shipping and seamen

Admiralty Register of Wrecks

Hardy's Register (1818)

Lloyd's Register (Green Book 1797-1834)

Lloyd's List

Lloyd's Register of British and Foreign Shipping (1834 onwards)

Mitchell, B. R.: Abstract of British Historical Statistics, Cambridge (1962).

Shipowner's Register (Red Book 1797-1834)

Wrecks Register of the Board of Trade

II Secondary Sources

1.Books

Abell, W.: *The Shipwright's Trade*, Cambridge University Press (1948).

Anon.: *Annals of Lloyd's Register, 1934.*

Anon.: *Lloyd's List, 1734-1984, 250th Anniversary Supplement*, Lloyd's of London Press Ltd.

Anon.: *"Lloyd's Register of Shipping" 1760-1960.*

Anon.: *Seafarers and their Ships*, National Maritime Museum HMSO (1963).

Baker, W.A.: *From Paddle steamer to nuclear ship – a history of the engine powered vessel*, London (1965).

Benham, H.: *Once upon a Tide*, 1971 (1955) George Harrap & Co. Ltd.

Bennett, T.: *Shipwrecks around Wales*, Vol.I, Happy Fish (1987).

Bennett, T.: *Shipwrecks around Wales*, Vol.II, Happy Fish (1992).

Bishop, P.J.: *A Short History of the Royal Humane Society to mark its 200th Anniversary*, London (1976).

Bird, Sheila: *Mayday - Preserving Life from Shipwreck off Cornwall*, Ex- Libris Press (1991).

Boase, Frederick: *Modern English Biography*, 1892-1921 (re-printed 1965).

Bracegirdle, Brian and Miles, Patricia H.(Eds*): Thomas Telford*, David & Charles, Newton Abbot (1973).

Brazell, J. H.: *London Weather*, Metrological Office Publication, HMSO (1968).

Butt, J. and Clark, I.F.: *The Victorians and Social Protest*, David & Charles, Newton Abbot (1973).

Carter, C.: *Cornish Shipwrecks*, Vol. II, David & Charles, Newton Abbot (1970).

Cassels, Ian: *No more Paraffin Oilers*, Whittles (1994).

Cecil, D.: *Melbourne*, Constable, London (1965).

Chambers, J.D.: *Workshop of the World*, 2nd Edition (1979).

Clapham, J. H.: *An Economic History of Modern Britain*, Cambridge (1926).

Clements, P.: *Marc Isambard Brunel*, Longmans (1970).

Coleman, T.: *Passage to America*, Hutchinson, London (1972).

Cotton, Evan: *East Indiaman – The East India Company's Maritime Service*, The Batchworth Press, London (1949).

De Boer, G.: *A history of the Spurn Lighthouse*, East Yorkshire Local History Society, York (1968).

Draper, S.: *Shipwrecks*, National Maritime Museum Publication, HMSO (1992)

Dunning, G.C.: *History of Niton*, (1951).

Farr, G.: *British Lifeboat Stations - A Historical and Geographical List*, Bristol (1979).

Farr, G.: *Wreck and Rescue in the Bristol Channel - the story of the English Life-boats*, Barton (1966).

Farr, G.: *Wreck and Rescue on the Dorset coast*: *The Story of the Dorset Lifeboats*, Barton (1971).

Finch, R.: *Coals from Newcastle*, Longmans (1973).

Harris, Leonard: *London General Shipowner's Society, 1811-1961*, London (1961).

Higgins, D.: *The Beachmen*, Terence Dalton (1987).

Hill, C.P.: *British History 1815-1914*, OUP (1981).

Hope, Ronald: *New History of British Shipping*, John Murray (1990).

Houghton, W.E.: *The Victorian Frame of Mind* 1830-1870, London (1957).

Howarth, P.: *Lifeboat in Danger's Hour*, Hamlyn, London (1981).

Hugill, Stan: *Shanties from the Seven Seas as Collected by Stan Hugill*, Routledge & Keegan Paul, London (1961).

Hume, David: *A Treatise on Human Nature*, L.A. Selby-Bigge, 2nd Edition, Oxford (1978).

Kipling, R.: *Rescue by Sail & Oar: Lifeboats before the days of engine power*, Published in association with the RNLI, Topsail Books (1982).

Larn, R.: *Devon Shipwrecks*, David & Charles, Newton Abbot (1974).

Larn, R.: *Shipwrecks of Great Britain and Ireland*, David & Charles, Newton Abbot (1981).

Lamb, H.H.: *Historical Storms of the North Sea, British Isles and N.W.Europe*, Cambridge (1991).

Langmaid, K.: *The Sea, Thine Enemy*, Jarrolds (1966).

Lavery, Brian: *Nelson's Navy*, London (1989).

Llewellyn Smith, Hubert: *The Board of Trade*, G. P. Putnam's & Sons Ltd, London & New York (1928).

Lloyd, C.: *The British Seaman, A Social Survey*, Collins (1968).

Long, N.: *Lights of East Anglia*, Terence Dalton (1983).

Macdonagh, Oliver: *Early Victorian Government, 1830-1870,* Weidenfeld & Nicolson, London (1977).

Maltster, R.: *Saved from the Sea*, Terence Dalton (1974).

Martin, P. M.: *Mastery and Mystery: a study of two religious poems - the wreck of the Deutschland by G. M. Hopkins and Ash Wednesday by T.S. Elliot*, Oxford University Press (1957).

Medland, J.C.: *Shipwrecks of the Wight*, Coach House Publications, (1986).

Mew, F.: *Back of the Wight*, The County Press, Newport IOW, (1990).

Mckee, Alexander: *The Golden Wreck "The Tragedy of the Royal Charter"*, Souvenir Press, 2nd Edition, (1986).

Murray, Venetia: *High Society, A Social History of the Regency Period*, Viking (1998).

Palmer, Sarah: *Politics, Shipping and the repeal of the Navigation Laws*, Manchester University Press (1990).

Parkhurst, P.G.: *Ships of Peace*, New Maldon (1962).

Prouty, R.: *The Transformation of the Board of Trade, 1830-1855*, Heineman, London (1957).

Richie, G.S.: *The Admiralty Chart, British Naval Hydrography in the Nineteenth Century*, Pentland (1995).

Rigman, T. and Brodefors, R.: *The Commercial History of Shipping*, Rinman & Linden, Goteborg (1983).

Robertson, R.M. & Walton, G.M.: *History of the American Economy*, 4th Edition, New York, Harcourt, Brace & Jovanovich (1979).

Shattock, Joanne: *Politics and Reviewers – the Edinburgh and the Quarterly*, Leicester University Press (1989).

Taylor, A.J.: *Laissez-Faire and State Intervention in Nineteenth Century Britain*, Macmillan (Anchor Press 1972).

Thornton, R.H.: *British Shipping*, Cambridge University Press (1939).

Warner, Oliver: *The Lifeboat Service – A History of the RNLI 1824-1974*, Cassel, London (1974).

Watkins, G.G.: *Coastwise Navigation*, Stanford Maritime, London (1974).

Webb, W.: *An Official History of HM Coastguard*, HMSO (1976).

Whitman, A.: *Charles Turner*, London (1907).

Yorke, Barbara and Reginald: *Britain's first Life-boat Station*, Formby (1982).

2. Articles

Anon.: *For those in Peril*, National Maritime Museum, HMSO (1963).

Anon.: : *Seafarers and their Ships*, London HMSO (1955).

Boase, T.R.S.: "Shipwrecks in English Romantic Painting", *Journal of the Warburg and Courtald Institutes*, Vol.XXII, 1959.

Clapham, J.H.: "Europe after the Great Wars 1816-1820", *Economic Journal*, Vol.30, 1920.

Cooper, E.R.: "East Coast Brigs", *Mariner's Mirror*, p.148, Vol.XXXI, No.3, July 1945.

Corlett E.C.B.: "The Stranding of the SS Great Britain in Dundrum Bay", *Mariner's Mirror*, pp.117-126, Vol.LXI, No.1, February 1975.

de Courcey, A.: "When London was so dirty even the grass refused to grow" *Daily Mail*, November 8th 1994.

Fulweiler, H.: "Why, tears! Is it? Tears: Gerald Manly Hopkins and Victorian sentimentality", *Thought*, Vol.65, No.259, December 1990.

G.A.B.: "War Rockets in the British Mid -Victorian Fleet", *Mariner's Mirror*, p.173, Vol. XXXI, No.3, July 1945.

Jones, S.: "Blood Red Roses: The Supply of Merchant Seamen in the Nineteenth Century", *Mariner's Mirror*, pp.429-442, Vol. LVIII, No.4, November 1972.

Laquer, T.W.: "The Human Narrative", *The New Cultural History* , University of California Press, 1989.

Leach, N.: "Early Lifeboats in Liverpool Bay", *Mariner's Mirror*, pp.21-31,Vol.LXXXI, No.1, February 1995.

Phipps Hornby, W.M.: "Grace Horsely Darling 1815-1842 Northumbrian Heroine", *Mariner's Mirror*, pp.55-60, Vol.54, No.1, February 1968.

Probert, W.B.C.: "The evolution of rocket based maritime rescue systems in the first half of the nineteenth century", *Mariner's Mirror*, pp.434-449, Vol.XXVI, No.4, November 1997.

Rule, J.G.: "Wrecking and Coastal Plunder", *Albion's Fatal Tree - Crime and Society in Eighteenth Century England*, p.167, Eds.: D. Hay, P. Linebaugh, J.G. Rule, E.P.Thomson & Cal Winslow, Penguin (1975).

Sharp, R.: "Lionel Lukin - Lifeboat Inventor", p.224, *The Life Boat* (Journal of the RNLI), Spring 1991.

Salisbury, W.: "Early Tonnage Measurement in England", *Mariner's Mirror*, pp.41-52, Vol.LII, No.1, February 1966.

Schroder, W.: "Zur grossen Sturmflut vom Februar 1825", *Acta Hydrophysica*, Band XVII (Heft1), pp.47-51, 1972.

Shee, G.F.: "Sir William Hillary - founder of the institution," *The Life Boat* (Journal of the RNLI) Vol.XXIV, No.273, p.159, May 1921.

Shields, L. and Fitzgerald, D.: "The "Night of the Big Wind" in Ireland, 6th -7th January 1839", pp.31-43, *Irish Geography*, 22(1), 1989.

Winter, Alison.: "Magnetic Bearings of Vauxhall Chimney, as Painted on the Dock Walls, Liverpool" in "Compasses All Awry: The Iron Ship and the Ambiguities of Cultural Authority in Victorian Britain", *Victorian Studies*, Autumn 1994, Vol.38, No.1.

Venning, B.: "A Macabre Connoisseurship; Turner, Byron and the apprehension of shipwreck subjects in early nineteenth century England", *Art History*, Vol.8, No.3, September 1985.

Yarrow, D.: "A Journal of the Walcheren Expedition", 1809, *Mariner's Mirror*, pp.183-189, Vol.LXI, No.1, February 1975.

3. Miscellaneous

Dictionary of National Biography (DNB)

Dorien Smith, Charlotte, Davies, C.J. and Jenkins, Noel (Compilers): "Shipwrecks around the Isles of Scilly", Isles of Scilly Museum Publication No.3, 1950.

List of Appendices

Appendix A

Emigration - letter

Letter of "One Long Connected with the Shipping Interests of Liverpool" published in the Liverpool Telegraph and Shipping Gazette of 11th June 1847 and quoted in T. Coleman, *Passage to America*, Ch.8 "Washed Away; Drowned Altogether", p.119.

This letter portrays a real feel of the hopelessness and fear of the emigrant in a situation of shipwreck at this time and appeals for an inquiry to see if man rather than nature is to blame:

> Another emigrant ship has foundered and 248 of our fellow creatures have been launched, unshrived into eternity. And another, and another will share the same fate unless a strict and searching enquiry be instituted to ascertain if man is not guilty in some measure of causing so great a sacrifice of human life. The tale of one unfortunate vessel is the tale of many..... A few days and the circumstance is forgotten - it is only the foundering of another emigrant ship - remembered by the relatives. Of the 251 passengers (the supposed number on board) only three escaped. The rest were drowned "between decks" or washed from the wreck. No agonising cry was heard - no piercing scream for help arose above the howling of the waves - all were silent, speechless, and sank into a sleep of mute death.... O God! it is a most harrowing picture.

Appendix B

The growth of merchant shipping during the first half of the nineteenth century

According to B.R. Mitchell (*Abstract of British Historical Statistics*, pp.217-218) the total amount of shipping registered in the UK during this period increased rapidly from 1839 to 1866; whilst the total number of ships decreases from 1866 the actual tonnage carries on increasing as the steamer tonnage is increasing at a far faster rate than the sail tonnage is decreasing. Also, it is interesting to consider that the dip in the total amount of shipping registered about 1827 may have arisen from a new registry Act that resulted in the exclusion of many ships that had previously been lost but which had been continued on the old register because no evidence of loss had been produced.

Again, according to Mitchell the yearly figures for the building of all types of ship peaked in 1840, 1855 and 1864. The total amount of ships in 1840 and 1855 particularly far exceed the peaks of tonnage registered, most likely indicating a greater amount of lighter sailing ships rather than heavier steam ships . The situation by the 1864 peak indicates weight and tonnage figures far more in sequence and from that date forward the figures include a vast increase in tonnage of shipping over quantity demonstrating the dramatic rise in the use of steamships after 1868 (Mitchell, *ibid.*, pp.220-221).

In studying the cumulative totals of shipping registered in the UK year on year as new ships were built there is a tremendous trough between 1819 and 1836 which must be accounted for by the post-war glut of old ships in decay at a time of economic hardship and the consequent loss essentially by shipwreck as little ship breaking occurred, this was probably the greatest concentrated loss of British shipping at a time when it was probably most needed in terms of the economy. The situation turned around by the second half of the century as between 1865 and 1885 British steamship tonnage rose from one million to four million tons, sailing tonnage fell from five million to three and a half million, according to Sir John Clapham "single handed, Britain had created modern ship-building."

Appendix C

The loss of the *Rothsay Castle*

The following detailed contemporary quotes concerning the loss of the *Rothesay Castle* mention lack of lifeboats, fear, panic and an intoxicated Captain. Incidents such as this and their consequent widespread publicity helped to sway public opinion as to the urgency of reform.

The wreck of the *Rothesay Castle*:

Lloyd's List report of the loss of the *Rothesay Castle* in August 1831 reads:

> Beaumaris, 18th Aug. The *Rothesay Castle*, Atkinson from Liverpool to this place, drove on Dutchman's Bank in this Bay, about 12 o'clock last night, and went to pieces in about an hour and a half. Out of 105 Passengers, the Master and Crew, (eight in number) and four musicians, only 16 of the passengers, four of the Crew and one Musician have been saved.

The Times for 22nd August 1831 (p.5, Col.d) gave an account from the *Liverpool Journal*:

> ....According to an Act of Parliament, every vessel ought to be provided with a strong and capacious boat; but owing to the sense of great security, the steam vessels which sail short distances are generally without them....
>
> ....As soon as it was known that the wreck had taken place, the life-boat and pilot-boat put off from Trwynde Point....

In an account of one of the survivors he mentions that:

> .... the sea appeared rough, and Mr Tarry being, in common with others greatly alarmed, went down to the cabin, where the captain was at dinner, and requested him to put back. His reply was "I think there is a d-d-deal of fear on board, and very little danger. If we were to turn back with passengers, it would never do - we should have no profit" - Mr Nuttall's narrative.

> ....When the vessel struck, the passengers rushed forward, but the Captain ordered them aft, and seeing him consult with a mate, a gentleman cried out.... "it's all over with us; the Captain and mate are preparing to leave the vessel", at that instant, no doubt from accident, the Captain fell or tumbled overboard, and was the first person drowned, Mr Nuttall says that he was intoxicated all the way....

In defence of the owners of the vessel the following abstract appeared in a letter to *The Times*. *The Times*, August 21st, a letter from a gentleman of Liverpool:

> ....The Captain was a lieutenant in the navy - a pleasant active and experienced officer....This vessel ran in opposition to others, and in no doubt many persons have interested reasons for injuring her concern. The vessel was thoroughly put into good order with new boilers etc. the week before last, and certificates will be produced from those who examined her worthiness. As to the poor Captain, Mr Watson (the father of the owner) has in his possession a letter from a clergyman and other inhabitants of Carnarvon, recommending him in the strongest terms, so that William Watson cannot be reproached for having employed him....

Further information on the wreck of the Rothesay Castle may be had from: Joseph Adshead (1800-1861), "A circumstantial narrative of the wreck of the Rothesay Castle steam packet, on passage from Liverpool to Beaumaris, August 17th 1831.... Indisputably authentic....illustrated by engraving's, copious notes etc. by Joseph Adshead", Hamilton, Adams & Co., London (1833). Nineteenth Century Microfiche Collection, Hartley Library, University of Southampton.

Appendix D

List of Witnesses to the 1836 Shipwreck Inquiry

Showing the date of the appearance to give evidence, the significance of the witness and their principle contribution to the inquiry:

(1) 1/7/1836, Mr James Ballingall: writer on merchant navy matters and sea insurance.

(2) 5/7/1836, Mr Henry Woodroffe: secretary to the Seamen's Society at South Shields, witness to malpractice in shipbuilding.

(3) 5/7/1836, Mr James Ballingall (as above - 2nd appearance).

(4) 5/7/1836, Mr Richard Bonniwell: navy shipwright, explained the significance of the "solid bottom".

(5) 8/7/1836, Mr Henry Woodroffe (as above - 2nd appearance).

(6) 8/7/1836, Mr George Coleman: teacher of navigation and nautical astronomy - witness to inadequacies of masters and raised proposal of a Marine Board.

(7) 8/7/1836, Mr Joseph Brindley: shipbuilder, devised and published a new system of naval architecture.

(8) 12/7/1836, Mr Henry Woodroffe (as above - 3rd appearance).

(9) 12/7/1836, Lieutenant Robert Wall: naval architect, critical of marine insurance practices etc. Supposed inventor of "oblique framing" ship construction - many recommendations made.

(10) 12/7/1836, Mr John Henry Hodgson: inventor of pumping arrangement dependent upon a clear deck and a capstan.

(11) 12/7/1836, Lieutenant James Rocheid Forrest RN: government agent for emigration at Leith, critical of sea-insurance practices and over-lading.

(12) 12/7/1836, Captain Hugh Evans: Harbour Master at Holyhead, recommendations for asylum ports and harbours.

(13) 15/7/1836, Mr Robert Brindley: a surveyor of shipping and a naval architect, advocate of method of displacement to ascertain ships' tonnage.

(14) 15/7/1836, Mr Charles Lorimer: adjuster of averages, acquainted with insurance practices.

(15) 19/7/1836, Captain James Couch: concerned with practical aspects of ships' rigging - inventor of a "patent channel".

(16) 19/7/1836, Mr John Anderson: Secretary to two shipping mutual assurance associations - "clubs".

(17) 19/7/1836, Mr Samuel Baker: brought the Marine Spiral Buoy of Mr Michael Logan to the attention of the Committee.

(18) 22/7/1836, Captain George William Manby: barrack master at Yarmouth inventor and innovator of the line mortar rescue system.

(19) 22/7/1836, Mr Thomas Adams: Secretary to the Coal Trade Mutual Insurance Association, practices within the associations.

(20) 22/7/1836, Peter Barlow Esq FRS: mathematical professor concerned with the use of the magnetic compass.

(21) 22/7/1836, Mr Henry Moores Rowe: a commander of ships, testimony as to the fitting of Scott's patent cable springs.

(22) 26/7/1836, Mr Nathaniel Warner Symonds: Secretary to the Society of *Lloyd's Register*, expert on their affairs.

(23) 26/7/1836, Mr John Henry Hodson: (as above - 2nd appearance) ex-navy man, inventor, advocate and demonstrator of method of displacement to find tonnage.

(24) 29/7/1836, Mr George Bayley: Surveyor of shipping for *Lloyd's Register Society*, had investigated the workings of the new society by travelling around the country.

(25) 2/8/1836, Mr John Marshall: agent of the Emigration Committee, shipowner, had been instrumental in affecting the alterations in the classification system at *Lloyd's*.

(26) 2/8/1836, Mr Charles Parnell: Dockmaster at Liverpool, observations on intemperance amongst other issues.

(27) 2/8/1836, Captain Edward Pelham Brenton RN: officer in His Majesties Navy, critical of ignorance and drunkenness of masters and crews.

(28) 2/8/1836, Mr Oliver Lang: master builder of naval ships - expert on building techniques, especially the concept of "filling-in".

(29) 4/8/1836, Mr John Pym: shipping agent at Liverpool, very aware of local navigational dangers.

(30) 4/8/1836, Arthur Willis Esq.: insurance broker and underwriter at *Lloyd's* for nearly forty years.

(31) 4/8/1836, Mr William Henry Phillips: teacher of mathematics and navigation, ideas concerning rotary motion of sails.

(32) 4/8/1836, Captain George William Manby: (as above - 2nd appearance) ideas for the formation of a private company for saving lives and property from shipwreck.

(33) 5/8/1836, Mr John Walker: East India Company, in charge of charts following the death of Captain Horsburgh.

(34) 5/8/1836, Mr William Bush: surveyor and engineer, proposed placing of lighthouses in situations where "it is not practicable to place them".

(35) 5/8/1836, Mr Henry Trengrouse: inventor and innovator of rocket based system of maritime rescue.

(36) 5/8/1836, Mr John George Cooper: employed in the Secretary's office at *Lloyd's.*

(37) 5/8/1836, Mr George Charlton: master mariner, concerned with ship construction.

(38) 5/8/1836, Sir Edward Codrington: distinguished naval officer, critical of habits of intoxication amongst British seamen.

Appendix E

Description of classes at *Lloyd's*

At the time of the Inquiry into shipwrecks of timber ships in 1839 the register letter designation signified the following ship types:

A1 signified ships of the first description of the first class
*AE1 signified ships of the second description of the first class for long voyages
AE1 signified ships of the second description of the first class for short voyages
E1 signified ships of the second class
I1 signified ships of the third class

When marked A2 or AE2 etc. or A or AE, it signifies that the anchors, cables, masts or spars are not sufficient; or that they may be in want of additional fastenings

Taken from BPP1839 (333). Also, see Anon.: *Annals of Lloyd's Register: Being a Sketch of the Origin, Constitution and Progress of Lloyd's Register of British and Foreign Shipping*, London (1884).

Appendix F

List of vessels fitted with Paddle-Box boats

Captain George Smith's paddle-box boats had received wide acclaim by the time of the Shipwreck Inquiry of 1843. According to Smith's testimony to the Inquiry, besides 26 Men-of-War fitted and a further 14 orders received from the Board of Admiralty their were 14 Royal West India Steamers and 7 other ships fitted with paddle-box boats. Ample evidence that in some areas of the merchant service at least they were beginning to take the question of shipwreck and the need for safety seriously.

Merchant vessels belonging to the Royal West India Steamers included:

Avon
Thames
Isis
Trent
Solway
Severn
Tweed
Dee
Medway
Teviot
Forth
Clyde
Medina
Tay

(evidence of Capt. George Smith to the 1843 Shipwreck Inquiry. BPP1843 (549), Q.2998, p.195.)

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THE EVOLUTION OF ROCKET-BASED MARITIME RESCUE SYSTEMS IN THE FIRST HALF OF THE NINETEENTH CENTURY

By W.B.C. Probert

One of the most frequent circumstances of shipwreck in the early nineteenth century was that of a heavily laden vessel being driven on to a lee shore. At a time when the busiest part of the English coast was along that relatively shallow and exposed stretch of the North Sea from the north-east seaports to London incidences of shipwreck by grounding were commonplace. Coincidentally, in 1807 two men were witness to such disaster in different parts of the country: on the east coast George Manby witnessed the wreck of HM Gunbrig *Snipe*, stranded within 50 yards of the beach at the back of the pier at Yarmouth, Norfolk; whilst in the west country Henry Trengrouse had witnessed the wreck of the *Anson* frigate upon a sandy beach in Mount's Bay, Cornwall. In both instances they separately vowed to produce an effective means to help alleviate suffering in such disasters.

Both men had independently soon arrived at the conclusion that a rope communication was the only effectual means of reaching the ship in order to get the stranded mariners off. Trengrouse, in giving testimony to the 1836 Shipwreck Committee, is quoted as saying:

> The excitement I felt to gain all possible information respecting the nature of shipwreck, subsequently led me to read all the narratives that came my way or that I could procure, as well as to anxiously listen to verbal recitals of those that had occurred upon the coasts of Cornwall and elsewhere; and my reflections upon all these, in connection with those I have personally witnessed most clearly decided that to save lives in case of shipwreck under general circumstances, a rope communication must ever be the first thing to be accomplished; I have seen in a variety of instances the want of it, and consequent melancholy effects; and where a rope communication has been established, its utility clearly manifested itself.[1]

In order to open a rope communication several methods occurred to Trengrouse, but the use of a rocket stood out as the most prominent.

Since 1803 Manby, barrack-master at Yarmouth, had witnessed

> ...the loss of vessels with all their crews within a few yards from the shore, from the difficulty by manual exertion to throw a rope by hand against a furious wind...[2]

With the loss of the *Snipe* on 18 February 1807 he resolved to act. Giving testimony to the Shipwreck Committee in 1836 he stated:

> On the close of that mournful scene, I vowed that if Providence blessed me with life I would apply myself to produce some effective means by which not only the sufferers might have been rescued, but similar occurrences in future be prevented... since the introduction of my plan for effecting communication with stranded vessels by means of projecting a rope by the force of gunpowder, from that time not a single life has been lost except in one instant.[3]

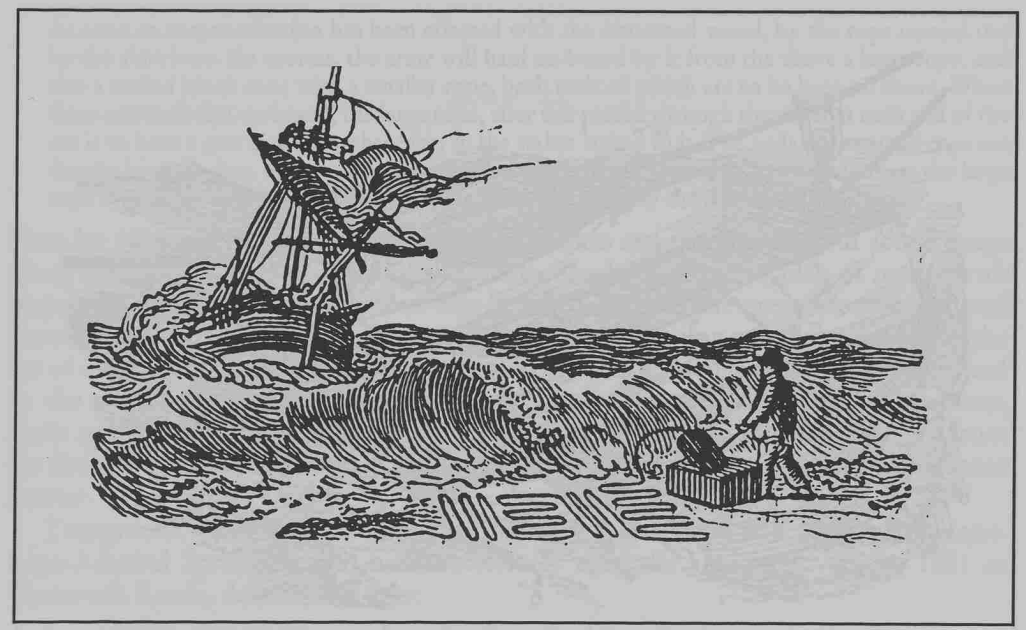

Fig. 1. Manby's Mortar – Representation of Mortar, Shot and Line, prepared for effecting a Communication. (*Gentleman's Magazine*, 1821)

Force of gunpowder for Manby meant the use of a mortar. Thus by the close of 1807 there were two separate developments of rescue apparatus, both borne out of direct experience of marine disaster. Whilst Manby had developed the use of a mortar to effect the line connection between the stricken vessel and the shore the relevance to the evolution of rocket-based systems of rescue lay in the means of adapting that line connection to the process of rescue.

Manby's method, first demonstrated before a Committee of the Suffolk Humane Society at Lowestoft on 26 August (and 10 September) 1807[4] and subsequently to a Committee of Field Officers of Artillery at Woolwich on 19 January 1808[5] concerned the use of a mortar gun whereby a rope to the stranded vessel was conveyed (**Fig. 1**). The method of rescue had been developed from an earlier idea from some twenty years before by a Lieutenant Bell[6] whose object was to cast a shot from a mortar prepared on board, whereas Manby's method was the reverse. Captain Manby stated:

> An iron mortar cast in its bed, and weighing with its bed two and a quarter hundredweight (which may be removed from place to place by two men on a hand barrow with ease) will propel a 24lb shot, with an inch and a half rope attached to it, 250 yards, or a deep-sea line, 320 yards, against the utmost power of the wind.[7]

There still remains some controversy as to the original inventor of this system as Dr John Carey claims to have been the original inventor as early as 1803 – although he does not seem to have been anything like the innovator that Manby was.[8] Manby demonstrated his apparatus again on 29 April 1809, showing its suitability at night and in cases of stormy weather to a committee of colonels and field officers.[9] He not only developed the use of the mortar but was instrumental in recommending those parts of

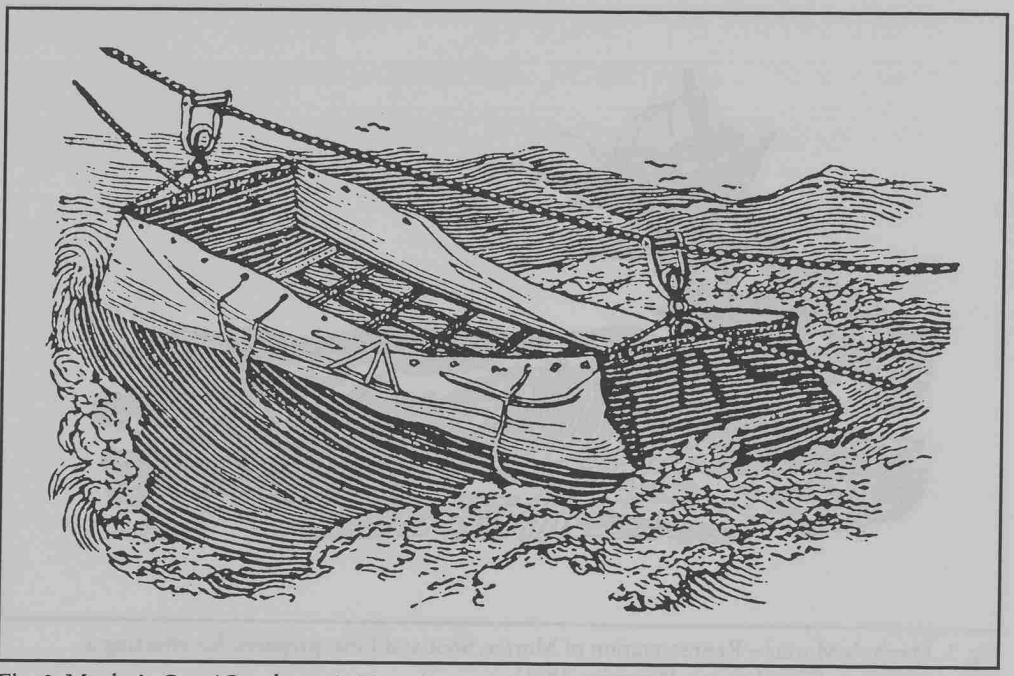

Fig. 2. Manby's Cot. (*Gentleman's Magazine*, 1821)

the coast that should be attended by such devices of rescue. He embarked upon a survey of the coasts on the basis of an agreement entered into with Lord Sidmouth, Secretary of State for the Home Department. On 5 October 1811, having surveyed and put forward recommendations concerning the provision of humanitarian aid for vessels in distress, he became too ill to continue and was advised to curtail his journeys into Devon and Cornwall as he would not be able to produce the relevant survey by the time that his agreement expired on 5 October 1812.[10] Manby eventually produced a plan of his rescue equipment and made contingency for all possible situations respecting its use that he could envisage.[11] The attributes of the system had been discussed in Parliament[12] and instructions were given by HM Secretary of State for the Home Department for the purpose of carrying into effect Manby's plan. A letter of direction to supply apparatus and stores to Manby's chosen stations was issued from Whitehall in September 1815[13] and by 28 May 1816 a list of stations was published together with proposed stores for each station for the purpose of putting Manby's plan into action – 97 stations principally along the south and east coasts essentially under the jurisdiction of the Water Guard (later the Coastguard). Manby's plan concerning rescue was published in an extensive report covering in excess of 7,000 words, with engravings designed by Captain Manby and executed 'at considerable expense by Mr Berryman'. Captain Manby covered all the technical detail of varying shot and rope techniques including methods of rescue 'once communication had been effected'. His descriptions include a basket or cot 'made buoyant by corks or kegs of air' used to transport survivors along a large rope (**Fig. 2**):

> As soon as communication has been effected with the distressed vessel, by the rope carried out by the shot from the mortar, the crew will haul on board by it from the shore a large rope, and also a trailed block rove with a smaller rope, both ends of which are to be kept on shore. When these are made fast on board, the large rope, after it is passed through the roller at each end of the cot is to have a gun tackle purchase fast to the stakes lashed to it. The ends of the small rope are then to be made fast, one to each end of the cot, and the cot travelling by the rollers on the large rope is to be worked by the bite of it to the ship, and back by the people on the shore.[14]

Thus by 1816, after much development, application and consideration of actual usage along the most vulnerable areas of the coasts, Manby's extensive plan of rescue with respect to specific coastal locations was installed. Besides the great amount of detail concerning the operation of the mortar and its various attributes, Manby described the use of a travelling cot that was to run on pulleys suspended from the hawser established by the mortar line; this must have been in effect the forerunner of the Breeches buoy, made so effective later in the century by the use of rockets to establish the link from the shore to the stricken vessel in place of the less efficient and much more cumbersome mortar.

Trengrouse, using rockets instead of mortars, had arrived at a similar technique. Rear-Admiral Spranger, who had successfully tried the equipment during 1821 in Yarmouth Roads, described it thus:

> It consisted in throwing, by a rocket, a line from the ship to the shore, and when the communication is once established, binding to that a deep sea line, or any of the running rigging; and when these reach the shore, a larger rope, sufficiently strong to bear four men in a chair, which is pulled on shore by means of the small rope, and returned empty to the ship for a fresh cargo. The chair was on shore five minutes after firing the rocket.[15]

Manby had used a mortar from the shore to effect the rope communication whereas Trengrouse had adapted and developed the use of the Congreve[16] rocket and argued strongly in favour of ships carrying the equipment so that it would always be immediately available and with the wind blowing on-shore in the majority of cases this ought to aid the range of the rocket:

> To project the rope from the ship to the shore, is assuredly the method most to be depended upon; as the vessel in that case carries the means with her, and need not rely on fortuitous assistance from the shore.[17]

Referring to the problem of bridging the gap between the stricken vessel and the shore a contemporary report reads:

> Many inventions have already been brought into practice either very partially, or not at all, having failed of producing the benefits anticipated by too sanguine benevolence of their authors. Capt. Manby's apparatus, although resembling Mr Trengrouse's in some particulars, is both less portable and less likely to succeed in actual practice.[18]

Written in 1822, the fact was that Manby's system although infinitely less portable had gained favour with the government, who had directed testing and trials of it since 1808, several rescues having already been achieved,[19] and had awarded Manby a total of £6,000 by 1821.[20] Trengrouse's system was potentially by far the better method principally because of its use of the rocket and consequent portability and, as events were to prove, the greater power of the rockets in achieving their targets (**Fig. 3**). Trengrouse was keen to develop his system and further the aims of life-saving. In Trengrouse's correspondence to the Royal Humane Society concerning shipwreck, he states when

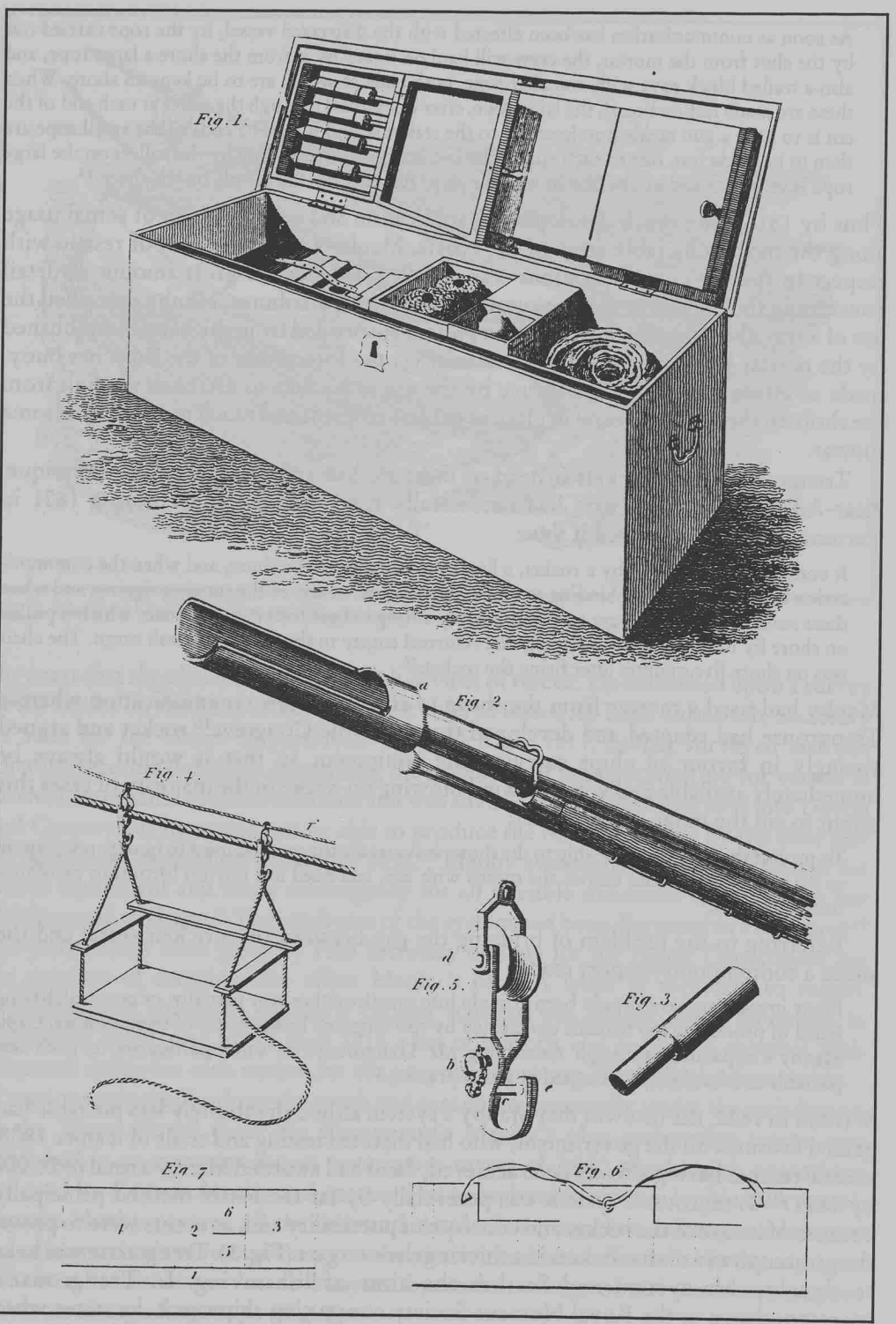

Fig. 3. Mr H. Trengrouse's apparatus for rescuing persons from shipwreck. (*Transactions of the Society of Arts*, 1820)

referring to the aims of the Society in saving the 'lives of hundreds perhaps thousands at once':[21]

> This would indeed be glorious work! I do assure you Sir, that I clearly feel the most heartfelt solid pleasure in anticipating the good that is about to be rendered my fellow creatures through my instrumentality in the hands of providence. To be wholly employed in prosecuting this work and in establishing a *wreck police* all along the coasts for the preservation of Lives and Property in case of shipwreck (and which may be done without any standing expense to Government) would be the highest of my ambition...[22]

This letter, written on 13 April 1818, expresses a sentiment that would have appeared to have been gathering pace for several years against the 'horrors of tempest and shipwreck'.[23] In some of its detail and certainly in its vision it would appear to pre-date the essential demand of Sir William Hillary's *Appeal ... from Shipwreck*[24] by six years in calling for the notion of a nationally organised body funded by public subscription rather than a government legislated service; as such it expresses the feelings and intent of many contributors to the cause of the alleviation of suffering due to shipwreck that were to make their contributions to that cause in the years to follow.

It may seem a mystery why the Trengrouse equipment was not taken up by the authorities at the time for it clearly appeared to have distinct advantages over Manby's mortars – Trengrouse continually strove for recognition and acceptance. It is all the more a mystery when one is aware of all the recommendations and favour the system won. Perhaps Manby's case can help shed light here. Manby had quickly and effectively developed his system, he had demonstrated it to government officials and by 1816 established a systematic distribution of necessary equipment at mortar stations positioned at key points along the coasts. Manby earned the recognition 'of every country and received honours from four sovereigns'.[25] He had refused to take out a patent and, the very opposite, tirelessly forwarded plans of his system to wherever it was required:

> ...in France they are now carrying my plans into effect, and they have done me the honour of appointing me president of the British section, with a request that my system be universally adopted, and I forwarded 500 of them and sent them abroad; and by this time they are in all quarters of the globe...[26]

Whilst this was the case abroad Manby did not receive any formal recognition from the Crown;[27] indeed it was his earnest wish to have the superintendence of his system, for which he was refused, and it was this apparent snub that caused him to write more than once to the First Lord of the Treasury, Lord Melbourne, who never even replied to him. Not content with this he wrote to the Secretary of State for the Home Department with a detailed list of the services he had provided for the country. Ultimately, feeling that he had been overlooked due to 'some odium in my character or conduct', he sought the reassurance of Lord John Russell who stated 'that such was not the case, and that he had not the most distant intention to cast any imputation on my character'. Manby acknowledged that the government had done everything they could to render the system universal.[28] The only thing missing was to give him control of it, despite the fact that the apparatus was at stations and places on the coast that he had personally pointed out.

The government had tried, tested and taken Manby's system as a proven means of effecting rescue and had done this at considerable expense and effort. It may appear

hardly surprising therefore that when Trengrouse tried to get his system operational government commitment hardly equalled that of Manby's experience, despite the fact that he had published a book on it in 1817 – he was not far behind Manby. Trengrouse had undergone heavy personal expenditure in developing his system but by the time of the 1836 Inquiry into the Causes of Shipwreck had not commenced manufacture. He had been waiting 'for the countenance of Government, to which I think I am justly entitled'. The government of the day had been extremely slow in appreciating the merits of Trengrouse's system. As early as 1819 he had approached the Shipowner's Society and exhibited his apparatus. In their report Trengrouse's system had been highly applauded and they had promised to recommend it to the merchant service.[29] The Elder Brethren of Trinity House had highly commended the invention and had requested to have a model set, which Trengrouse duly supplied. Their report again was very favourable; they recommended that all vessels should be equipped with the system.[30] *Lloyd's Register* had also been approached and left Trengrouse with the impression that they were not interested in the subject of life-saving. The topic of marine insurance had been a very contentious issue in the first half of the nineteenth century[31] and much had been discussed as to the true objectives of the insurance underwriters.[32] Trengrouse had not been optimistic of a favourable reception to his ideas:

> By the public prints I have seen that many gentlemen have recently written and published their sentiments on underwriting, but which it is not now my business to repeat; however I may add, that I was certainly sanguine in my expectations of the countenance I should receive from *Lloyd's*, and my disappointment was in proportion.[33]

He had not received any encouragement at all at *Lloyd's*. Trengrouse's attempts to interest the Admiralty had been equally unsuccessful. He naturally felt that:

> His Majesty's ministers would readily countenance it and myself, and that it would be immediately adopted in and throughout the navy, consequently on coming to London my first step was to submit it to the board of the Admiralty.[34]

Upon coming to London Trengrouse was directed to Woolwich where a committee of naval and field officers thoroughly examined the apparatus and witnessed a demonstration.[35] Mr J.W. Croker, the then Secretary of the Admiralty, soon wrote to Trengrouse on the basis of an extremely favourable report and requested to know what price per set some of His Majesty's ships could be supplied.[36] Before the information was obtained he received another letter from Croker telling him not to proceed[37] but that he should appear before a committee of inquiry, as Sir William Congreve[38] had disputed his claim to originality of the invention. Trengrouse faced a committee in which Congreve was not only accuser but judge – he proved to the entire satisfaction of the committee that his invention was original. Congreve had congratulated him on the invention and a member of the committee, Captain Sir John Ross, requested through official orders a set of rocket-apparatus to take with him on his imminent northern expedition. Despite Trengrouse's complete acquittal and his finding favour with Sir William Congreve, he could not again draw the interest of the Secretary of the Admiralty despite repeated efforts. Trengrouse's proposal for the apparatus and system of rescue was voted a gold medal and 50 guineas by the examining committee of the Society... for the Encouragement of Arts, Manufactures and Commerce (now Royal Society of Arts); they awarded him the large silver medal and 30 guineas in 1820 following consideration by the committee of mechanics, having witnessed experiments

in Hyde Park on 27 April.[39] In 1826 he applied to the Royal Humane Society to be considered for their Fothergill Medal in respect of his method of rescue.[40]

Given the obvious lead that Manby's system had over Trengrouse's, having been actually established some twenty years at least prior to the 1836 Inquiry – and given that Trengrouse had not even commenced manufacture by then, despite all the recommendations, sample systems he had demonstrated and supplied, the tireless devotion to the subject – it would seem as if nothing except a government acceptance of the system and its consequent deployment would enable its obvious benefits to be realised. James Silk Buckingham, the chairman of the 1836 Shipwreck Committee, put it to Trengrouse:

> Considering the advantages to be so striking and the price so small, to what do you attribute the infrequency of their adoption for use?[41]

Trengrouse answered by quoting the words of Sir Thomas Acland:[42]

> The apparatus having gained such strong testimonials in its favour, it is to me a great mystery why it has not been adopted and reduced to practice...[43]

He took this to mean, of course, why has the government refused to take it up? Trengrouse was of the opinion, against all this apparent disinterest from the government who were really his only means to which the system would gain national acceptance, that they could not easily accept change, especially in the concerns of the Navy:

> At the same time I must admit, that I believe there exists too general disposition to object to new things intended for real benefit, particularly with sailors; they almost need to have things forced upon them...[44]

The real breakthrough as far as Congreve-based rocket-powered rescue systems such as Trengrouse's were concerned was the rescue in 1832 of the survivors from the wreck of the *Bainbridge* (upwards of 400 tons burthen) off Atherfield Ledge, Isle of Wight. This had been the first time that a rocket-carried line had been successfully used in the case of an actual shipwreck. The man behind this achievement was John Dennett who in 1832 had invented the life-saving apparatus (known as Dennett's) for conveying a rope from the shore to a shipwrecked crew.[45] According to Trengrouse, Dennett had been engaged in the manufacture of rockets during the Napoleonic Wars, based upon the plan of Congreve rockets, as military implements of war, and that since the war had ended:

> ...he thought of applying their projectile force to carry ropes for the purpose of saving lives in case of shipwreck...[46]

Dennett's principle was similar to Trengrouse's. Trengrouse knew of this as Dennett had produced a pamphlet, but in no way did it acknowledge his achievements. It may have been coincidental, but according to Trengrouse a copy of his publication on the subject of saving lives at a time of shipwreck, published as early as 1817, was deposited by him at the circulating library for sailors at Cowes, Isle of Wight, in about 1824:

> ...whether Mr Dennett ever saw it or heard of it I cannot tell; however some years elapsed before his rocket invention for communicating a line in case of shipwreck was announced...[47]

The two systems were comparable but Dennett had used large rockets, perhaps as much as 4 inches in diameter. At the 1836 Inquiry into the Causes of Shipwreck Trengrouse drew attention to the fact that he also had used much the same equipment – detailed in a report from the officers at Woolwich – concerning experiments with

large rockets (made under Sir William Congreve's directions) some eight or nine years previous to Mr Dennett 'appearing before the public':

> I think that they were called 18 pounders reduced, they were in iron cases, having a six pound grapple at the head and were very powerful. An inch and a half line was projected full 250yds by one of them.[48]

Dennett's apparatus resembled a sky-rocket but instead of the paper case of the sky-rocket it had an iron case and a pole rather than a 'mere stick', it weighed 23lb, was propelled by 9lb of composition and had a range of 250yds.[49]

At the wreck of the *Bainbridge* the Manby mortar was brought to the shore opposite the wreck and four efforts were made with it to get a line aboard. It may have been due to the distance involved but all four attempts failed. The ship was by this time lying stern to the shore, which presented a very narrow target for the rescuers on the shore. Dennett's large rockets were brought to the spot and upon the first attempt succeeded. A line was made to reach the *Bainbridge* and subsequently a rope hauled on board, and a boat drawn through the surf by which the crew were safely landed on the beach.

Dennett's experience with the British government on the question of recognition and patronage was much the same as Manby had received, and that Trengrouse had sought after:

> ...hope deferred maketh the heart sick, I have experienced the most painful disappointments as well as been at a very heavy expenditure...[50]

Dennett received several honorary distinctions from foreign rulers, and again as Manby, his services to society were appreciated far more abroad than at home.[51] Two years after the wreck of the *Bainbridge* in 1834 the example of fortuitous rescue in the case of the *Bainbridge* caused many of the coastguard stations to be supplied with similar Dennett apparatus; the rocket was at last finding acceptance amongst the British authorities.

By the time of the 1843 Shipwreck Committee, Dennett's rockets had been instrumental in effecting rescues all around the coast. Many of the coastguard stations kept both Dennett's rockets and Manby's mortar,[52] some preferring one to the other, for there were still great advantages to be gained in the case of the mortar. Whilst much heavier (a brass mortar weighed 152lb and its bed 133lb)[53] and therefore much more cumbersome, it could project a grapple rather than a shot, which would have the effect of increasing its range when aimed across a rope tied to a buoy and let out from a stranded vessel (**Fig. 4**). Also, there were problems with the rockets that the mortar did not incur, such as rusting jackets, damp and inefficient charges, broken sticks causing directional problems etc. Against this the rocket was much lighter and at night could illuminate the wreck and therefore enable the rescuers to check its direction. In attempting to further develop his invention Dennett attempted to use two rockets side by side in order to increase the power and range of the system. The range was increased to 400yds but the simultaneous and equal action of the rockets could not be relied upon and directional problems ensued. Other inventors were now on the scene - A.G. Carte, an ordnance store-keeper from Hull, had approached the Ordnance Department to have his rocket apparatus tried against Dennett's, an exercise that Dennett had previously been party to on several occasions against Manby's mortar apparatus[54] under sanction of the Comptroller-General of the coastguard. In a comparison held at North Yarmouth on 2 and 5 September 1842, Commander James Pulling RN, the inspecting

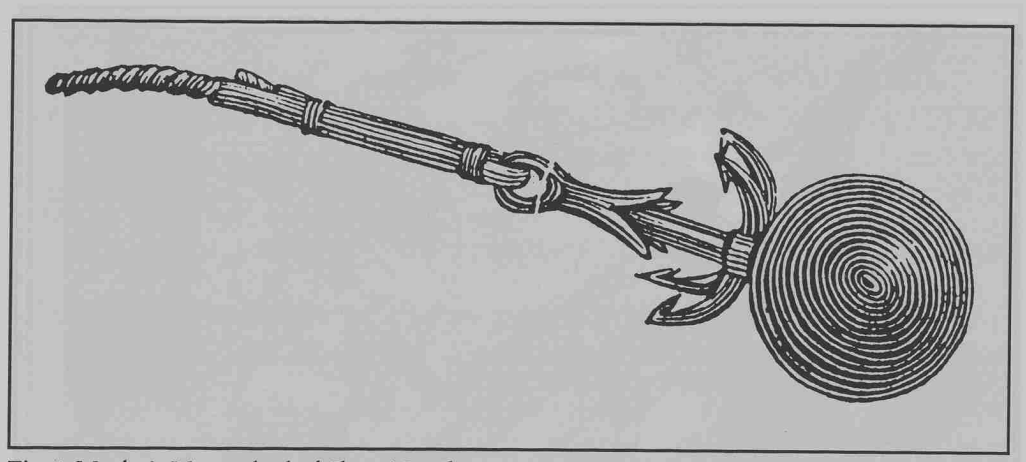

Fig. 4. Manby's Mortar-barbed Shot. (*Gentleman's Magazine*, 1821)

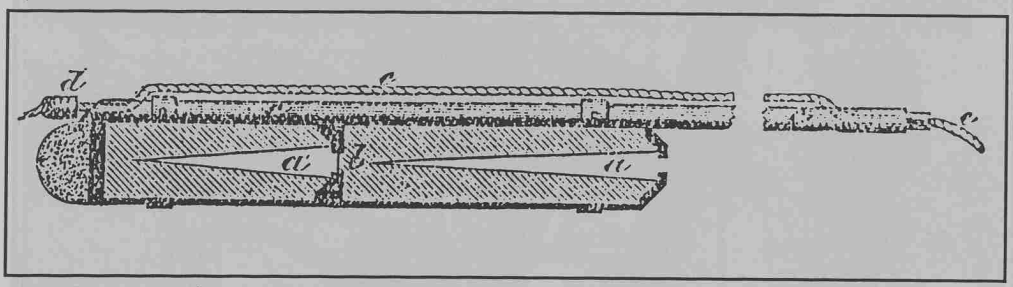

Fig. 5. Boxer's Rocket – section showing two distinct cavities in line separated by a solid portion of composition. (*Cornhill Magazine*, 1873)

commissioner, reported having estimated averages against Dennett and Carte's rockets, for Dennett's were 9-pounders and Carte's were 6- and 12-pounders, that

> ...taking all these things into consideration, the superiority of Carte's rockets seems so very trifling, that it would not in my opinion be advisable to incur any additional expense in placing them at these stations, where Dennett's rockets are already established; but if a station (not furnished with either) were to be supplied, I should certainly, on the whole prefer Carte's...[55]

Thus by 1842 competition to gain the interests of the authorities was enabling the further development of the rocket. In France, Tremblay's rocket fitted with a barbed head to incorporate some of the best features of both Manby and Dennett was to be adopted for the Emperor's yacht as a safety measure designed to be fired from the ship to the shore to enable rescue.[56] Most successful of all these later developments, and destined to replace Dennett's rockets by 1865, was Colonel Boxer's device, developed after many trials and consisting of placing two rockets in one tube, one behind the other. The head was made of hardwood and there was a wrought-iron case, within which were two separate internally coned rockets, the cavities of which were separated by a solid portion of composition which, when the first stage had expired, burned through and ignited the second stage, giving a fresh impulse to the rocket (**Fig. 5**). The overall length of the 12-pounder rocket section was 24 inches, which was fixed to a stick of 9½ feet

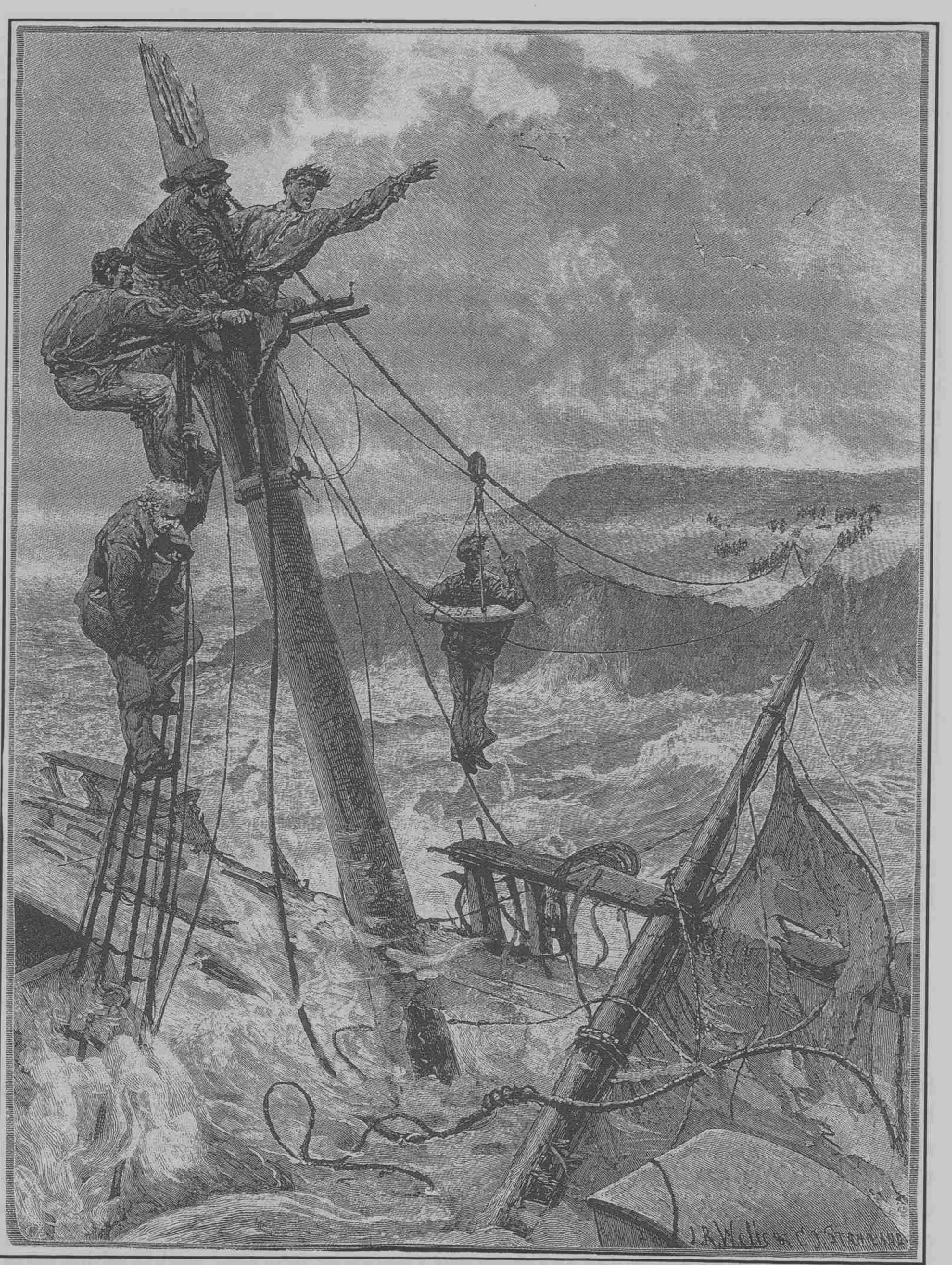

Fig. 6. Lieutenant Kisbee's Sling Life Buoy or Petticoat-breeches – Breeches Buoy in action. (*The Illustrated London News*, 1886)

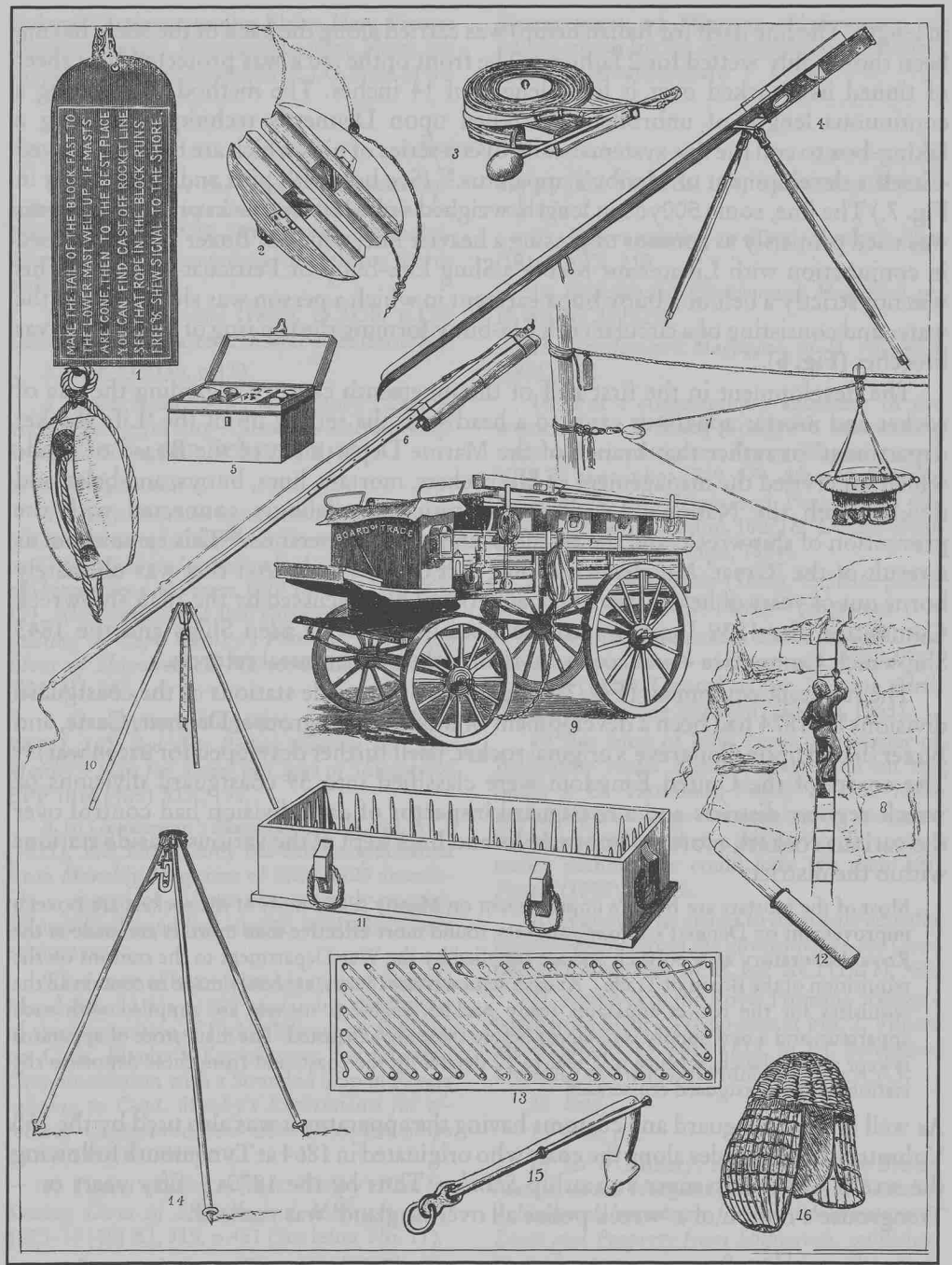

Fig. 7. Rocket Apparatus of the Board of Trade. (*The Illustrated London News*, 1886)

in length. The line itself (of Italian hemp) was carried along the back of the stick, having been thoroughly wetted for 2 fathoms. The front of the stick was protected by a sheet of tinned iron tacked over it for a length of 14 inches. The method of releasing a continuous length of unbroken line relied upon Dennett's technique of using a faking-box to coil the line systematically over a series of pins which are finally removed – itself a development of Manby's apparatus.[57] (See box with pins and rope layout in **Fig. 7**.) The line, some 500yds in length, weighed only 46lb and as in previous systems was used primarily as a means of passing a heavier line, which in Boxer's case was used in conjunction with Lieutenant Kisbee's Sling Life-buoy or Petticoat-breeches. This was not strictly a belt or a buoy but a garment in which a person was slung clear of the water and consisting of a circular cork life-buoy forming the top ring of a pair of canvas breeches (**Fig. 6**).[58]

The development in the first half of the nineteenth century regarding the use of rocket and mortar apparatus came to a head with the setting up of the 'Life Rocket department' or rather that branch of the Marine Department of the Board of Trade which supervised the management of life-rockets, mortars, lines, buoys, and belts, and divided with the National Life-boat Institution the labours connected with the prevention of shipwreck, and the rescue of shipwrecked persons.[59] This came about as a result of the 'Great' Merchant Shipping Act of 1854 – the Act that was ultimately borne out of years of heavy shipwreck and loss of life discussed by the 1836 Shipwreck Committee, the 1839 Inquiry into the Loss of Timber Laden Ships and the 1843 Shipwreck Committee – and coalesced their hitherto piecemeal reforms.

The resultant equipment (**Fig. 7**) supplied to 300 seaside stations of the coastguard divisions by 1874 had been a development of Manby, Trengrouse, Dennett, Carte, and Boxer (based upon Congreve's original rocket, itself further developed for use in war).[60] The coasts of the United Kingdom were classified into 59 coastguard divisions or wreck-register districts and a coastguard inspector of each division had control over the various rockets, mortars, buoys, belts and lines kept at the various seaside stations within the district:

> Most of the mortars are Boxer's improvement on Manby's; and most of the rockets are Boxer's improvement on Dennett's. Boxer's rockets, found more effective than mortars are made at the Royal Laboratory at Woolwich and are supplied by the War Department to the stations on the requisition of the Board of Trade... At each station is kept a cart, expressly made to contain all the requisites for the rocket apparatus ready packed. Eighteen rockets are supplied with each apparatus; and a new supply is obtained before these are exhausted. The main store of apparatus is kept at Woolwich, whence it is sent to 12 depots on the coast, and from these depots to the station by the coastguard cruisers...[61]

As well as the coastguard and customs having the apparatus it was also used by the 150 Volunteer Life Brigades along the coast who originated in 1864 at Tynemouth following the wreck of the passenger steamship *Stanley*. Thus by the 1870s – fifty years on – Trengrouse's notion of a 'wreck police all over England' was realised.

Acknowledgements

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References

1 *Report from the Select Committee appointed to Inquire into the Causes of Shipwrecks*, BPP 1836 (567) XVII, 373, Q.3866, p.250: Evidence of Henry Trengrouse; of Helston, Cornwall.

2 *S.C. Shipwrecks* (1836), Q.2135, p.132: George Manby; Barrack Master at Yarmouth.

3 *Ibid*, Q.2135, p.133.

4 *Papers Relating to Capt. Manby's Experiments for effecting Communication with Stranded Ships*, BPP 1809 (255) X, 375.

5 *Ibid*, X, 373.

6 See attribute to Lieutenant Bell in *Report of Committee of Artillery Officers at Woolwich on Capt. Manby's Invention for Saving the Lives of Shipwrecked Mariners*, BPP 1810-11 (215) X1, 111. Also, petition of Bell's daughter in *Papers relating to Capt. Manby's Plan for Saving the Lives of Shipwrecked Mariners*, BPP 1813-14 (309) III, 347.

7 *Gentleman's Magazine*, pt. II, vol. XCI (1821), 162. See also *Papers relating to Capt. Manby's Plan for Relief in Cases of Shipwreck*, BPP 1816 (409) XIX, 193.

8 In *Gentleman's Magazine*, pt. II, vol. XCI (1821), 360: Dr J. Carey has extracts published from *Monthly Magazine* of Nov. 1803 describing a system of mortar cannon with wooden coloured balls and line – much as Manby's later equipment.

9 See copy of letter from Lieutenant General Lloyd dated 3 May 1809 containing the Report of the Committee of Field Officers of Artillery on Capt. Manby's Experiments for effecting Communication with a Stranded Ship in *Papers relating to Capt. Manby's Experiments for effecting Communication with Stranded Ships* 1809, (255), X, 384, p.10.

10 *Papers relating to Capt. Manby's Plan for Saving Lives of Shipwrecked Mariners*, BPP 1813-14 (48) XI, 415, p.451 (See letter No. 11).

11 *Papers relating to Capt. Manby's Plan for Relief in Cases of Shipwreck*, BPP 1816 (409) XIX, 193.

12 PD *Hansard* (Commons), 1st Series vol. XXVIII: Friday 10 June 1814, cols 44-50; Monday 20 June 1814, col 104; Wednesday 22 June cols 121-2.

13 *Papers relating to Capt. Manby's Plan* (1816), XIX, 213.

14 *Ibid*, See also *Gentleman's Magazine*, pt. II, vol. XCI (1821).

15 *Gentleman's Magazine*, pt. II, vol. XCI (1821), 361.

16 For a contemporary summary of the work of Sir William Congreve concerning rocket development see *Penny Magazine*, vol. VIII, 28 September 1839, 374. Also: 'A Concise Account of the Origin and Progress of the Rocket System' (London, 1807) & 'Details of the Rocket System' (London, 1814).

17 *S.C. Shipwrecks* (1836), Q.3856, p.252. See also Q.3865, p.253: Henry Trengrouse.

18 From Transactions of the Society... for the Encouragement of Arts, vol. XXXVIII, London (1822). Quoted in *For Those in Peril*, National Maritime Museum (HMSO, 1963).

19 See letter of John Prout, late master of Brigantine vessel *Elizabeth*, stranded on the beach at Gt Yarmouth, Friday 12 Feb. 1808, explaining that a rope communication was made from the shore and that in this particular circumstance nothing else could have got them off. *Papers* (1809), X, 376.

20 Although he claims to have only actually received £4,000 from the government – see *Gentleman's Magazine*, pt. II, vol. XCI (1821), 360.

21 Archives of the Royal Humane Society - letter from Henry Trengrouse at No. 2, Villiers Street, Strand, 13 April 1818, to T.J. Pettigrew, Secretary to the Royal Humane Society, p.3.

22 *Ibid.*

23 *Ibid*, p.2.

24 Sir W. Hillary, *An Appeal to the British Nation on the Humanity and Policy of Forming a National Institution for the Preservation of Lives and Property from Shipwreck.* published in various papers ie. *Pamphleteer* (London, 1824), 484. (Also by Whittaker et al.)

25 *S.C. Shipwrecks* (1836), Q.2174, p.138: Capt. George Manby.

26 *Ibid*, Q.2174, p.138.

27 Despite having been said to have gained the attention of the Prince Regent. See letter from Lord Sidmouth, Secretary of State for the Home Department to the Master General and Board of Ordnance '...and I am at the same time to signify to you the Prince Regent's pleasure ...', Whitehall, 14 Dec. 1815. *Papers* (1816) XIX.2, 7.

28 *Ibid*, QQ.2175-2178.

29 *S.C. Shipwrecks* (1836), QQ.3871-3872, p.255: Henry Trengrouse.

30 *Report of the Committee of Pilotage and Examination on Invention of Henry Trengrouse*, BPP 1825 (489) XXI, 363: Trinity House, 6 Aug. 1818.

31 See James Ballingall, *Sea Insurance the Cause of Shipwreck*, 8 vols (London, 1834).

32 See *Edinburgh Review*, 'On the Frequency of Shipwrecks', vol. LX, 1834-5, pp.339-41.

33 *S.C. Shipwrecks* (1836), Q.3875, p.255: Henry Trengrouse.

34 *Ibid*, Q.3869, p.254.

35 *Letter reporting Result of Inspection of H. Trengrouse's Invention (for preserving Life in cases of Shipwreck, by Rocket)*, BPP 1825 (415) XXI, 361.

36 *Ibid*, see letter from J.W. Croker to Trengrouse.

37 *Ibid.*

38 Sir William Congreve (1772-1871), see Vol. XII, DNB, 9.

39 See *Transactions of the Society... for the encouragement of Arts, Manufactures and Commerce*, Vol. XXXVIII, p. 161. and Minutes of Committee of Mechanics, 27 April 1820.

40 Archives of the Royal Humane Society – list of applicants for the Fothergill Medal. Trengrouse submitted an essay entitled 'Prevention of Shipwreck'.

41 *S.C. Shipwrecks* (1836), Q.3868, p.254.

42 Sir Thomas Acland (1787-1871), see DNB, vol. I, 62.

43 *S.C. Shipwrecks* (1836), Q.3868, p.254: Henry Trengrouse.

44 *Ibid.*

45 John Dennett (1790-1852), see DNB, vol. XIV, 367-8. There appears to be some controversy according to *Encyclopedia Britannia* about the actual date of Dennett's invention – they claim it to be 1826.

46 *S.C. Shipwrecks* (1836), Q.3866, p.254.

47 *Ibid.*

48 *Ibid.*

49 See *Chamber's Encyclopedia* (1874), 605, 'Life Mortars and Rockets'.

50 *S.C. Shipwrecks* (1836), Q.3877, p.256: Trengrouse.

51 See *Gentleman's Magazine*, No. XXXVIII (1852), 319. (taken from *London Weekly Paper*).

52 *Select Committee appointed to Inquire into Shipwreck of British Vessels, and the Means of Preserving the Lives and Property of Shipwrecked Persons*, BPP 1843, (549) IX, 1, Q.3308, p.219 & Q.3311, p.270: Evidence of Captain Samuel Sparshott; Commander of the Navy and Deputy Comptroller of the Coastguard.

53 *S.C. Shipwrecks* (1843), QQ.4885-4886, p.306: Commander James Pulling RN: employed by the coastguard to try the rockets and mortars.

54 Dennett's rockets and Manby's mortars had been regularly compared on occasions of instruction in usage at for instance: Yarmouth, 24 Jan. 1835; Blyth, 20 Aug. 1835; Beadnall 24 Aug. 1835; Holy Island, 25 Aug. 1835; Howick, Sea Houses, 26 Aug. 1835; Tynemouth, 29 Aug. 1835; Atherfield, 20 Oct. 1837; St Catherine's Down, 19 July 1841; Chilton Brook Station, 18 Oct. 1842. See *S.C. Shipwrecks* (1843), App.14, *Papers respecting Rockets.*

55 *S.C. Shipwrecks* (1843), App. No. 14, p.86: Letter from Inspecting Commissioner Commander James Pulling to Comptroller-General of Coastguard.

56 See *Chamber's Encyclopedia* (1874), 605.

57 Faking Box – described and illustrated in: *Papers relating to Capt. Manby's Plan for Relief in Cases of Shipwreck*, BPP 1816 (409) XIX, 193, pp.216-7. See also *Cornhill Magazine*, vol. XXVIII July-Dec. 1873, 73, fig. 2.

58 See *Cornhill Magazine*, vol. XXVII, July-Dec. 1873, 72-87, for a clear exposé on Colonel Boxer's rocket system.

59 See *Chamber's Encyclopedia* (1874), 606, 'Life Rocket Department'.

60 Since Congreve's invention in 1804 the use of rockets as weapons of war gradually became commonplace. They were used in the attack on Boulogne in 1806, Copenhagen 1807, Walcheren expedition of 1809, where His Majesty's Ship *Galqo*, sloop of war was fitted out as a Rocket Ship. See David Yarrow, 'A Journal of the Walcheren Expedition 1809', *M.M.*, Vol. 61 (1975), 183-9, extracted from a manuscript entitled 'A Journal of the Proceedings of His Majesty's Sloop of War the *Galqo* during the Seige

of Flushing in the Year 1809 under the command of John Gardene McBride Esq. and Especially Genl. Sir William Congreve, Bart'.

61 *Chamber's* (1874), 606.

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