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Cruising the Flag: The Evolution and Future of the American Passenger Ship

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CRUISING THE FLAG:
THE EVOLUTION AND FUTURE
OF THE AMERICAN PASSENGER SHIP

by

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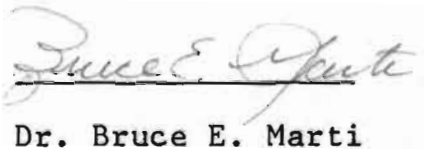
Approved: 

Major Professor: Dr. Bruce E. Marti

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FRONTISPIECE

"A steamer of the Collins Line
A Yankee Doodle notion
Has also quickest cut the brine
Across the Atlantic Ocean.
And British agents no way slow
Her merits to discover
Have been and bought her
Just to tow
The Cunard Packets over."

Punch 1852 (Hughes 1973 p.45)

ABSTRACT

A brief history of the North Atlantic passenger vessel trade is presented with special emphasis on the development of American participation in the industry. The current cruise ship growth is outlined with insight into the economic nature of cruise ship operations, with a twenty-year cabin cost profile and analysis of price growth of foreign and domestic vessels. The results of an industry survey are presented and coastwise cruise routes are discussed as an alternative for U.S.-flag cruise ships. A sample domestic deep sea intinerary is outlined.

DEDICATION

This paper would in no way have been possible without the enduring understanding, patience, and perseverance of my loving wife, Lora, and it is to her this effort is dedicated. Every man should have such a partner in life and love.

ACKNOWLEDGEMENTS

I am indebted to Professor Bruce E. Marti for the nucleus of the idea from which this paper grew. His love for the great liners has served as inspiration. My thanks go also to Mr. Mark Aspinwall for helping with a valuable source and to Professor Thomas Luke for putting me on the right track for the economic analysis. I must also mention the role of Mr. Thomas Sweeny who got me involved with the Marine Affairs Program at URI, as I have alternately blessed and cursed him over the past year.

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THE FLAG FADES

Introduction

When the first steam powered ship crossed the North Atlantic in 1819, the face of shipping, particularly passenger transport, was to change rapidly and forever. Passengers would soon seek out the fastest and most comfortable ships, and competition began to breed larger and more luxurious vessels. While for many years the America-Europe routes were dominated by British, French, and German companies, significant American liners began to appear about mid-century.

Larger and faster than their European rivals, the ships of the Collins Line in particular began to capture a significant share of the "North Atlantic Ferry." However, this popularity was soon to end following the loss of two vessels and several hundred lives in 1856. American steamships established regular service elsewhere around the globe, but were not to occupy a significant role in Atlantic routes until the emergence of United States Lines in the 1920s. Beginning with old liners captured from the Germans in World War I, United States Lines was to steadily build a fleet culminating in the launching of the magnificent UNITED STATES in 1952. Capturing the coveted

"Blue Riband of the Atlantic" for speed on her maiden voyage, she was to provide the standard of excellence for the next seventeen years.

Today the "BIG U" lies at the same pier in Norfolk where she ended her last voyage fourteen years ago, waiting for her new owner to secure the financing to refurbish her for the cruise trade. Displaced by vessels of foreign registry, she and all her proud sisters found their way to mothballs or to scrapyards, and the American seamen who sailed them have been forced to seek their fortunes elsewhere. At the end of two decades of steady decline, the U.S.-flag passenger cruise industry is almost nonexistent.

In the late sixties, there were twenty large passenger and passenger/cargo vessels actively cruising under the U.S. flag. Today, there are only two deepsea American luxury liners operating in the coastwise trade or the foreign commerce of the United States. These are the INDEPENDENCE and the CONSTITUTION, which maintain weekly cruise schedules in the Hawaiian Islands. According to Fearnleys (1985), the balance of the U.S.-flag fleet is limited to about twenty vessels of 100 gross registered tons (grt) or less each, with a combined passenger capacity less than that of one large liner. As is the case with the ships in Hawaii, these vessels operate in the coastwise "Jones Act" trades, reserved by law to vessels of domestic construction manned by American crews.

In order to gain a better understanding of the present state of American passenger shipping, this study begins with a review of steamship history in the North Atlantic and the American role in its development. Later, some economics pertaining to the evoluion of passenger shipping into cruise shipping will be examined and a hypothesis offered regarding foreign flag dominance in this trade.

An American Pioneer

The honor of being the first ship to cross the North Atlantic fitted with an auxiliary steam engine belongs to the American paddle steamer SAVANNAH. Originally designed as a sailing packet, soon after her 1818 launching in Corlears Hook, New York, she was bought by the then recently formed Savannah Steamship Company who intended to pioneer regular coastwise Atlantic steamship service. A single cylinder engine of 90 h.p. built by Stephen Vail of Morristown, New Jersey, was installed and connected to a pair of 15 foot diameter unprotected paddlewheels fashioned to fold up on deck when not in use. According to Wall (1977), a trading depression proved the 110 foot, 320 ton ship too large for economical operation, so her owners decided to sell her in Europe. Following the trial run to her home port, newspaper ads failing to enlist any

paying passengers, she departed on May 24, 1819 for her historic voyage carrying only a little cargo and 100 tons of coal and wood (Hughes, 1973). Before she left, however, she did have the opportunity to embark President James Monroe for a short tour of Savannah harbor.

The passage to Liverpool took 29 days and 11 hours. So unusual was the sight of a steamship at sea that a British cutter was dispatched to aid the "ship on fire" as the SAVANNAH approached the Irish coast. Despite running out of coal and putting into Kinsale, Ireland for more, Captain Moses Rogers had run his engine for only 85 hours on the entire trip. Though many were later to claim this hardly constituted passage under steam, fourteen years were to pass before another steamship was to attempt the North Atlantic crossing.

Unable to attract a buyer, the SAVANNAH was to return to America, have her engine removed, and end her days a sailing packet as she was originally conceived. According to Brinnin (1971), two years after her maiden voyage she wrecked on the beaches of Long Island and broke up in the surf. Though her life was short and ended ignominiously, the SAVANNAH's place in American seafaring history was secure.

The Rivalry Grows

The achievement of the SAVANNAH did not go unnoticed. Sailing ships fitted with steam auxiliaries began coastwise service in many countries; the Chilean RISING STAR, the Dutch CURACAO, and the British ENTERPRISE among them. These ships, however, relied primarily on sail. The problem of building a ship large enough to carry sufficient coal for a deepsea voyage was finally to be solved with the commissioning of the ROYAL WILLIAM in 1831. Owned by the Quebec and Halifax Steam Navigation Company, the ship was 160 feet long, 800 tons, and carried a 200 h.p. steam engine. A young Nova Scotian who dreamed of regular Atlantic steamship service was one of her major shareholders. Already operator of a fleet of Canadian coasters, this man was Samuel Cunard.

The ROYAL WILLIAM made the trip from Nova Scotia to the Isle of Wight in 21 days, commencing the voyage on August 4, 1833. Aside from a four hour period each day to remove salt from the boilers, she had steamed the whole way (Wall, 1977). Moreover, she had carried seven passengers. Though by this time Cunard had sold his interest in the ship, her performance convinced him that steam navigation of the Atlantic was practical, and he began plans for a regular mail and passenger service between Britain, Canada, and the United States. He was to find his first chief competition in the form of a brilliant

British engineer, I.K. Brunel.

Brunel had also realized the potential of steamships while an engineer for the Great Western Railway Company of Bristol. He convinced the management that the continuation of their services across the Atlantic was a logical next step for the company. The ship Brunel built, the GREAT WESTERN, 236 feet and 1,320 tons, made the Atlantic crossing with 44 passsengers in 15 days at an average speed of 8.2 knots. She arrived in New York April 23, 1838, only four hours after the SIRIUS, her arch rival of the British American Steam Navigation Company which had left England five days prior to the GREAT WESTERN. The first race was over but many more were to follow.

Cunard was to launch his transatlantic service aided with a British mail contract secured by underbidding Great Western Steamship Company. This type of "subsidy" was to mark all major passenger liner achievements for the next century. The first Cunarder, the BRITANNIA, left Britain for Boston on July 4, 1840, crossing in fifteen days, inaugurating the great Cunard line which survives to this day. Soon to be joined by her sisters, ACADIA, CALEDONIA, and COLUMBIA, the BRITANNIA set the tone for North Atlantic travel and soon established Cunard as the industry leader (Hughes, 1973).

Brunel, meanwhile, had designed a ship unlike any other. To be built of iron and propelled by sail, paddle and screw propeller, the GREAT EASTERN at 680 feet and 18,915 tons, was

to remain the largest ship ever built for 41 years. She could travel 7000 miles at seven knots without recoaling and had a passenger capacity of 300. She was so large that attempts to launch her were to take three days, the mammoth effort and strain of building her killing Brunel only eight days after she sailed on her sea trials. On her maiden voyage to New York on June 17, 1860 she carried a crew of 418 but only 38 paying passengers. Huge operation costs and continual losses for her owners forced her withdrawl from service. She was eventually to come into her own as the ship to lay the first transatlantic telegraph cable, but never carried another passenger before being scrapped in 1888.

The demise of the Great Western Steamship Company was to cement the fortunes of Cunard, who had years previously battling the aggressive ships of an American company owned by E.K. Collins of New York.

The American Challenge

On March 3, 1845, the U.S. Congress authorized the Postmaster General to contract for the carriage of American mail with railroads and shipping companies, preferably those with steamships. An interesting caveat to the contract was that "upon demand and payment of their full value these ships

must be handed over to the government to be converted into warships" (Hughes, 1973, p.33). The bid for the European mails was won by the Ocean Steam Navigation Company, which was to receive $400,000 annually for the service. Their first ship, the wooden paddle steamer WASHINGTON of 1750 tons, was on paper larger and faster than any of the Cunard vessels. However, on her maiden voyage from New York to Southampton with 120 passengers, she was two days later in arriving than the BRITANNIA, which had left at the same time (Hughes, 1973).

The second ship of the Ocean Steam Navigation Company, the HERMANN, set the record of 11 days 21 hours for New York to Cowes in 1948. This prompted Cunard to approach the British government for further subsidy to build four more ships. The request was granted and by 1849, Cunard had nine ships in service, with an annual government payment of £173,340. In America, two important results arose with this increase of tonnage. New York replaced Boston as the premier port of call, and the Ocean Steam Navigation Company's ships were never to wrest supremacy from Cunard.

Edward Knight Collins was born on Cape Cod in 1802, son to a long line of sailing ship masters. He was already owner of the leading sailing packet line serving Mexico and New Orleans when he turned his attention to steam. He found a champion in Senator T.B. King who persuaded Congress to grant Collins a

contract for the carriage of mails between New York and Liverpool, entailing the construction of five ships with a subsidy of $385,000 annually for ten years (Hughes, 1973). Additional support came from Senator J.A. Bayard of Delaware who called for the "absolute conquest of this man Cunard" (Brinnin, 1971, p.168). National and public pride was at stake so Collins vowed to build ships that would make the passage from "New York to Europe in ten days or less" (Hughes,1973, p.41).

The first ships were the ATLANTIC and the PACIFIC, launched the same day in 1849. Each was a wooden paddlewheeler 282 feet long, 2,856 tons, and carrying three fully rigged masts. Designed by George Steers (builder of the America's Cup yacht AMERICA) to be the fastest ships afloat, they were the first oceangoing vessels to exhibit plumb stems and were propelled by two engines of 2000 h.p. each. As the novelty of transatlantic steam travel had been replaced by the desire for comfort, Collins strove to make his ships the most luxurious available.

Each ship had a barber shop and smoking room. All public spaces were steam heated and a system of electric bells was installed for calling stewards to cabins. Ornate woodwork was extensive and everywhere mirrors adorned bulkheads. No expense was spared, and this resulted in horrendous cost. The final price of each ship was $675,000, forcing Collins to approach the government for more assistance. Congress agreed to reduce

the number of ships from five to four and increased the mail subsidy by 75 percent. They wanted fast ships, and the Navy was called in to supervise the incorporation of certain strategic modifications (Hughes, 1973).

When the ATLANTIC left for her maiden voyage on April 27, 1850, thousands of New Yorkers cheered her off to what was sure to be a record passage. She limped into Liverpool thirteen days later, having suffered ice-damaged paddles and a broken steam condenser, the British press making the most of the unglorious arrival.(Brinnin 1971) On her return trip, however, she set a blistering pace, making the trip in 10 days and 16 hours, fully twelve hours faster than the record held previously by the Cunard CANADA. The PACIFIC soon followed the ATLANTIC and the race was on.

In June of 1850, the Cunard EUROPA made the passage in 10 days, 12 hours, and twenty-six minutes. The ATLANTIC countered two weeks later with a run of 10 days, 12 hours even. The Cunard ASIA bested this record in December with a passage of 10 days, 4 hours. Nevertheless, the honor of first crossing the North Atlantic in less than 10 days belonged to the Collins PACIFIC which tore across the ocean in May of 1851 in 9 days, 20 hours, and ten minutes for an average speed of 13 knots. Her new sisterships, the BALTIC and ARTIC then traded the record for several voyages until 1852 when the ARTIC blazed across from New York to Liverpool in 9 days, 17 hours, and 12

minutes for an average speed of 13.17 knots, a record which was to stand for four years (Hughes, 1973).

After two years of operation, the Collins steamers were carrying 50 percent more passengers than Cunard. The British company countered with a reduction in freight rates, but travelers continued to flock to the fastest and most opulent ships, a trend which was to drive ship construction for decades. Cunard's fortunes were dealt another blow when the outbreak of the Crimean War saw their ships pressed into war service by the British government as per the mail contract. The Red Ensign disappeared from the Atlantic routes and Collins found himself with a virtual monopoly, even carrying the mail for the British government (Hughes, 1973)!

Such luck was not to hold. The enormous cost of operating the ships forced Collins once again to seek help from Congress. His ships were losing $17,000 per voyage so he requested another increase in the mail subsidy which was granted by narrow votes in the House and Senate. Doubters claimed that dependence on the government was encouraging mismanagement, but Collins won out and continued to run his ships, and continued to run in the red (Brinnin, 1971).

It was not financing that eventually killed the Collins Line. It was the North Atlantic. On September 27, 1854, while steaming full ahead through fog off the Grand Banks, the ARCTIC collided with the French iron steamer VESTA. Thinking his ship

undamaged, Captain Luce of the ARCTIC sent lifeboats to aid the smaller vessel. The VESTA, however, steamed off into the night, eventually to make port intact. The ARCTIC had been mortally wounded below the waterline and sank in four hours with the loss of 346 people, including the wife and two children of E.K. Collins (Wall, 1977). Passengers continued to patronize the line, but sixteen months later the final blow fell.

In January of 1856, the PACIFIC sailed from Liverpool with 186 passengers and crew. She was followed two days later by the Cunard PERSIA, newly built of iron and out for the record. Five days out the PERSIA ran into an icefield at 11 knots, ripping plating from her bow and damaging the starboard paddles. Her iron withstood the shock and she was able to limp into New York twelve days later. The PACIFIC had never arrived and no sign of her was ever to surface. Though this event was to establish the superiority of iron over wood, it also ended the aspirations of the Collins Line. Public faith was shaken, the subsidy reduced, and the line never recovered. The North Atlantic was not to see another American-flag passenger fleet until after the First World War. But Collins had given the British a run for their money, and for six years had held the record for speed, an achievement and honor that was to become known as the "Blue Riband of the Atlantic."

The Blue Riband

Following the demise of the Collins Line, the seas were open for the ascendancy to dominance of the British Merchant Navy in the North Atlantic. The PERSIA recaptured the record for Cunard in April of 1856 with a crossing of 9 days, 1 hour, and 45 minutes for an average speed of 13.8 knots. The prize was back in Britain, and there it would stay for the next 41 years, a period marked by the transition from wooden paddle steamers with sails to long fast ships which relied solely on engines of ever increasing power and reliability.

It is significant to note that one final attempt at Yankee supremacy was made by the American businessman Cornelius Vanderbilt. Having once been master of a Hudson River ferry, he had two wooden paddle steamers built, the NORTH STAR and the ARIEL, putting them into Atlantic service in 1855. Known for luxurious accommodations, the ships developed a small but regular following that encouraged Vanderbilt to order another ship. This he named for himself, and the VANDERBILT, at 355 feet in length, 5000 tons and a designed speed of 13 knots, was the largest ship ever launched to date. When she was put into service in 1857, Collins had already faded from the scene. Helped by a subsidy to carry mail to Bremen, Vanderbilt undercut his rivals on that route and for awhile, according to

Brinnin (1971), dominated the American Merchant Marine on the Atlantic.

The VANDERBILT and her sisters never quite had the speed, however, to take the record from Cunard. The PERSIA's accomplishment was to stand for seven years, and the American Civil War put the end to Vanderbilt's aspirations in shipping. He presented his ships to the government for use against the Confederates and turned his attention to railroads.

The PERSIA was the last paddle steamer built for Cunard and the first made of iron. Slow to adopt new technology, Cunard had been preceeded by Brunel in advancing metal hulls and screw propellers, his GREAT BRITAIN of 1843 being the first large oceangoing ship to employ either. Over a century later ships are still designed to principles established by this wizard of marine design (Wall, 1977).

Cunard was not without competition in the ensuing years. Several British companies were founded about this time and each tried in turn to capture the Blue Riband. How this term came to describe the transatlantic speed record is undocumented, but it is known that the title originates from the blue insignia of Britain's highest honor, the Order of the Garter. However, the quest for this unofficial prize was watched by the entire world, and anticipation would build whenever a new ship neared launch date. Curiously, there was no official race committee,

no specific course or timekeepers. Speeds were averaged over any of several routes and the Captain's figures were accepted without question.

Some companies, Cunard most notably, officially chose to deny that the competition even existed, while ensuring that their new ships would win it. Others would proudly display blue pennants from mastheads upon arrival from a record breaking voyage. But all were aware of the prestige and business to be garnered with ownership of the fastest liner, and each spent lavishly to build them.

In Britain, Cunard's leading competitors were the Inman Line, the National Line, and the Guion Line. The latter was owned and operated by Americans, but flew the British flag over its vessels. Having recognised the potential of steam, this packet operator ordered four ships from British yards. The Queen's court decided in 1846, that since the vessels were made in Britain, they were technically "British subjects" and hence must be of British registry. The country of beneficial ownership was regarded as irrelevant (Hughes, 1973).

Also making inroads in the North Atlantic at this time were the Hamburg-Amerika Line, the Norddeutscher Lloyd Line, and the Compagnie Generale Transatlantique or French Line. Many of these lines were making their fortunes in the emmigrant trade to America, providing extensive accommodations in "steerage" for little cost, a practice eschewed by Cunard.

When the PERSIA's record finally fell to the SCOTIA in late 1863, an era of controversy followed, several vessels each claiming the fastest crossing, mere minutes separating their times. The issue was settled with the Inman liner CITY OF BRUSSELS, which crossed in 1869 at a speed of 14.66 knots, being the first to make the run in less than eight days. Cunard was not to again hold the Blue Riband for 15 years.

The White Star Line built a pair of ships that each took the record, the ADRIATIC in 1872, then the BALTIC in 1973, the first ship to average over 15 knots. These ships, marked by new heights of luxury in first class and extensive steerage space, soon captured a large share of the market. Public confidence in this company was shaken and business declined after the loss of the ATLANTIC on the rocks of Nova Scotia, taking 585 of the 952 souls on board (Hughes, 1973).

The Inman CITY OF BRUSSELS outclassed White Star with a performance of 15.41 knots in 1875. White Star struck back with the GERMANNIC and the BRITANNIC which between them were to hold the records until 1879. The American owned Guion Line took the Blue Riband in 1879 with the ARIZONA, then again in 1882 with the ALASKA, the first to cross in less than seven days. Because of such fierce competition, during the 1880s the record was to change hands twelve times.

The quest for greater speed was to end the role of Guion in the North Atlantic. So much space aboard their ships was given

over to machinery that passenger accommodations were reduced below economic levels and produced excess vibration. Their last ship, the OREGON, took the record in 1884, only to lose it to the National steamer AMERICA. The OREGON was to take the honors back in ninety days, but by then Guion had been forced to sell her and she now flew the Cunard colors.

Inman and White Star traded the race for several years until the launching of the Cunard CAMPANIA in 1893. This ship put the record up to 22 knots and it was generally believed that this was as fast as a ship could go (Wall,1977). Germany, however, had been quietly building and, with the help of a benevolent Kaiser, the North German Lloyd KAISER WILHELM DE GROSSE was launched in 1897. By now, ships had foregone any pretense as sailing ships and their profiles had begun to resemble the ships of today.

The KAISER WILHELM pushed the record up to a blistering 22.35 knots and started a decade of German dominance. The record was traded in these years with the Hapag DEUTSCHLAND, the NDL KRONPRINZ WILHELM and the KAISER WILHELM II. The century turned with the Blue Riband resting securely in German hands.

It fell again to Cunard to recapture the record. Helped by a hefty subsidy from a British government unhappy with the German lead, two of Cunard's most famous vessels entered service. The ill-fated LUSITANIA took the record in 1908

followed by her sister the MAURITANIA in October of 1909, with a speed of 25.94 knots, steadily increasing her performances as time passed. She held the record for twenty years, longer than any other ship, and survived the 1914 war serving gallantly as a troopship (Wall, 1977).

The four years of war in Europe were to take their toll of the great liners. Many were sunk in war duty or languished at their docks waiting for the fighting to end. Several German vessels took refuge from the British warships in American harbors only to be interned and appropriated by the government when the United States entered the war in 1917. It is a matter of curious fact that these ships and others captured during the war were to form the nucleus of the new challenger in the North Atlantic, United States Lines.

United States Lines

While the United States was conspicuously absent from the North Atlantic liner races in the early twentieth century, the flag was flying proudly on other seas. Matson Navigation Company had begun regular service to Hawaii in 1908 with the 400 foot long LURLINE, and today operates a fleet of cargo carriers on that run. Prior to World War I, the north Pacific was dominated by the Dollar Line. According to Ransome-Wallis

(1977), the Dollar Line survived until 1938 when, having gotten into financial difficulties, it was taken over by the U.S. government and renamed American President Lines. The Dollar Line ships had been built by the Shipping Board for the United States Mail Steamship Line, which had also failed economically.

South American routes were served by Moore McCormack Lines, and later by a fleet of passenger/cargo liners owned by Delta lines. But it was not until the twenties that American liners returned to the North Atlantic.

Under the control of the United States Shipping Board, the fleet of aging foreign liners in possession of the United States at the close of World War I were reflagged American and distrubuted to various domestic companies. The Hapag liner VATERLAND, caught in New York at the outbreak of hostilities, was renamed LEVIATHAN and extensively refitted for troop transport, able to carry 11,000 soldiers on each trip. After the war, she was laid up until 1922 at which point she was refitted for the passenger trade and sailed for 11 years in the North Atlantic for the newly formed United States Lines. Luxurious and speedy, she was a financial failure and taken out of service in 1934.

Cairis (1979) lists five liners of foreign construction that flew the American flag after World War I. Aside from the LEVIATHAN, the REPUBLIC, the AMERICA, the GEORGE WASHINGTON, and the PRESIDENT ARTHUR all carried passengers for United

States Lines. None were successful. In 1924, the U.S. government introduced an act greatly restricting immigration, and as a result, there was much surplus tonnage on the North Atlantic. Further, this was during the time of Prohibition, and American laws extended to her ships at sea, forcing passengers to choose between "dry" domestic ships and foreign "wet" ones. These laws helped to sink the finances of the three liners United American Lines had received from Hamburg-Amerika and forced their reflagging under Panamanian registry. Unencumbered by liquor laws, these ships eventually were operated profitably.

American Export Lines were mainly cargo ship operators until 1931 when they put four ships into service between New York and the Mediterranean ports. After World War II, four new ships were put back in the same routes, each carrying 124 first class passengers, but the re-emergence of European companies in the trade prevented their economic operation and they were sold by 1965. In 1960, controlling interest in American Export was acquired by Isbrandtsen Co. of New York, who continued to operate their two largest liners, the CONSTITUTION and the INDEPENDENCE which went into service ten years before. Each was 23,754 tons and carried about 1000 passengers, but the decline of the Mediterranean trade forced their conversion to cruise ships. Nevertheless, they were both laid up in 1969 (Ransome-Wallis, 1977).

In 1932 and 1933 the sisterships MANHATTAN and WASHINGTON were launched for United States Lines, being the largest merchant vessels ever built in the United States at that time. Each carried 1200 passengers in superior accommodations and both did quite well following the repeal of Prohibition. This prompted the Line to build the AMERICA as a replacement for LEVIATHAN. Used for cruising until the U.S. entered World War II, AMERICA became a troop transport eventually carrying over half a million soldiers to Europe. Put back in transatlantic service following the war, by 1964 she was unprofitable and sold to Chandris Lines for cruising. A similar fate befell WASHINGTON, withdrawn by 1951 (Cairis, 1979).

In 1952, United States Lines launched its most ambitious project. The UNITED STATES was the largest passenger liner ever built in the U.S. Financed by a government subsidy for roughly half her $77 million cost, she was the most modern and technologically brilliant passenger ship of all time. Constructed to strict military standards and designed to carry 11,000 troops in wartime, extensive use of aluminum made her light and fireproof. Two separate engine rooms held her turbines which gave a top speed of over 42 knots. She carried 1563 passengers in three classes and operated with 1060 officer and crew. On her maiden voyage she tore across the Atlantic at 35.59 knots, obliterating by nearly four knots the record held by the Cunard QUEEN MARY since 1938. The Blue Riband returned

to the United States for the first time since the Collins liner PACIFIC disappeared in 1857.

The UNITED STATES sailed for 17 years until being laid up in 1969 after the expiration of her operating differential subsidy. In her last year of operation, her losses were between $4 and $5 million, victim of forces that had moved public interest away from the great liners as a mode of transatlantic transport, the single most significant of which was the Boeing 707.

Empty Ships, Empty Oceans

According to the BBC (1985), the Boeing 707 was put in regular transatlantic service in 1958. Capable of carrying 180 passengers to Europe in less than six hours, the jet airliner was to seal the doom of the great express liners. Air travelers to Europe exceeded sea travelers for the first time in that year, and only ten years later the share of transatlantic passage captured by ship had fallen to 4 percent.

Wall (1977) states that by 1965, the QUEEN MARY and the QUEEN ELIZABETH were losing £8,000 per day on the North Atlantic Run. The QUEEN MARY made her thousandth and final trip in 1967 before being sold to Long Beach, California for use as a hotel/convention center. The QUEEN ELIZABETH was withdrawn in 1968, eventually to die of fire in Hong Kong

harbor while being fitted out as a floating university.

The layup of the UNITED STATES has already been noted, and the ILE de FRANCE was burned for a motion picture special effect in 1958. The French Line superliner FRANCE held on until 1974 before being sold, and the Italian luxury ships RAFFAELLO and MICHELANGELO managed to stay in business until 1975 (Wall, 1977).

Only the QUEEN ELIZABETH II (QE 2) maintained regular Atlantic service to the present day, and then only in the summer. Off season, she must make her way in the cruise trade, serving as floating hotel and resort for thousands of vacationers each winter as fewer and fewer find the sea a rewarding route to Europe.

Cruising itself is not really a new phenomenon. For years it was the practice for major lines to divert their less economic ships to the vacation trades when seasonal business fell off. Many famous transatlantic liners found homes in this business in their declining years and a few were actually designed for it. However, the large liners were ill-suited for tropical cruises. Having been designed for the North Atlantic in wintertime, they boasted long covered promenades, little open deck space, interior pools, and, most importantly, no air conditioning. This latter lack turned staterooms into steamrooms under the tropical sun, requiring extensive refits to convert the suitability of liners to cruise traffic. Some

were able to make the transition, others were not. The traditional three class system gave way to a single class, or hotel class, on board ship.

The liners were dead, but a new industry was growing. Each year, increasing numbers of Americans chose the ease and convenience of a sea vacation and shipowners began building ships for that service only. The Atlantic surrendered the passenger trade to the Caribbean, the Mediterranean, and the Mexican Riviera. New York was replaced by Miami and Ft. Lauderdale as the premier ports of embarkation and the airplane, killer of the liners, boosted cruise sales by making a sea voyage as near as the closest airport.

The Cruise Industry Today

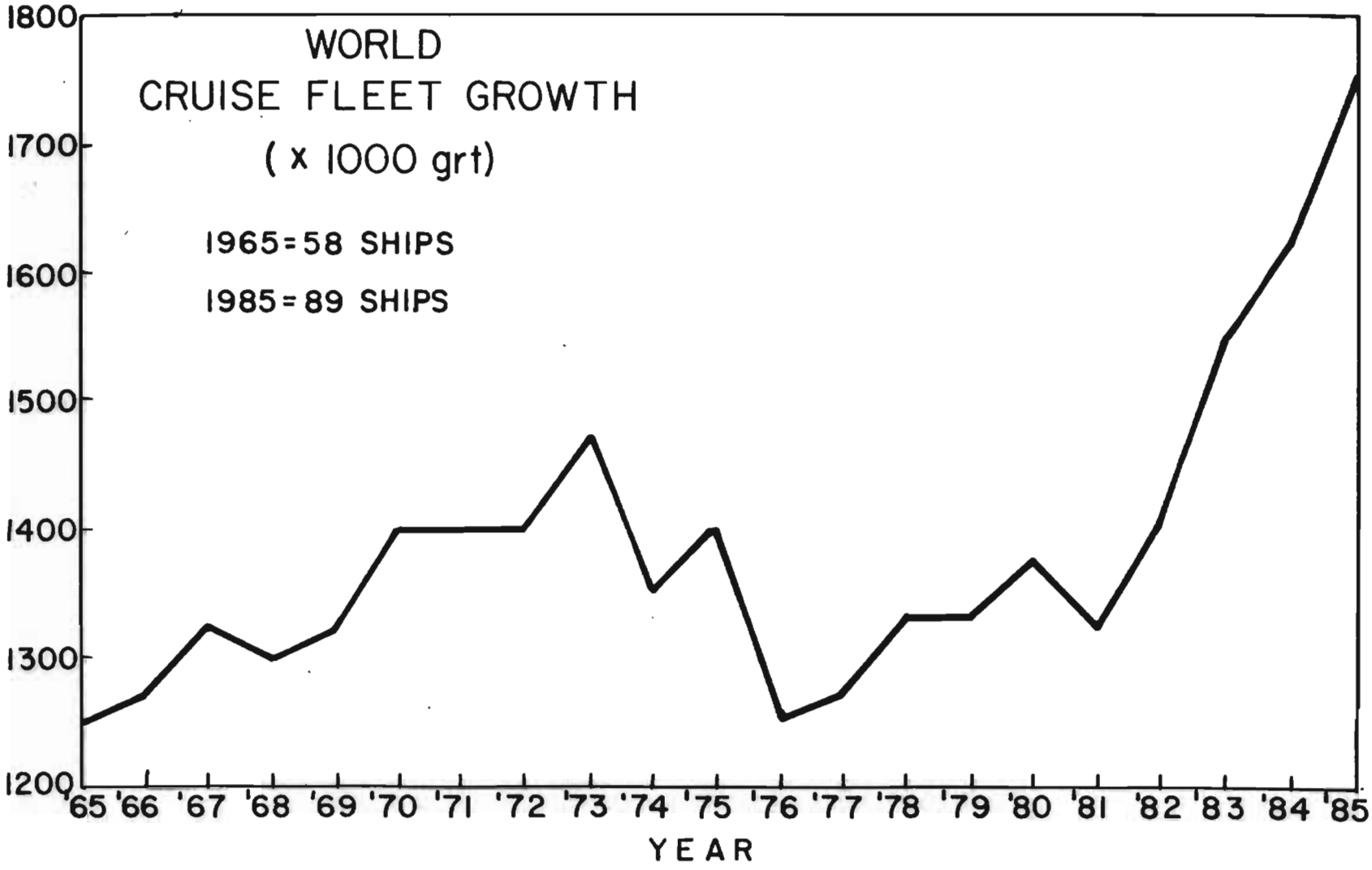
If one were to use the U.S.-flag fleet as an example, the cruise industry would appear on the verge of extinction. Nothing could be further from the truth. Spurred by a period of phenomenal growth, the number of passengers taking vacation cruises from American ports only has climbed from 590,000 in 1970 to over 1,600,000 in 1984 (Cohen, 1984). Presently, 55 vessels representing 62 percent of the world fleet operate out of U.S. ports during some or all of their schedules and cruise revenues have climbed from $500,000 in 1971 to over $4 billion in 1982 (Seatrade, 1984). The world cruise fleet has

skyrocketed since 1981 (see Figure I), with 19 ships having been built or expanded (McDonald, 1985). The North American market is the largest in the world, and Americans account for up to 75 percent of the world cruise passengers (excluding Soviet-bloc nations). However, only two of the vessels (INDEPENDENCE and CONSTITUTION) are of American registry, the balance being of various flags and ownership (see Table A).

Statement of Purpose

With such a powerful industry emanating from American shores providing a lone bright star on the shipping horizon, what forces have combined to drive American ships from the competition? Did they succumb to normal market pressures or were other factors involved? When the American ships had gone, did the foreign interests respond with unreasonable and inflated fare structures? Has the industry atmosphere altered in such a way that again the U.S.-flag will be seen flying prouldly over a passenger fleet? It is therefore the purpose of this paper to examine the nature of the cruise industry and relate it to the demise of the great American passenger ship, offering reasons and insights into the dominance of foreign ships and seamen in American oceangoing tourism. Further, factors influencing a rebirth of American flag cruise ships

FIGURE I - World Cruise Fleet Growth, 1965 - 1985



Source: Fearnleys, "World Cruise Fleet 1985".

TABLE A - Cruise Vessels in Operation - January 1985, by country of registry.

Country	No. of Vessels	Passenger Capacity
Panama	18	13619
Norway	12	11029
United Kingdom	10	10035
Greece	17	8843
Liberia	6	5705
Bahamas	5	3182
Italy	4	2704
Neth. Antilles	3	3602
United States	2	600
W. Germany	2	900
France	2	1251

Source: Fearnleys, "World Cruise Fleet, 1985"

will be discussed, and a possible method presented.

Hypothesis

The domestic passenger trade declined under the pressure of air travel, but the American cruise ship succumbed to the lower operating and construction costs of foreign vessels. It is hypothesized that from that point in time where the U.S.-flag ships disappeared from the competition that the increased demands of the buying public served to raise cabin prices beyond that dictated solely by inflation. Chapter III will address this hypothesis and present conclusions. Further, as American vessels are provided by law certain protections in domestic coastwise trade, it is postulated that these routes may have been overlooked by potential operators and may hold the key for renewed U.S.-flag participation in the burgeoning vacation cruise market. Chapter IV will attempt to prove that the cities of America's East and Gulf coasts have the attractions and capabilities necessary to start and support an economically viable coastal deep sea cruise ship industry.

CHAPTER TWO

CRUISING ECONOMICS

The Cruise Industry Oligopoly

Studying American cruise industry patterns of the last twenty years reveals competitive reactions typical of what economists term oligopolies. Knickerbocker (1973) describes an oligopoly as "rival firms in an industry composed of a few large firms which counter one another's moves by making similar moves themselves." Since the number of sellers is small, each firm's decisions often have a substantial impact on the price of products and profits of the others, and hence on the market as a whole. A direct and personal interaction of sellers results in what is known as "mutual interdependence," whereby each seller must take the potential reactions of rivals into account before making business decisions.

In the cruise industry, though ships may vary widely, each operator has roughly the same competitive capabilities. If one company chooses to raise its prices, or improve its market position by lowering fares, its rivals may do so also in order not to lose their market share. If one company gains a lead, the added assets available to improve competitive capabilities may establish that company as the industry leader and difficult

to dislodge. Additional revenues provide the base to invest in more ships, and if the industry as a whole experiences growth as is has in recent years, the leading company may increase its market share even further.

Economies of scale are quite important in the cruise industry, the more berths one has to offer, the lower the price that has to be charged to meet the marginal costs of operation - and more ships mean more berths. According to Gwartney and Stroup (1983), reducing price in an oligopolistic industry may bring customers away from competitors and new buyers into the market, causing higher profits provided the prices aren't too depressed. If each company tries to undercut its rivals, however, prices will continue to fall to just above production levels, and economic profit and incentive is eliminated. Hence, the stimuli prompting collusion among rivals are strong, each desiring to maximize joint profit.

Along with the tendancy to collude is the proclivity to cheat on the collusion, be it tacit or overt. In the cruise industry, this takes the form of deep discounting, air/sea packages, group rates, and other hard to detect fare structures. More often, operators will use improved style, quality, and advertising as competitive weapons, effectively cutting fares and improving position. Price cuts may be matched, but improving quality takes time.

The large scale production necessary to produce the

required low unit cost is a substantial barrier to entry in the cruise business. A potential operator must quickly achieve a substantial market share, having little time to grow gradually to comfortable size. Prospective ship owners must fashion and market novel types of cruises on new or unique vessels, breeding fresh demand through creative difference.

In a caution to new ship owners and current operators looking to expand, Stanley Buchin (1985), cruise marketing expert for Temple, Barker & Sloane, Inc., advised at the recent "Seatrade" Cruise Shipping Conference to "avoid the bandwagon trap brought on by increased opportunity. Look to future supply and demand, not present, and tap new consumer and geographic markets, lest the scope of opportunity be exceeded."

The Cost of Competition

There are several reasons for the decline of U.S. participation in the cruise industry. The cost of building a passenger vessel is higher in American yards than in foreign yards. Consequently, there have been no large passenger ships built in domestic yards since 1958. Harbridge House (1984) estimated the cost of construction of a generic cruise ship of 700 passenger capacity at $210 million. Recent deliveries of ships from foreign yards have averaged about $135 million. It

is difficult to compare costs in a U.S. yard to foreign yards because many foreign governments own, heavily subsidize, or provide attractive tax and other incentives to shipbuilders. These direct or indirect subsidies distort the true cost picture.

The other major reason for the lack of American cruise ships is the wide disparity between U.S. and foreign crew wages and benefits. These can amount to as much as 50 percent of domestic operation, but as little as 25 percent of foreign ship costs (Harbridge House, 1984). Though U.S. labor unions vow to achieve parity with foreign operating costs, this has yet to be put in practice on an actively competitive vessel on the same routes as foreign ships.

As a result of these and other factors, when operational subsidies expired for the American fleet and were not renewed, the operators could no longer pay their crews and maintain competitive prices. As has been demonstrated, a few ships held on running limited routes here and there, but by 1971 there were no active U.S.-flag luxury liners left in the world fleet. The foreign vessels controlled the market, one aspect of which this study addresses.

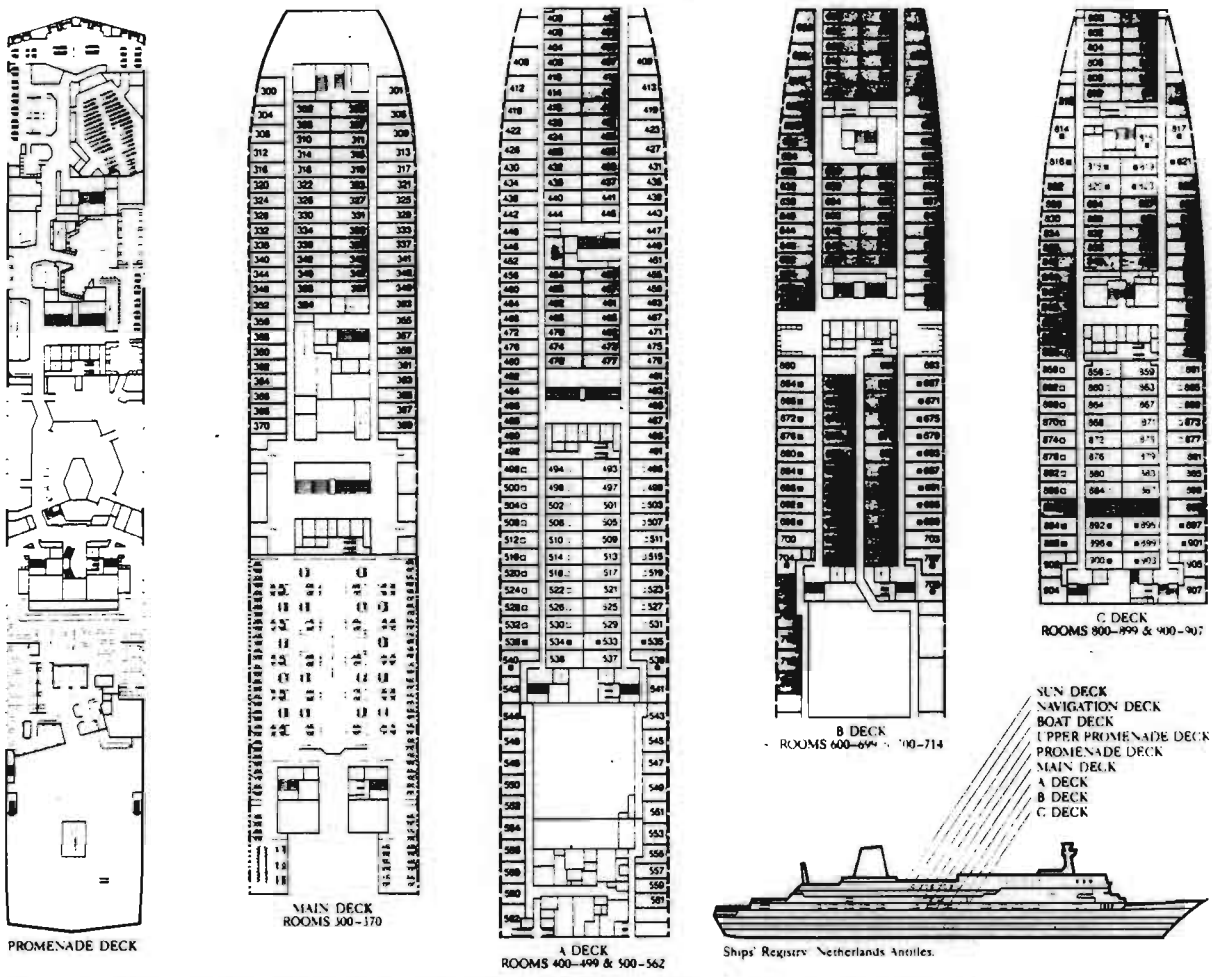
Methodology

In order to obtain a clear picture of the evolving price structure in the cruise ship industry, prior to and after the disappearance of American flag vessels, the following methodology was conceived:

Each year, usually in the fall, the New York Times publishes a special issue of its Sunday "Travel" section dealing specifically with cruise ships, their itineraries, and the current price structures of the various cruises offered around the world. Grouped typically by geographical area of service, the individual ships are profiled, special cruise features are highlighted, and a price range is listed. Research has shown that the Times is likely to repeat this concept during other seasons, but the October or November offering normally covers the coming winter season, the time of highest prices in the Caribbean.

As most cruise ships offer from ten to fifteen different price structures, (see Figure II) based on cabin size, location, and opulence, the fare listings are necessarily limited to a brief summary such as "from $995 to $2250 per person, based on double occupancy." However, neither figure gives and accurate idea of the typical or most desirable cabin available. As advertising "come ons," the lower figure usually

FIGURE II - Typical Cabin Selection Sheet



CRUISE FARES

CATEGORY	PEAK	VALUE	ECONOMY
A Staterooms Deluxe	$2,475	$2,335	$2,195
B Deluxe Outside Double/Twin	1,995	1,895	1,795
C Deluxe Outside Double/Twin	1,925	1,825	1,725
D Large Outside Double/Twin	1,825	1,725	1,625
E Outside Twin	1,725	1,625	1,525
F Outside Twin	1,645	1,545	1,445
G Large Inside Double/Twin	1,545	1,445	1,345
H Inside Twin	1,445	1,345	1,245
I Inside Twin	1,345	1,245	1,145

Peak: June 29-August 20
Value: June 15-25; August 24-September 3
Economy: June 1-11; September 7-17

- ● BATH
- ▲ KING SIZE BED
- ■ QUEEN SIZE BED
- ○ TRIPLE (KING SIZE BED AND SOFA BED)
- □ QUAD (TWO LOWERS, TWO PULLMANS)
- \+ CONNECTING ROOMS
- ♦ ON NOORDAM ONLY. AVAILABLE WITH EITHER TWIN BEDS OR ONE QUEEN SIZE BED.

Prices shown are per person based on double occupancy.
Port Charges: $28 per person additional.
Single fares 150% of applicable category.
Third and fourth persons sharing with two full fare passengers $395 per person.
Other terms and conditions apply.

Source: Holland America Lines

reflects the rate of only a few small cabins without portholes on lower decks. The higher figure may represent widely different accommodations, some ships being equipped with suite arrangements costing far more than the average cabin. Other ships have no such quarters, the higher figure more accurately reflecting the standard per berth cost, therefore simply averaging the two figures will not accurately describe mean cabin cost.

As a general rule of thumb, the cabins on upper decks command higher prices, and cabins on particular decks, as noted above, may differ according to size, bed type, and other amenities. The presence of a porthole or windows is an important factor, though most cruise passengers, especially on shorter trips, use their cabins for little more than sleeping. Nevertheless, cruise operators are quick to point out how many of their cabins are "outside", and this is perceived by the prospective passenger as the type most preferred. New ship designs reflect this trend with more and more interior spaces given over to public rooms and engineering allowing maximum cabin access to outer bulkheads.

In order to present an accurate profile of cabin "per diem" changes over the last twenty years, 1965 - 1985, the appropriate issues of the New York Times were examined and the price ranges of all ships noted. As the price of operation may

vary according to geographical area, those ships operating seven day programs in the Caribbean in winter were singled out for comparison, exceptions occurring when particularly significant ships (such as American-flag vessels) were only operating in other routes or for other passage durations at the time. This was done for simplicity's sake as often 75 different ships might be represented sailing seven different seas for up to 70 days. The Caribbean routes were picked as they have shown the greatest growth over the chosen time period.

The next step was to determine the average gross passage price of several ships, divide each by the number of available berths, and arrive at an average price per berth for an entire ship. This figure was then divided by the length in days of the voyage to arrive at an average price per bunk per diem per ship.

Current data published in company brochures was used for the comparison and six ships presently in operation were employed. Six different registries were examined, one each of Norwegian, British, French, Bahamian, Liberian, and American. In every case the average price per berth was representative of a typical two berth cabin having a porthole on a middle or upper deck, by far the most common cabin type on any ship. Simply dividing the indicated figure by the minimum advertised price per diem yields the "Minimum Fare Multiplier" (MFM) for

the ship in question. Similarly, dividing the figure into the highest advertised price results in arrival of a "Highest Fare Multiplier" (HFM). The data is presented in Table B.

The range of values for the MFM was remarkably narrow, indicating that the ships have similar degrees of difference in the lower cabin classes. The values for HFM were considerably more disparate, reflecting the presence of ultra-luxury accommodations on some vessels. Accordingly, the average of all MFM values was taken to achieve a standard MFM for any vessel, a factor of 1.33. This figure was then used to adjust the lowest advertised figure for passage on each vessel offering cruises each year for the twenty year period. Next, all ship per diems in the study area were averaged according to year, American flag vessels separately, and the data presented in Figure III.

Applying the Consumer Price Index

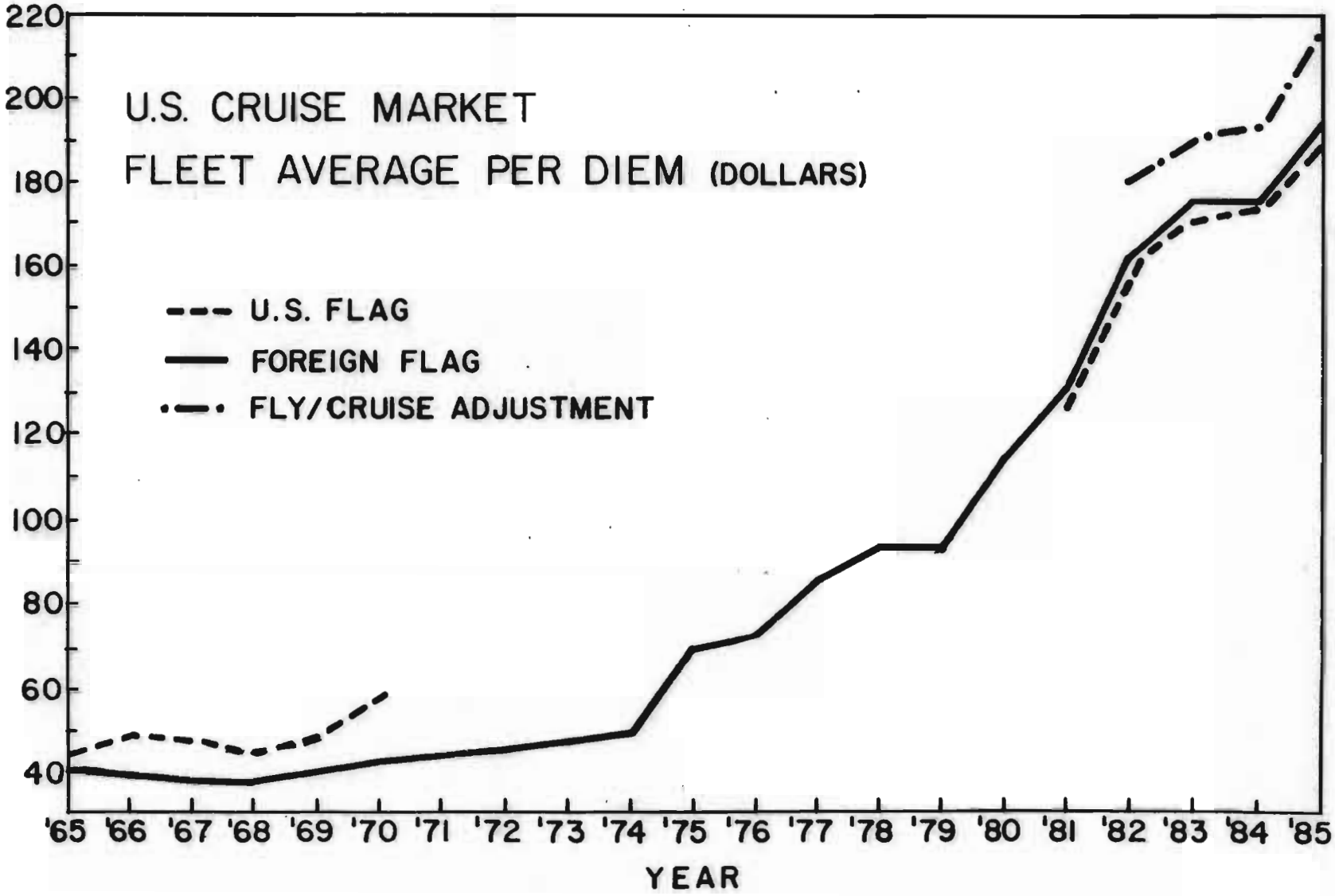
The Bureau of Labor Statistics of the United States Department of Labor has studied the effects of general inflation on prices for several decades. The changing purchasing power of the dollar is measured against a typical "market basket" of goods and services, keeping track of the average prices paid by consumers. Changes in value are listed

TABLE B - Calculated Mimimum Fare Multiplier (MFM) and Highest Fare Multiplier (HFM) for six vessels.

Ship	Registry	MFM	HFM
SKYWARD	Norway	1.38	.70
SUN PRINCESS	Britain	1.31	.65
ATLANTIC	Liberia	1.23	.63
RHAPSODY	France	1.38	.80
PEARL	Panama	1.32	.76
CONSTITUTION	U.S.	1.36	.77
Average		1.33	.72

Source: Various issues New York Times, ship brochures, and author's calculations.

FIGURE III - Average Per Diem Growth, 1965 - 1985



Source: New York Times, various issues and Author calculations

relative to certain base years (1967=$1) and tabulated as the "Consumer Price Index" (CPI). According to the Handbook of Labor Statistics (1983), quantities and qualities of the sample items in the "market basket" remain essentially the same between consecutive pricing periods, so that the index measures only the effect of price change on the cost of living. Through population studies and consumer surveys, the CPI is periodically revised, bringing the "basket" up to date and improving the sample and methodology. A cross section of the country is used in the sampling, food, fuels, rents, and a few other items being priced monthly in all areas.

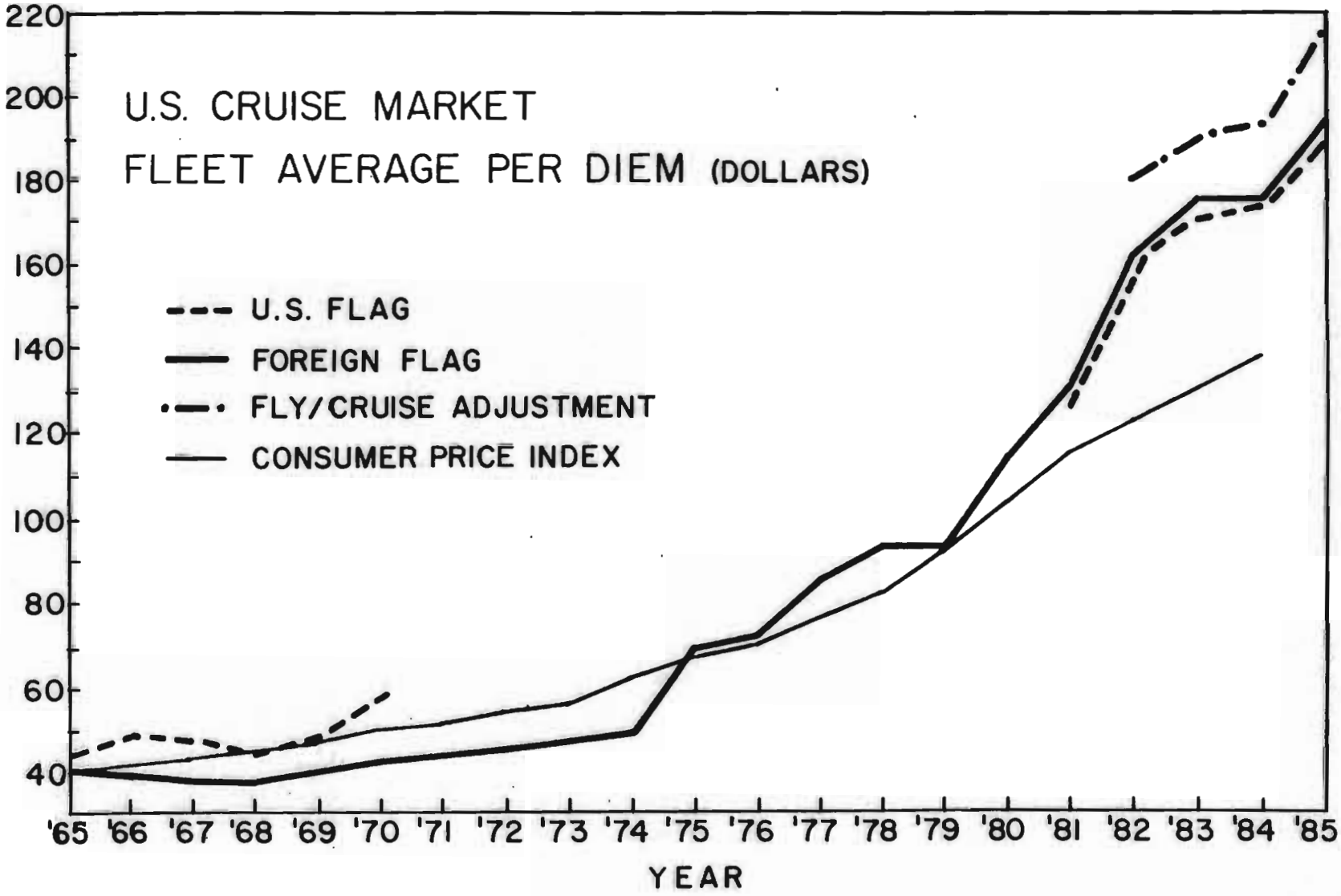
In addition to the CPI, the average prices received by producers are also tabulated in the Producer Price Index (PPI). Because producers' price increases take time to be reflected in the prices that consumers pay, the PPI usually increases before the CPI, but over the long run, the PPI and the CPI generally reflect the same rate of inflation. For this study we will use the CPI as published by the Bureau of Labor Statistics and apply it to cruise ship prices as they have evolved over the last twenty years. Simple multiplier factors adjusting each year's fares consistent with the CPI are presented in Table C, and the results are overlaid on Figure III producing Figure IV.

TABLE C - Annual Consumer Price Index Multipliers 1965-1982

Year	Factor
1965	1.0286
1966	1.0288
1967	1.0420
1968	1.0537
1969	1.0592
1970	1.0430
1971	1.0330
1972	1.0623
1973	1.1097
1974	1.0914
1975	1.0577
1976	1.0645
1977	1.0766
1978	1.1147
1979	1.1346
1980	1.1024
1981	1.0599
1982	1.0583

Source: U.S. Department of Labor, Handbook of Labor Statistics, 1983

FIGURE IV - Average Per Diem with CPI Factor Overlay



Source: New York Times various issues, Handbook of Labor Statistics, Author calculations.

Results

Examining Figure IV, we can see that in the late sixties, as the U.S. fleet began to disappear, the average prices offered by the foreign fleets were well below those one might expect given the prevailing inflationary patterns in the United States. This illustrates the lower cost of operating and manning under foreign registries. After the U.S. fleet no longer provided competition, the trend continues until 1975 when the CPI adjusted fares begin to fall below those offered by the foreign ships. The lines nearly intersect in 1979, but move rapidly apart in the early eighties.

In 1981, the cruise industry began to see the widespread use of the fly/cruise fare, which includes all or most of the airfare from a passenger's home town to the port of embarkation. This is naturally not "free", but passed on to the passenger in the form of increased fares, the total package being less, however, than the separate tickets would be. This is the result of the airlines and cruise lines cooperating to increase the profits of both. The two American ships in operation providing data for the years following 1981, did not typically offer the full fly/cruise package. They did, however, offer air discounts which amounted to approximately half the normal price. Factoring in a per diem addition to the cruise price based on prevailing airfares, we arrive at a value

to more accurately compare with foreign fares, represented by the line in Figure IV labeled "Fly Cruise Adjustment." As indicated, this results in an increased per diem of around $20.

Conclusions

While it can not be flatly stated that foreign predatory pricing practices drove the American fleet out of the business in the late sixties, we can readily see that the blatant dichotomy in fares would encourage prospective passengers to move to foreign vessels. This, coupled with the loss of government operating subsidies, simply made U.S.-flag operation inviable.

The rapid rise in fares starting in 1974 may be attributed in part to the jump in global oil prices, but this factor is reflected in the CPI and does not account for the growing disparity in cabin rates following 1979. The tremendous increases in the early eighties can be attributed to the rise in prices which always follows increased demand. As demand for cruise space is continuing to grow, so can we expect the prices to multiply. If the two vessels in Hawaii are operating at mimimal cost, and their relatively higher prices are not born of the exclusivity of their routes, we might expect that American vessels will continue to be uncompetitive in the open

trades. Because of the greater elasticity between marginal costs and marginal revenue in foreign-flag operation, should American vessels come on line posing serious threats to foreign operators, the foreign ships would be able to drop prices below those at which the domestic companies can compete.

CHAPTER THREE

THE CRUISE SHIP OPERATORS SURVEY

Purpose and Method

In order to gain a greater appreciation of any difference in financial and operational pressures facing domestic versus foreign flag cruise ship operation in the present U.S. market, the "Cruise Ship Operators Survey" was conceived. Consisting of seventeen questions (see Figure V), the survey was sent with self-addressed return envelope to the Chief Executive Officers of thirty companies presently or planning to operate cruise ships calling at U.S. ports. Respondents were encouraged to ignore questions that were considered inappropriate or proprietary (see Appendix A). Confidentiality was guaranteed. Results are tabulated as Table D.

Results

Of the thirty questionaires administered, twelve were returned, representing a response rate of 40 percent. In all, thirty-nine vessels of six different registries, either in service or planned, are represented. Two thirds of the companies and two thirds of the vessels are described as "U.S.

FIGURE V - Cruise Ship Operators Survey

CRUISE SHIP OPERATORS SURVEY

PURPOSE:
To perform research at the University of Rhode Island.

Instructions:
Please check or fill in appropriate blank.

1. Do you presently, or are you planning to, operate cruise ship tonnage in the U.S. market?

   _____ presently _____ planning

2. How many ships? _____

3. Country(ies) of registry? _____

4. Could company ownership be termed "U.S. beneficial" _____yes _____ no

5. Year vessel built? 1. _____ 2. _____ 3. _____ 4. _____

6. Year acquired by company? 1. _____ 2. _____ 3. _____ 4. _____

7. Approximate original cost of acquisition and fitting out (U.S. dollars)?

   1. _____ 2. _____ 3. _____ 4. _____

8. Number of berths (lowers only)? 1. _____ 2. _____ 3. _____ 4._____

9. What is approximate average breakeven utilization rate (% of berths)? _____

10. Approximately what percentage of non-administrative operating costs are (or anticipated to be) attributable to wages? _____

11. What percentage to capital interest and depreciation? _____

12. What is predominant nationality of ships officers?

    deck _____ engineering _____

13. What is predominant nationality of hotel staff? _____

If Appropriate:

14. Would an amendment to "Jones Act" restrictions permitting U.S. flag registry on vessels of foreign origin induce you to seriously consider reflagging U.S.?

    _____ yes _____ no _____ undecided

15. Would a further relaxation of regulations allowing hotel staffs *only* to be comprised of foreign nationals on U.S. flagships induce you to seriously consider reflagging under U.S. registry?

    _____ yes _____ no _____ undecided

16. Would repeal of cabotage laws induce you to seek markets in the U.S. coastwise trade?

    _____ yes _____ no _____ undecided

17. Company name._____

THANK YOU!

TABLE D - TABULATION OF OPERATORS SURVEY RESULTS

Numbers in parentheses indicate number of vessels or operators. Twelve returns are represented.

Question:

1. 9 operators presently in market
   4 in planning stages as well
   3 in planning stages only

2. 39 ships total represented

3. Norway (17), Bahamas (9), Panama (7), Liberia (2), France (1), United States (3).

4. Yes (8), No (4).

5. Varied from 1944 to unbuilt.

6. Varied, earliest was 1968.

7. Varied, from $6 million for a vessel built in 1957, to $200 million for an as yet unstarted ship.

8. From 150 (2) to 2000

9. 6 responses, average of 68% for U.S.-flag (2); 73.25% for foreign operations (4)

10. 5 responses, 25% for U.S.-flag (1); 20.7 for foreign operations (4).

11. 5 responses, 25 % for U.S.-flag (1); 25 % for foreign-flag.

12. Deck: Norway (3), U.S.(3), European (2), Italian (1), Greek (1), Varied (1), French (1), Danish (1). Engineering: Norway (4), U.S.(2), European (1), Italian (1), Greek (3), Danish (1).

13. Hotel: Varied (3), French (1), Caribbean (2), U.S.(3), Philippines (1), European (3).

Questions 14-16 refer to foreign-flag operations only.

14. Yes (1), No (7), Undecided (1), No Answer (1)

15. Yes (2), No (3), Undecided (4), No Answer (1)

16. Yes (4), No (1), Undecided (4). No Answer (1).

beneficial," meaning they are owned primarily by Americans. The vessel sizes range from two of 15 berths to one of 2000 berths. The oldest vessel was built in 1944, the youngest has yet to have her keel laid.

Too few responses were obtained to the questions concerning capital cost versus percentage of operational expense attributable to interest and depreciation to arrive at any firm analysis. The figures for this item range from 7.2 to 40 percent. Similarly, the questions on breakeven utilization rate and wage costs were answered by less than half the respondents. Breakeven rates ranged from 68 percent to 85 percent and wage percentage from 13 to 25 percent.

The crews aboard the ships are by far predominantly European in all departments, except, of course, on the three planned U.S.-flag ships. One operator had a large percentage of hotel staff of Philippine origin and another claimed hotel staff of 38 different nationalities.

Discussion

Considering that the only responses from U.S.-flag vessels were from those in the planning stages, it is clear that no firm conclusions can be drawn regarding the relative costs of domestic and outflagged registries. Very interesting

information, however, came from the final three questions concerning U.S. regulatory structures.

Only one foreign operator chose not to answer this section. Of the other nine, only one would reflag under the relaxed construction restrictions, but only three would definitely not reflag if hotel staffs were permitted foreign nationals. This indicates that this may be a major cost area for ships of American registry, and an area that could be considered for regulatory compromise.

The most enlightening information, however, came from the responses to the last question concerning the market for coastwise American cruises. Only one operator firmly denies considering coastwise markets. Four others, including two industry leaders, would definitely seek such markets, the remainder being undecided. This leads to the conclusion that this trade is being looked at by experienced professionals in the field who are not denying the possibility of the protected trades as a source of income. This would tend to strengthen the position of U.S.-flag operators about to enter the industry. If the "Jones Act" trades can be developed, it may be the sustaining factor in future American passenger ship operation, and it is precisely this subject which is addressed in Chapter Four.

CHAPTER FOUR

THE COASTWISE CONCEPT

Introduction

The unprecendented boom in the American cruise market has raised a number of interesting questions about the future of the American-flag deep sea cruise fleet. Presently confined to the two vessels operating in the Hawaiian Islands, the possibility of building and operating a number of vessels in the protected "Jones Act" coastwise market as an opportunity for American seafarers and shipbuilders has been subject to debate. Industry experts are divided as to whether such a market exists in sufficient quantities to support one vessel, let alone several. The rapid growth of the market supplying small coastwise vessels (T-Boats) has led many to believe interest is rising in the American people for vacations along their own shores. The vast amounts of capital and energy devoted to resurrecting decaying waterfront in American coastal cities serves as an example of the attention the population is paying to the marine environment as a focus for social and recreational development. Increasingly, Americans are exploring their seacoasts and the excitement and convenience of doing so by sea may be a key to rebuilding the passenger fleet,

in the legacy of the MANHATTAN, AMERICA, and the UNITED STATES.

Opportunities Within the Law

While the Merchant Marine Act of 1920, commonly known as the "Jones Act", is concerned with the carriage of cargo between U.S. ports and issues of seamen's rights, it does not address the transportation of passengers, as is popularly believed. Such carriage is covered in the Passenger Vessel Act of 1886, which prohibits foreign-flag or foreign built vessels from carrying passengers or their accompanying baggage between domestic ports (Bank 1985). This trade is restricted to American-flag vessels with coastwise endorsements on their certificates of registry, a idea that has become known as "cabotage".

Foreign-flag vessels on a voyage originating from a domestic port must call at at least one nearby foreign port-of-call prior to temporarily discharging their passengers at a second U.S. port. The stay in the second port must not exceed 24 hours before the voyage is resumed and eventually the vessel must return to the port of origin. Unofficially, the number of intermediate stops is limited to two for each call at nearby foreign ports. Exceptions to this rule occur during "cruises to nowhere" when the vessel touches international

waters before returning to point of origin and on cruises to Puerto Rico. In 1984 legislation was passed allowing foreign-flag vessels to operate with passengers between the mainland and Puerto Rico, until a legitimate domestic vessel serves 270 day notice of intent to displace the foreign vessel in service. Under additional proposed changes, the 24 hour rule would be extended to an indefinite period, providing the vessel stops at one nearby foreign port.(Bank 1985)

With rising interest in cruise vacations, prospective ship operators are increasingly considering the coastwise protected routes as a source of income. Seatrade (December, 1984), mentions studies which suggest that Americans are interested not only in the exotic island cruises dominated by foreign operators, but also in cruises which operate along the South Atlantic, Gulf, and Pacific Coasts. Cohen (1984) states, that with the exception of Hawaii, there is little reliable information about these markets, forecasts being little more than guesswork. However, some hopeful large cruise operators concede this may be the only viable trade to seek until their operations get off the ground.

In 1980, a Marad study concluded that no domestic coastwise market existed that could adequately offset the construction and operating costs of a large U.S.-flag cruise ship. However, Harbridge House (1984), reported the coastwise cruise trade as a substantial opportunity for U.S.-flag operators. They

estimated the unserved market could provide from 226,000 to 658,000 passengers per year by the end of the decade, producing revenues exceeding $1.2 billion annually.

Gulf Coast operators believe that the proximity of the pier to the passenger will offset any slight fare differences between their ships and their foreign competitors. The East Coast, generally believed to be the least promising market, is also being looked at by at least one operator of large ships who is hoping to cash in on the escalating interest demonstrated by smaller coastwise vessels on that route.

Fearnleys (1985) lists about 20 small vessels of up to 100 grt and carrying around 100 passengers presently operating coastwise in the U.S., with two sternwheelers cruising the Mississippi River. Operating under the relaxed construction and manning standards of Subchapter T, 46 CFR, these boats are enjoying a remarkable increase in popularity and revenue. Cruise Travel magazine (April 1985) cites the relaxed intimate atmosphere and the constantly changing waterway scenery as major attractions to this industry which Professional Mariner (Feb. 1985) claims produced over 57,000 passengers in 1983. One such operator, American Cruise Lines of Haddam, Connecticut, is beginning its eleventh year of operations, planning 135 cruises accommodating a total of 16,000 passengers on four vessels sailing 22 different itineraries. With the addition of four new vessels in the country's small passenger

fleet last year rises the realization that Americans are becoming more America-minded in terms of vacations and tourism.

Certainly the burgeoning cruise market has not gone unnoticed by municipal port authorities and developers in American coastal cities. In an article on cruising, Fairplay (April 18, 1985) examines the dramatic construction and harborfront rejuvenations currently underway in several major U.S. port cities. Each hopes to become a "cruising center" providing competition for traditionally more popular but crowded ports such as Miami, Ft. Lauderdale, and New York. Promotion of local attractions and facilities for passenger recreation play a major role in luring large cruise ships to a port.

The remarkable attention that many U.S. cities are directing to rebuilding their inner-city harborfronts as tourist attractions increases the possibilities of intriguing domestic coastwise routes. As these cities once and sometimes still do accommodate large freight carriers, the necessary draft is available for cruise ships as well. With crowded highways and urban sprawl serving to discourage visitors to coastal cities, it is believed that interest exists for large cruise ships to provide the means for exploration of our coasts for any and all of our citizens, and those of other countries as well.

Hence, the purpose of this chapter is to assess whether

domestic deepsea cruise routes and facilities exist on the Gulf and East Coasts. Further, it will be shown that attractive itineraries for one and two week cruises are possible, providing maximum shoreside interest for passengers and provoking general industry growth both at sea and ashore.

As the Chairman of the Board of American Hawaii Cruises said recently,

> "One segment of the cruise industry which remains virtually untapped, and for that matter untested, is the United States coastwise cruise market. Authorities claim a potentiality of half a million passengers per year. I don't know...but it is one of the highest incentives for American shipyards and American labor in shipyards to get their act together. If the bottom line is there, it will be done...once the market develops there will be irresistable forces to start building."
>
> (Everhard, 1985)

Methodology

A total of 52 Gulf and East Coast ports were examined as potential sites for cruise origins, destinations, and

intermediate stops (see Appendix B). Evaluating criteria included but were not limited to:

- controlling depth to quayside
- controlling depth to anchorage
- channel width
- turning basin
- pilot availability
- passenger terminals for transferring baggage
- passenger only facilities
- major airport proximity
- tug services
- repair facilities, drydocks
- bunkering and watering facilities
- Customs Port-of-Entry
- special harbor hazards
- Coast Guard rescue team proximity
- port tariffs
- shoreside attractions for 500-1000 people

Reference materials and port resource materials included:

- United States Coast Pilot, vols.1-5
- World Port Index
- Ports of the World
- National Port Assessment
- Waterway Guides

- Birnbaum's United States 1985
- Distances Between Ports
- industry reports, articles, and promotional materials.
- appropriate U.S.C.G.S. charts

Suitability of ports and schedules are based on a typical modern cruise ship of 20,000 grt, drawing 9m, a beam of 20m, service speed of 21 knots, and carrying from 500 to 750 passengers.

Final port selection was based on the conformation of the harbor and its facilities to the needs of the ship, the passengers, and time. Presence or plans for large specialized passenger terminals worked in favor of Boston, Pt. Canaveral, Charleston, and Tampa. It is believed that they would facilitate shore excursion and baggage handling considerably. Ports such as Miami and Ft. Lauderdale were eliminated as they are located in large cities without centralized tourist locations, even though they have extensive terminal facilities.

Casco Bay and the Dry Tortugas were chosen for the unique natural environment that each affords. Tampa, Pt. Canaveral, and Yorktown were chosen for the proximity to major family theme parks and recreational facilities. Savannah, Baltimore, Boston, New Orleans, and Yorktown were chosen for historic interest and new waterfront developments. Martha's Vineyard, Provincetown, and Key West were chosen for the unique and

picturesque nature of the communities. Appendix C lists some of the more important criteria and their availability at selected ports.

Cruise Itinerary and Port Review

The following itinerary is designed to give maximum time in selected ports-of-call, providing adequate daytime cruising but concentrating passage time during nighttime hours. Two one-week routes are described, allowing passengers to select either one or both as vacation alternatives. Ideally, a cruise ship operator would have two ships running the route in opposite directions, leaving the endpoints (New Orleans and Boston) and meeting at the mid-point (Charleston) on the same day, providing an opportunity for passengers to mingle and party with their counterparts on the sistership. At least one wilderness experience and theme park visit is included in each route. Port selection concentrates, however, on historic and general interest, with thought given to the real possibility of marketing such cruises as family vacations.

Listed distances between ports are approximate and transit times are adjusted to allow for docking and miscellaneous maneuvering. Long passages are provided with adequate buffer periods at the next port-of-call to allow for speed reduction

in event of heavy weather. In other cases, service speed has been purposely reduced to adjust arrival times to practical or convenient hours, producing fuel economy in the bargain.

Sunday, Day 1 - New Orleans to Tampa, 440 miles, 22 hours @ 21 knots. Depart New Orleans 1500h.

New Orleans - One of the largest ports in the United States. The natural gateway to the central portions of the country, last year New Orleans was the largest domestic port in terms of tonnage moved. Main air, rail, and highway routes connect to all parts of the country. It is a popular resort with many fine hotels, theaters, restaurants, parks, and places of historic interest, including the famous French Quarter. Cruise passengers could easily extend their vacations for a day or several in this lively city. The harbor is essentially 22 miles of marginal wharfs, and the Board of Commissioners of the Port of New Orleans is currently building a new passenger terminal and has begun aggressive marketing to attract cruise ships. This is an ideal stopping and starting point as all services are available and channels are well maintained to the sea. Early departure would give passengers a chance to see the lower Mississippi River during daylight and also would ease the strain on the captain in these heavily traveled sea lanes.

Monday, Day 2 - Tampa to Dry Tortugas, 180 miles, 9 hours @ 21k. Arrive Tampa 1300h., depart 2300h.

Tampa - Three cruise lines currently operate with Tampa as home port, Bahama Cruise Lines, Holland America, and SEL Maduro. This year to date over 100,000 passengers have cruised from here. A $225 million three-ship cruise terminal is planned for the downtown area at the junction of the Ybor and Garrison Channels. Repair facilities exist for large ships and all other sevices can be obtained. During our 13 hour stay in port passengers can visit nearby beaches, the "Bounty" exhibit and maritime museum, and nearby Busch Gardens.

Tuesday, Day 3 - Dry Tortugas to Key West, 60 miles, 4 hours @ 15k. Arrive Dry Tortugas 0800h., depart 2200h.

Dry Tortugas - Known as the "Gibralter of the Atlantic", the Dry Tortugas are the site of Ft. Jefferson National Monument. The fort, built in the mid-nineteenth century, is the largest brick fortification in the western hemisphere and occupies almost all of Garden Key, one of three islands surrounding a deepwater anchorage. The fort is presently maintained by National Park Service personnel from Everglades National Park. This is an opportunity for passengers to go ashore on an island completely cut off except by air or sea. The coral reefs provide excellent snorkelling and the fort can be explored for hours. In the evening a beach party could be

held, passengers reboarding for the 2200h. departure. It is believed that cruise ships have yet to visit these islands and this would provide a truly unique experience.

Wednesday, Day 4 - Key West to Port Canaveral, 320 miles, 14 hours @ 23k (2 extra knots are picked up by the Gulf stream flow), arrive Key West 0200h., depart 1600h.

Key West has been steadily improving its facilities for cruise ships for several years, establishing a dock on Pier B, with two more planned for the Mallory Dock area in conjuction with a hotel complex. Bunkers are available but no repair services exist. A Coast Guard base is nearby with all capabilities. The town is tourist oriented with many attractions for sightseeing both ashore and afloat. Key West is the closest approximation of a Caribbean island community in the United States. Air service, car rentals, and hospital services are available.

Thursday, Day 5 - Port Canaveral to Savannah, 300 miles, 14 hours @ 21k., arrive P.C. at 0600h, depart 2400h.

Port Canaveral has two modern passenger terminals with four more planned or under construction in the West Basin area. Rail and interstate connections are nearby. All services except drydocking are available. Passengers would be bussed to Disney World, 70 minutes away, or the Kennedy Space Center, 15

minutes away. Beautiful beaches are within walking distance, and the port location is an ideal spot to view Space Shuttle launches. All day is given to this port to allow for maximum enjoyment of passengers of the nearby attractions.

Friday, Day 6 - Savannah to Charleston, 100 miles, 5 hours @ 21k., arrive Savannah 1400h, depart 2400h.

Savannah, 15 miles up the Savannah River from the sea, is a leading southern port with considerable foreign trade. Well marked channels but considerable tidal currents characterize the entrance. All big ship facilities are available though no specific passenger terminal exists. Cruise ships would have to arrange to moor at one of the numerous marginal wharves which line both sides of the river. Attractions ashore include historic house tours and the River Street restoration project which has developed a dilapidated section of the harborfront into 55 stores and restaurants. Walking tours of the city take explorers through charming neighborhoods of unique design.

Saturday, Day 7 - Charleston, arrive 0400h

Charleston, largest city and port in South Carolina, has a new passenger terminal on the Cooper River approximately 7 miles from the outer jetties, in a downtown location within walking distance of many of the local attractions. All major ship services are nearby and this is an ideal end or starting

point for the cruise. Rail, air, and highway connections can be easily made. Visitors can take tours of historic houses, nearby plantations, enjoy theaters and fine restaurants. Harbor tours to Ft. Sumter National Monument leave from nearby piers. In addition, Charleston is planning an extensive waterside park in the vicinity of the passenger terminal.

Sunday, Day 8 - New passengers board by 1500h, provisioning, bunkering, and cabin preparation having been carried out the night before and after departing passengers disembark at 1000h. Depart at 1700h for Yorktown, Va.

Monday, Day 9 - Charleston to Yorktown, Va. 440 miles, 21 hours @ 21k., arrive Yorktown at 1300h.

This is a long night at sea around Cape Hatteras and into the Chesapeake Bay, arriving in the York River. Deep anchorage is available, and passengers would be ferried ashore to enjoy the Yorktown Battlefield National Monument, nearby historic Williamsburg, Jamestown, and Busch Gardens. No services are available but nearby Norfolk has every big ship service should any need arise. Depart at 2200h. for Baltimore, Md.

Tuesday, Day 10 - Yorktown to Baltimore, 150 miles, 10 hours @ 15k., arrive Baltimore at 0800.

Baltimore has been a major seaport of the United States for

many years. All ship services are available in this deep and well traveled harbor. Though no specific passenger terminal exists, wharfage could be obtained at one of the 200 piers which line the Patapsco River. Passengers would enjoy the new Harborside Pavillion, the new National Aquarium, the U.S.S. Constellation exhibit, and historic Ft. McHenry, birthplace of the national anthem. Depart 2000h.

Wednesday, Day 11 - Baltimore to Philadelphia, 90 miles, 6 hours @ 15k. Arrive Phila. 0600h.

Philadelphia, a major cargo port, is 86 miles from the mouth of the Delaware River. No passenger terminal exists but all large ship services are available. Cruise ships might be able to moor at the Penn's Landing facility by the Philadelphia Maritime Museum. From here it is a short stroll to historic Independence Hall and charming Society Hill where many fine restaurants and shops have been recently established. World famous Franklin Institute would be an ideal passenger sidetrip. Depart Phila. 1800h.

Thursday, Day 12 - Philadelphia to New York City, 220 miles, 12 hours @ 21k. Arrive New York 0600h.

New York is a famous passenger port but rarely is used as an intermediate stop. A new passenger ship terminal was built ten years ago on the Hudson River at midtown. All ship

facilities are available. The shear size and sprawl of New Yord would necessitate careful planning for passenger excursions, but New York is renowned for its variety of tourist attractions. Ideally, a Broadway show would be offered to passengers, filling the evening hours until the planned departure at 2400h.

Friday, Day 13 - New York to Newport, R.I., 140 miles, 9 hours @ 15k. Arrive Newport 0900.

Newport's inner harbor has insufficient draft to accommodate a cruise ship but anchorages exist in the outer harbor in deep water. No drydock is available but nearby in Providence and Fall River complete ship services can be found. The town offers a variety of sights for the passengers with mansion tours, historic Ft. Adams, and the newly refurbished downtown wharf area with shops and restaurants. Ship would depart at 2000 for cruise to Casco Bay, Maine.

Saturday, Day 14 - Newport, R.I. to Casco Bay, Maine. 180 miles, 10 hours @ 18k. Arrive Casco Bay area 0600.

Casco Bay - An area of deep water and an extensive island regime, the harbor of Portland offers secure anchorage in all weather. A general cargo pier with 718 foot marginal wharf is available but the ship would not plan on stopping here. Ship's schedule would permit slow cruising among the 136 islands in

the bay, with an afternoon picnic and clam bake on one of the many uninhabited islands. Depart Casco Bay for Boston at 2000h. Arrive Boston 0400, Sunday, passengers disembark by 1000h.

Boston - The trip ends (or begins) here at the new passenger terminal presently undergoing a $4 million renovation and relocation. All ship services are available, and all transportation is nearby. The city itself offers a wide variety of tourist attractions giving the cruise passenger plenty to do if he chooses to extend his vacation in this area.

Conclusion

Two sample large vessel itineraries have been presented in this chapter. It by no means covers all available ports and cruise opportunities available in American home waters, but does serve to prove that viable cruise routes exist in the United States with plenty of shoreside diversions and attractions for passengers in areas proximal to major seaports. As operators become familiar with passenger desires, the ideal schedule will emerge. Further, it is believed that this type of service will not detract from the cruises offered by small waterway vessels. New passenger facilities have been cited, and it is believed that growth of coastal cruising will spur

further development of this kind. The pioneers of this industry will start the ball rolling and undoubtedly reap the greatest rewards.

SUMMARY

This paper has shown that over the course of American history a proud tradition of maritime accomplishment has become intertwined with the spirit of the nation. It has been established that, following the disappearance of the U.S.-flag passenger ships, cruise prices rose with demand above normal inflationary levels. The feasibility of coastwise deepsea trades as a vehicle for American participation in cruising has been established both phyically and in the minds of the industry. It remains only for one operator with vision and perseverance to test the market.

It would appear that the future viability of American cruise ships is in the hands of labor. With the disinclination of government to subsidize what is essentially a leisure industry, it is up to shipbuilders and seamen to come to terms with ship operators. As most other maritime interests languish in the doldrums, the cruise trade should be seized like a breath of fresh air. Opportunities and jobs are the natural children of booming business. It is shameful that in this industry, so dependent on American dollars, Americans are orphans on the outside looking in.

APPENDIX A - CRUISE OPERATORS SURVEY COVER LETTER

The University of Rhode Island, Kingston, RI 02881-0817
Department of Geography and Marine Affairs (401) 792-2596

March 26, 1985

Dear Cruise Ship Executive:

Enclosed is the University of Rhode Island "Cruise Ship Operators Survey". The purpose of this survey is to provide material for a major research effort in cruise ship economics.

Please take a few minutes to fill it out. If any question is not appropriate for your situation or requires disclosure of sensitive information of a proprietary nature, please feel free to leave it blank. However, be assured that all returns will be kept confidential and that company names will not appear in association with specific figures or opinions in the final report.

This effort cannot succeed without your help and we sincerely appreciate your input. Please return the survey in the enclosed self-addressed and stamped envelope. We will be grateful for your timely response.

Very truly yours,

David C. Errickson
Researcher

DCE/sh
Enc.

APPENDIX B - SELECTED PORT LIST

Port	Adequacy of Harbor	Terminal	Tourism	Nature
Penobscot Bay	Y	N	Y	Y
Casco Bay	Y	N	Y	Y
Portsmouth, N.H.	Y	N	N	N
Gloucester, Ma.	N	N	N	Y
Boston	Y	Y	Y	N
Plymouth, Ma.	N	N	Y	Y
Provincetown, Ma.	Y	N	Y	Y
Nantucket	N	N	Y	Y
Martha's Vineyard	Y	N	Y	Y
New Bedford, Ma.	Y	N	Y	N
Narragansett Bay	Y	N	Y	Y
Grenport, N.Y.	N	N	Y	Y
Port Jefferson, N.Y.	N	N	Y	N
New London, Cn.	Y	N	Y	N
New Haven, Cn.	Y	N	N	N
New York City	Y	Y	Y	N
Atlantic City	N	N	Y	Y
Philadelphia	Y	N	Y	N
Baltimore	Y	N	Y	N
Annapolis	N	N	Y	N
Washington D.C.	N	N	Y	N
Yorktown, Va.	Y	N	Y	Y

Norfolk	Y	N	Y	N
Beaufort, N.C.	N	N	Y	Y
Wilmington, N.C.	Y	N	Y	Y
Georgetown, S.C.	N	N	N	Y
Charleston	Y	Y	Y	Y
Beaufort, S.C.	N	N	Y	Y
Savannah	Y	N	Y	Y
Brunswick, Ga.	Y	N	Y	Y
Fernandina Beach,Fl.	Y	N	Y	Y
Jacksonville	Y	N	N	N
St. Augustine	N	N	Y	Y
Port Canaveral	Y	Y	Y	Y
Ft. Pierce	Y	N	N	Y
Palm Beach	Y	N	N	N
Miami	Y	Y	N	N
Key West	Y	Y	Y	Y
Dry Tortugas	Y	N	N	Y
Ft. Myers, Fl.	N	N	Y	Y
Tampa/St. Pete	Y	Y	Y	Y
Apalachicola Bay	Y	N	N	Y
Panama City	Y	N	Y	Y
Pensacola	Y	N	N	Y
Mobile, Al.	Y	N	N	N
Pascagoula, Ms.	Y	N	N	N
New Orleans	Y	Y	Y	Y

Galveston	Y	Y	Y	N
Matagorda Bay	Y	N	N	Y
Corpus Christi	Y	N	N	N
Port Isabel, Tx.	N	N	N	Y

REFERENCES

Banks, Richard., Adddress to Seatrade Cruise Shipping Conference, New York, March 5, 1985

Birnbaum, S., United States 1985 Travel Guide, Houghton Mifflin, New York, 1984

Brinnin, J.M., The Sway of the Grand Saloon, Delacourte Press, New York, 1971

British Broadcasting System (BBC), "Diamonds In The Sky", Harry Hastings Productions, WGBX-TV, January 28, 1985

Bruce, D., "Small Ships", Cruise Travel, Mar/Apr. 1985 p.39

Buchin, S., Address before the Seatrade Cruise Shipping Conference, New York, March 6, 1985

Cairis, N.T., Passenger Liners of the World Since 1893, Bonanza Books, New York, 1979

Cohen, M., "Dream Ships", Seatrade, March 1984, pp.3-5

Defense Mapping Agency, Distances Between Ports, U.S. Government Printing Office, Pub. 151, Washington D.C., 1976

Defense Mapping Agency, World Port Index, U.S. Government Printing Office Pub. 150, Washington D.C., 1984

Everhard, C., Address to Seatrade Cruise Shipping Conference, New York, March 6, 1985

Fairplay, "Cruise Fever Grips US Ports", April 18, 1985, p. 14

Fearnleys, "World Cruise Fleet 1985", Oslo, Norway, 1985

Gwartney, J.D. and Stroup, R., Microeconomics, Academic Press, New York, 1983

Harbridge House, "A Study of the U.S. Deep Sea Coastal Cruise Market", report to American Maritime Officers Service, Washington D.C., March 21, 1984

Hughes, T., The Blue Riband of the Atlantic, Charles Scribner & Sons, New York, 1973

Katz, F.J., "Riding the Passenger Cruising Boom", Professional Mariner, February 1985

REFERENCES (cont.)

Knickerbocker, F.T., Oligopolistic Reaction and Multinational Enterprise, Harvard Press, Boston, 1973

McDonald, S.B., Address before the Seatrade Cruise Shipping Conference, New York, March 6, 1985

New York Times, various Sunday "Travel" Sections, 1964-1985, New York

Ports of the World 1979, Benn Publications, Ltd., London, 1979

Ransome-Wallis, P.L., North Atlantic Panorama, Wesleyan University Press, Middletown, Conn., 1977

Seatrade, "Cruising To Capacity?", December 1984, pp.9-13

U.S. Department of Commerce, United States Coast Pilot, vols. 1-5, NOAA, 1984-85

U.S. Department of Commerce, Maritime Administration, "Analysis of the North American Cruise Industry", Centaur Associates, October 1980

U.S. Department of Labor, Handbook of Labor Statistics, Bulletin 2175, U.S. Printing Office, Washington D.C., 1983

Wall, R., Ocean Liners, Chartwell Books Inc., Secaucus, N.J., 1977

Waterway Guide, Northern Edition, 1983, Annapolis, Md.