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The Port of Boston: Perspective on a Maritime Dilemma

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THE PORT OF BOSTON: PERSPECTIVE ON A MARITIME DILEMMA

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THE PORT OF BOSTON: PERSPECTIVE ON A MARITIME DILEMMA

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by

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INTRODUCTION

"Outside of the Eighteenth Amendment, port development is about as dry a subject as you can think of." So would Alfred E. Smith begin meetings with business and civic groups back in 1921 when he was a Commissioner of the newly formed Port of New York Authority. With theatrical, as well as political flair, however, would belie his own words and impress upon his audience the vitality, complexity and utility of a seaport. The same approach could be adapted to any port that is, or once was, a major commercial center. Most New Englanders are curiously conscious and proud of their legacy of a unique maritime heritage. Yet for most, this manifests itself in regattas off Marblehead or faded daguerreotypes of a long removed romantic era. Few in Massachusetts, or even in the metropolitan Boston area, however, understand their Port's past, and few still appreciate its present contributions and sympathize with its struggles and problematic future. Ask a Bostonian about the Seaport, and he will just nostalgically sigh that the Port is not what it used to be. Nonetheless, he cannot be faulted for lack of concern about container cranes, demurrage charges and pension funds.

However, if the saga of the Port of Boston were a required course in the public school system, as are civics and American history, it would effectively span many academic disciplines. It would entail not just over 300 years of the

Seaport's evolution, but also the historical development of the region and even the nation. Its economic concepts would be vividly presented against the backdrop of international commerce. It would shed light upon various approaches, traditional and innovative, successful and unsuccessful, of public administration and business management. It could focus on governmental mechanisms and dissensions, and political processes and infighting. It could highlight the necessity and methods of effective public relations and advertising schemes. It could expose the practical workings of unsightly labor-management relations, feuds and resolutions. It could trace the development and often inept application of new technologies. Lastly, but not least, it could provide psychological insights as to mercantile titans, calculating politicians and frustrated and irate community leaders. The Port of Boston could educationally provide constructive and destructive illustrations in all these fields.

Ports, as their handmaidens, ships, often assume characters of their own and become almost humanized participants in their own chronicles. The Port of Boston has enjoyed and suffered most of the vicissitudes offered by maritime commerce, from an internationally glorious significance to a nationally inglorious insignificance. It has been a versatile Thespian, dramatic and melodramatic, tragic and burlesque. Above all, it has faithfully served and reflected its assigned hinterland, from an initial national expanse to a constrained local market.

It was the vital link in the early flow of European settlers, most of life's necessities and all communication with the outside world; later it was the gateway for the raw materials of rapid and extensive industrialization. Now it has been reduced to solely the terminus of a troublesome energy life line. It once accomodated an endless variety of offerings and demands, and now, with singular dependence, receives but one predominant import. It has attracted and lost those water-front industries that impart so much to the dynamism of a past Boston or a present Rotterdam. It once supported a thriving and integrated maritime economic structure only to witness its gradual erosion and the alien expropriation of its ownership and control. From a premier distribution center that generated revenues for all Port interests, it has declined to a status at which its very economic viability has been questioned.

Whatever its past fame or present indignities, the excitement of a vibrant, profitable waterfront does not enter into the advocacy and implementation of harbor recreational and residential development plans, with or without commercial activities. This near dismissal of the Seaport's present and potential value in certain circles, only presents another dilemma to those attempting to cope with this veritable maritime bag of worms.

But despite all these obstacles, the Port may possibly, for the first time in many years, face the opportunity of

resuscitation. In this context, however, with so many contingencies and external influences, the only reasonable undertaking may be a survey of the Port's past, a description of its present, and a modest anticipation of its future. Too presumptuous a hindsight or a prescience would only force upon the Pandora's box that the Seaport's critics, timbers and revivalists are endeavoring to seal. If Governor Smith could convince his audience of a port's inherent interest, maybe sometime in the future the Port of Boston or its spokesmen can convince its inattentive audience of its inherent worth.

History is a cruel stepmother,
and when it retaliates, it
stops at nothing.

V. I. Lenin

History is more or less bunk.
Henry Ford

CHAPTER I

HISTORY OF THE PORT

Exigencies more than natural advantages seemed to have inaugurated the early emergence of Massachusetts' maritime eminence. While Boston is blessed with one of the finest harbors in the world, favorable physical characteristics abounded elsewhere along the newly settled seaboard. The Canadian Maritimes were nearer to both the Grand Banks and northern Europe. Maine's coastline offered numerous and equally fine harbors. Chesapeake Bay, with its adjacent agricultural wealth and milder climate, was much more centrally located. Furthermore, Boston enjoyed no great tributary such as the St. Lawrence, the Hudson or the Delaware, to guarantee it a natural concentration of goods to and from the interior. Finally, its hinterland, constrained by a northern political frontier and a western mountain barrier in the Berkshires, produced no staple to compare with those of the middle and southern colonies.

Nonetheless, necessity and ingenuity skirted these handicaps and engendered Massachusetts' initial and pre-eminent

maritime orientation. Though the first settlers intended to farm the land, the inhospitable soil of the new colony forced many of them to look to the sea for sustenance. By 1630, fishing, shipbuilding and sea-borne commerce were well on their way to becoming the dominant industries. It was early and perceptively recognized that distribution could contribute as much to a successful economy as production, and soon trade amongst the settlements and with the local Indians soon flourished. Distant coastal commerce with Virginia, Maryland, the Dutch colonies of Manhattan and Long Island and the French colonies in Canada quickly followed. Fish, liquor and linen cloth were the principal exports, with corn, tobacco, sugar, brass pieces, beaver skins and sheep the major imports.

With increased maritime activity, water-front facilities were improved and a gradual filling of marshes and swamps pushed Boston's water mark out to the deeper waters of the harbor. Bounties were offered to public spirited citizens who would extend the shoreline, and by the early 1630's the first town dock was constructed. In 1631, John Winthrop's "Blessing of the Bay", the first sizable ship built in Massachusetts was launched at Medford and signalled the birth of a famed and lucrative shipbuilding tradition.

From these early limited trade patterns, Massachusetts developed a true maritime commerce by the 1640's. Several factors made this possible. The Civil War in England increased

the scarcity of foreign commodities and led to expanded colonial trade with new and far-flung parts in the Western World. Export deficiencies, destined to forever plague Boston, further contributed to an increase in distant commerce. Well supplied with fish, beef and lumber, Mother England afforded little market for the only staples Massachusetts could provide. A new and more receptive marketplace was required and soon discovered in the West Indies.

The plantation economy of the "sugar islands" had to import every necessity of life and readily absorbed New England offerings. Boston soon dominated a triangular trade route, the ingredients of which were local rum, African slaves and West Indian molasses. This successful adjustment to the absence of a directly saleable export medium allowed New England distilleries to profitably meet the growing domestic demand for rum. Since sales to the islands exceeded purchases, this scheme was central to counter the imbalance of imports over exports that had already reared its nasty head in the trade with England. Furthermore, through bills of exchange, specie and native produce obtained in the islands, Boston shipmasters obtained the cargoes needed for a more equalized British trade. Soon, the West Indies trade became the keystone of Massachusetts' maritime commerce and was largely responsible for the steady growth of the Port of Boston. By the late Seventeenth Century, over 60% of the traffic in the Harbor was working this route. A trade had been established that was to last over 250 years and Boston had surely become "the

mart town of the West Indies".

Boston's expanding trade was not limited to the West Indies, however. Although this route continued to be the most profitable and engaged more than one-half of the Port's foreign shipping up to the Revolution, the range and diversity of Boston's commerce was also increasing elsewhere. Trades begun in the late Seventeenth Century flourished in the prosperity that followed the Peace of Utrecht in 1713. Reliance upon England for imports decreased and a wide variety of goods was brought in from European, Mediterranean and South American ports. From 1714 to 1717, a total of 1,267 vessels, totalling 63,000 tons and employing 8 to 9,000 seamen sailed from Boston for distant foreign ports.¹

Behind this trade expansion was a growing export base that consisted of a varied mix of goods including dried codfish, which by 1700 had become the mainstay of Boston's out-bound cargoes. Also composing this *mélange* were whalebone, whale and cod oil, pickled mackerel and shad, masts, boards, staves, shingles, naval stores, potash, horses and livestock, pickled beef and pork, beeswax, and other "sundries". On the liquid side, in 1773, New England as a whole exported 911,000 gallons of rum, 419,000 gallons of which went to Africa, 361,000 gallons to Quebec, and 111,000 gallons to Newfoundland.²

Supplementing this foreign trade, numerous small vessels out of Boston developed a varied and prosperous coastal trade

with the other North American coastal colonies. This "mosquito fleet" exchanged a variety of local goods for tobacco, grains, naval stores of pitch and tar, and beaver and seal skins. With rapid development, Boston coastwise traffic entailed about 800 voyages a year by Mid-Century.

As a result of its growing ocean-borne commerce, Boston was the largest town in the English colonies until 1755, when passed by Philadelphia, and the major trade center in North America for much longer. Within this commercial ambiance, merchants even ruled the social and political life of the colonial metropolis. Two factors were critically important to Boston's supremacy. First, it was able to draw on local resources for export products which were in demand in many domestic and foreign markets. Secondly, Boston had evolved as the major distribution center for the numerous and varied imports and exports of the North American colonies, and as such, it served an area much larger than its immediate hinterland. Consequently, as the marketability and volume of New England's export mediums fell and competition from other ports reduced Boston's service region, the Port would be profoundly affected.

Though Boston became the headquarters of the American Revolution largely because the policy of George III threatened her maritime interests, the war destroyed the city's trade, industry and commerce. In 1789, however, the first Congress immediately adopted customs regulations designed to make Boston the leading port of the United States. Once again,

maritime ascendancy rescued the local economy and as Boston's commerce expanded, both the seaboard and the interior entered a period of prosperity.

Expansion was not limited to the European and coastal trades, however. Hampered by new trade restrictions in the West Indies, Boston turned to newer and safer markets. An eastern Mediterranean trade in fruit, oil and wine proved profitable and opened a larger number of ports to Boston vessels. More important, by the early 19th Century, a new Baltic trade had become extremely lucrative for Boston merchants, with Russian hemp, iron and duck linen exchanged for New England rum, Virginia flour and tobacco, and imported tea and coffee. Surpassing even the profitable Russian business, however, was the China trade begun in 1793. Again the pattern was unfolding to reveal Boston's prone weakness, that of lacking a suitable export medium for the Far East. Yankee inventiveness, however, cultivated another prosperous, indirect trade scheme. Local ships carried cutlery, ironware, clothing, blankets, beads and molasses to the Pacific Northwest where they were bartered with the Indians for sea otter furs. These beautiful black furs, prized in the Orient, were in turn shipped to China, where they were traded for chinaware, sugar, curios and tea. By the early 1800's, Boston vessels monopolized nearly nine-tenths of the China trade.

Although New York surpassed Boston in total tonnage by 1800, the city enjoyed unprecedented prosperity. Much of this

resulted from the increased demand for American provisions precipitated by military activities in Europe. Boston vessels were the chief carriers of these foodstuffs, and by 1807, Massachusetts was the largest shipowning state in the Union. Massachusetts' commercial strength had come to rest on a complex interlocking system of maritime industries, none of which was self-sufficient. Protected by the policies of the federal government, this imposing economic structure was founded upon, amongst other components, a successful fishery, a pre-eminent shipbuilding industry, a vast and proven fleet, venturesome merchants and clever traders. Profits were based not so much on Massachusetts' limited exports, but rather on Boston's status as an emporium of world trade. Even by this time, Boston had little to directly offer the major trade routes. Yankee ingenuity and skillful trading, concocting delicate, multi-cornered trade patterns, could overcome this handicap only temporarily. Extensive and prosperous as this commercial edifice was, it proved peculiarly susceptible.

The preceding embargo and resultant blockade of the War of 1812 almost destroyed Massachusetts' maritime commerce. It was asserted, "...with some plausibility that (President) Jefferson's ultimate object was to destroy New England's wealth and power".³ Although prosperity did return after the war, the conflict materially altered the economic structure of Massachusetts and began a new era in Boston's maritime history. Concisely stated, "A toilsome advance in the eighteenth-twenties was followed by perceptible speeding-up in the

thirties, full-tide prosperity in the forties, and a glorious culmination in the fifties, with the clipper ship."⁴

In the ensuing peace, Europe recovered its own carrying trade and became less reliant on American produce. Boston, subsequently, lost much of its former export traffic. Moreover, a westward migration in the United States left Massachusetts, isolated in the northeastern extremity of the country, more remote from the shifting centers of population, consumption and agricultural production. As conduits between Europe and the West, ports nearer the growing interior such as Philadelphia, Baltimore and New Orleans threatened Boston's commercial base. Most important, however, New York emerged as the preeminent United States port on the North Atlantic and offered insurmountable competition to Boston. In 1825, the Erie Canal was opened and tapped the interior, west of the Alleghanies, for traffic through the Port of New York. The Canal extended from Albany to Buffalo and linked the Hudson River with Lake Erie. It established New York as the entrepôt of Western commerce and was instrumental in creating an agricultural boom in the West. Boston's future was looking dim, as the port first recognized the dire consequences of an inexorable attrition of its hinterland: "A sullen pessimism was the prevailing attitude on State Street. The decline of Boston to a fourth-rate seaport...(was) confidently predicted."⁵

Though this prognosis eventually proved prophetic, at the time, just as the port was to most need a strong export base, it was granted a wondrous respite. During the war, the manu-

factures the young Nation had traditionally acquired from England were cut off. This instigated some shrewd, prescient Yankees to divert capital into industry. In 1814, the first complete cotton factory in the United States was established at Waltham, Massachusetts. New Englanders found in the factory the assured wealth the soil had initially denied them. A wave of industrialization followed. Textile and paper mills, iron foundries, tanneries and shoe factories soon turned Lowell, Lawrence, Chicopee and Manchester into manufacturing cities. By 1840, Massachusetts was predominantly a manufacturing state and Boston's maritime prosperity depended on these new enterprises.

Port activity gradually became oriented around the functional priority of supplying food for the region's growing population and fuel and raw materials for its growing industries. Boston's coastwise trade kept pace with this increasing reliance on imports. Cotton and coal were the necessary ingredients for the new economy. The port's cotton imports from the South leaped from 25,000 bales in 1832 to 270,000 in 1849.⁶ Anthracite coal imports from Philadelphia for industries, stoves and furnaces went from 63,000 tons in 1830 to more than a million in 1850.⁷ These two commodities account for America's coastal tonnage exceeding its foreign tonnage for the first time in 1831 and the continuance of this trend despite the increasing rivalry that the railroads were offering sea-borne transport.

New England sent out everything its limited export base

would allow in exchange for these domestic receipts. Lumber, apples and fish were sent to Philadelphia and Norfolk for coal, and boots, shoes, cotton and granite were converted into Southern corn and cotton. Yankee imagination even concocted means of loading ships with ice and sailing it to Dixie for mint juleps. This burgeoning domestic trade nearly doubled Boston's coastwise shipping from 5,000 arrivals and departures in 1830 to 9,300 in 1848.⁸

Up to the Civil War, Boston's foreign commerce also expanded, but at a slower rate. Its increment also resulted from the need for imported raw materials and food. The Northwest fur trade declined and increasingly more of the China trade went to New York. The Port's Mediterranean trade increased tremendously, however; exporting cotton and rum, Boston led New York in imports of wine and fruit until 1850. Industrial demands sent local ships along new trade routes to the Baltic, exchanging western grains and manufactured goods for Swedish steel and Russian hemp. A South American trade grew to be as important for Massachusetts' commerce as the West Indies trade of colonial days. From Buenos Aries and Montevideo, hides were hauled for New England tanneries and shoe factories along with Brazilian coffee and River Plate wool for local looms. For these goods, Boston shipped lumber, ice, boots, cotton and woolen cloth, shovels and machines. Even the prestigious East-India trade supplied New England with its needed raw materials such as buffalo hides, indigo,

linseed, shellac and salt peter. All these imports were destined for the New England area except gunny-bags for Western corn growers and gunny-cloth for Southern cotton growers. All total, in 1857 there were 3,012 foreign arrivals in Boston amounting to 714,821 tons.⁹

Despite the prosperity this volume of foreign trade brought to Boston, however, an important fact cannot be overlooked. Though the export of local manufactured goods increased, at no time during the 1850's did Boston's total exports amount to even one-half of its imports from the established trade routes. Industrialization was an illusory antidote for New England's export deficiency. The vast majority of local manufactured goods were absorbed by the domestic market. Furthermore, the shoes, boots and textiles of New England's factories, while of high value, were of small bulk. When shipping was gradually wrested from the control of local merchants, the inability of the products of local enterprises to fill out-going ship bottoms became a critical handicap. In order to attract and maintain the regular and frequent service so vital to a port, a somewhat balanced volume of trade is a prerequisite. Industrialization would not prove the source of an export medium adequate for this function. Boston came to rely not only on external raw materials but also on non-indigenous bulk exports from outside its immediate hinterland to sustain an essential ocean traffic. This festering dilemma was now clearly exposing the port's singularly susceptible maritime foundation.

The clipper ship era, beginning in 1850, was considered by many as the romantic and commercial apogee of Massachusetts' maritime history. In retrospect, it appears more as a miscalculated investment. Though a need was long recognized in the China tea trade for faster vessels, the California gold rush of 1848 gave the real impetus to build and sail ships which sacrificed carrying space for maximum speed. The premium placed on the rapid transport of men and provisions of all sorts to San Francisco resulted in some of the fastest sailing vessels ever built, with Donald McKay creating such legendary master-pieces of oak, hemp and canvas as the Sovereign of the Seas and the Flying Cloud. The clipper era was short-lived, however. San Francisco became flooded with goods and freight rates dropped to a barely remunerative level. Clipper ships were found too costly to operate even in shorter coastal and trans-Atlantic voyages and sadly, none were built after 1855. The passing of the clipper can be said to have ended Boston's maritime history as distinct from the nation's as a whole.

At the end of the clipper era, Boston was a metropolis of refinement and wealth, the richest city for its size in the world. Despite this prosperity, Boston was rapidly losing ground to New York in maritime commerce. Maritime commerce has a tendency toward concentration. In the first half of the 19th Century, Boston, in her struggle to compete with New York, absorbed the commerce and shipping of every other Massachusetts seaport, including famed Newburyport, Gloucester

and Salem. Concurrently, however, the same process on the national scale was concentrating much greater water-borne commerce through New York. In 1845 New York's fleet surpassed that of Massachusetts, and by 1860, New York could boast of 1,464,001 tons of shipping compared to 466,213 tons for Boston. Though in 1857 Boston had 2,842 foreign arrivals from the major trade routes to 2,990 for New York, the figure disguises the fact that 1,913 of Boston's arrivals were small Nova Scotia schooners.¹⁰

New York's growth was unpinned by an irresistible concentration of expanding imports and exports for a great hinterland. Boston's out-bound cargoes remained stationary for the lack of a good export base and even its imports grew more slowly than New York's. Boston could still compete with Philadelphia and Baltimore because local ownership of a large share of the American merchant fleet guaranteed it cargoes. Competition with New York, however, was a losing battle. Geography and a self-aggrandizing concentration afforded New York a much greater domestic market for both imports and exports. This allowed it the commerce of a great world trade center and the profits of a great distribution center. Boston, meanwhile, relied primarily on local enterprise for its sustenance and began its struggle with the persistent and more and more apparent dilemma of an increasingly imbalanced trade which eventually relegated it to the status of a second rate out-port.

This process was hastened by Boston's reaction to the

steam-ship. Though it was able in 1840 to lure Samuel Cunard with an offer of free facilities to use Boston as the U.S. terminus of his North American Royal Mail Steam Packet Company, the Port's over-all adaptation to the new technology was disastrously inept. Its record was one of costly failures in transatlantic ventures and only a very slow establishment of coastwise steam packet lines. In contrast in New York, the state government-subsidized Collins Steamship Line to England quickly deprived Boston of much of its share of the European trade. Eventually, even Cunard transferred its lines to New York. Even worse, when New York inaugurated steamship service to the far South in the 1830's and 1840's, Boston lost her former domination over southern commerce. New York's supremacy was bolstered as a faster and more efficient development of steamship lines concentrated even more commerce in the leading port. Boston's inability to initially exploit the new technology even led local talent and capital to seek New York for better opportunities and more assured investments.

Boston's situation has been aptly summarized:

"The Civil War merely hastened a process that had already begun, the substitution of steam for sail. It was the ostrich-like attitude of maritime Massachusetts toward this process, more than the war, by which she lost her ancient preeminence. Far better had the brains and energy that produced the clipper ships been put into the iron screw steamer."¹¹

The Civil War did contribute to the crumbling of Boston's commercial prestige. The port's large trade with the South was disrupted, export cotton for the European trade was cut off and

freight rates increased due to Confederate raiders. After the war, however, despite various trade fluctuations, Boston experienced a gradual and general commercial advance between 1865 and 1900. It was the railroad that rescued Boston.

The complexion of Boston's foreign trade did not change greatly except for an inevitably increasing emphasis on imported good and raw materials. The trans-Atlantic trade with England and the Continent was still paramount and Boston continued to hold the dominant position in dealings with the Mediterranean. Though New York supplanted Boston as the terminus of the Far East trade and commerce with India and Africa decreased after 1860, these losses were compensated for by expanded trade with South America and a new trade with Australia. The goods carried back to New England on these routes were the familiar industrial necessities; hides and skins for tanneries, boot and shoe factories; cotton and wool for textile mills; jute for bagging factories; hemp for linen thread mills; sisal for cordage works; sugar for refineries; and chemicals, drugs and dyes for chemical and fertilizer works.

It was the domestic trade, however, on which the port relied for the bulk of its total tonnage. The growth of domestic imports continued to reflect the steady industrial expansion of New England. This growth was more marked than that of any of Boston's leading out-port competitors. From Maine to the Gulf of Mexico flowed the goods so imperative for the region's industrial economy. Principal inbound cargoes

included sugar, molasses, sand, lumber and vast amounts of coal, raw cotton and domestic wool. Coal was the most important tonnage commodity in this coastal trade, and the Chesapeake Bay offered an endless supply of this "black dirt" for the furnaces of northern factories.

The key to Boston's success during this period, however, was the great exports which the port was able to muster to counter-balance the huge volume of imported fuel and raw materials. By the end of the century, in fact, Boston experienced an unusual excess of out-bound over in-bound cargoes. This resulted primarily from two processes. First was the development of the great New England textile centers after 1880. These catapulted the port into the position of a world wool market second only to London. Even this, however, while demanding increased imports, did not give Boston a sufficient export base. Increased textiles supplemented the Port's other exports, and out-going cargoes of manufactured goods increased. These increases, however, while adding value to Boston's export traffic, did not supply the much needed bulk to fill ships. The Port's dilemma of high value-low bulk exports was exacerbated by the fact that most of the area's manufactured products continued to be absorbed domestically. This condition has plagued Boston up to the present.

The bulk exports the Port of Boston could not find in its immediate hinterland, it discovered in the fecund farms of the Midwest. The trunk lines of the great American railroads

were built to transport western produce, especially grain, not to the still relatively sparsely populated East, but rather to voracious Europe. All the major North Atlantic ports came to rely on carloads of Midwestern grain for needed bulk exports. Only New York, almost embarrassed by the amount of varied freight seeking its port, escaped this singular dependence. Boston, Philadelphia and Baltimore, however, fought among themselves to serve as entrepôts for the trade of the great American interior. The situation was a slight exaggeration of a basic axiom: "A port is not the origin or destination of the bulk of traffic carried by its water lines. It is a concentration point or gateway, in severe competition with other gateways for the business of a common hinterland."¹² The North Atlantic ports were the combatants, Midwestern grain was the prize and the railroads were the lances.

The major railroads had expended great efforts to build up their respective ports. Norfolk was served by the Norfolk & Western and Newport News by the Chesapeake & Ohio. Baltimore was the home port of the Baltimore & Ohio, but was also served by the Pennsylvania and the Western Maryland. Philadelphia had the Pennsylvania and also the Baltimore & Ohio and the Reading. New York, in a class by itself, was served by all the home roads of its competitors plus three direct routes of its own to Chicago, the Erie and two lines of the New York Central, and had two additional strong roads to Buffalo, the Delaware, Lackawanna and Western and the Lehigh Valley. Boston was

served by the Boston & Maine, the Boston & Albany, and the New York, New Haven & Hartford.

All these roads attempted to establish European steamship lines and thus be able to haul import and export traffic for the interior. In some cases, if independent carriers could not be convinced to enter its port, a railroad would establish its own steamship services. More often, however, a steamship line was attracted on the understanding that railroad and steamship lines would work together for their mutual interests and by the offer of a free pier, a practice to which only New York did not need to resort. This was the general method used in Boston. The Port's railroads were able to entice steamship lines with offers of free piers, guaranteed cargoes and new terminal facilities such as warehouses and grain elevators. Only the railroads could afford this sales program, for only they had the lucrative compensation of the rail haul freights which the steamship lines generated.

So it was western grain, produce and livestock, supplemented by local manufactured goods, that dramatically increased Boston's export trade. Though the steamship had a late start in Boston, by 1880, 322 steamers carried merchandise to European ports and in 1900, only 2,686 of the 10,436 ships entering Boston depended on sail.¹³ By 1900, Boston was still the nation's second largest port in foreign trade with \$192,609,000 of overseas commerce, 50% more than its nearest rival, Baltimore. Surpassed only by New York with \$1,068,700,000, Boston handled

approximately one-fifth of the country's aggregate foreign tonnage.¹⁴ The port's status, however, was shaky, and its vulnerable commercial trade base proved unreliable.

After the turn of the Century, Boston suffered a serious dislocation of its trade that, while not apparent on the surface at first, resulted in a seemingly irreversible trend of deterioration. By 1920, the earlier predictions of the Port's inescapable fall from glory were realized and Boston faced a dismal future. The artificial stimulation of World War I brought unparalleled activity to the port of Boston. Unprecedented exports of meat, dairy products, breadstuffs, cotton, leather, iron, steel and munitions were shipped to warring Europe. This was, however, only an aberration from a persistent pattern that eroded Boston's stature in world commerce and only allowed the port to maintain a parcel of dignity as the sea-borne transportation center for New England.

Though the value of Boston's foreign commerce increased impressively between 1900 and 1920, it did not match the gains of the other U. S. North Atlantic ports and marked a preponderance of imports over exports that was destined to be magnified. (Table 1). Boston's over-all tonnage gain compared favorably with that of its rival ports, but these figures were even more deceptive. (see Table 2). The Port's coastal trade, which became the dominant activity in its commercial traffic, belabored under a more severe imbalance than its foreign trade. (see Table 3).

The stimulus behind Boston's increased ocean-borne traffic

TABLE 1

FOREIGN IMPORTS AND EXPORTS

1919, 1929

(short tons)

	1919		1929	
	Imports	Exports	Imports	Exports
Total U.S.	19,882,693	48,240,771	57,975,796	69,534,481
Atlantic Coastal Ports	13,167,893	30,101,459	40,401,769	19,372,216
Boston	1,465,251	1,366,708	3,261,301	303,120

SOURCE:

U.S. Army, Report of the Chief of Engineers, 1920, Part 3, (Washington, D.C.: Government Printing Office, 1921).

U.S. Army Corps of Engineers, Waterborne Commerce of the United States, Calendar Year 1929, Part 2, Waterways and Harbors, Atlantic Coast, and Part 5, National Summaries, (Washington, D.C.: Government Printing Office, 1930).

TABLE 2

WATERBORNE COMMERCE OF THE U.S.
AND THE NORTH ATLANTIC PORTS
1919, 1929

(short tons)

Year	Total U.S.	Boston	New York	Philadelphia	Baltimore	Hampton Roads
1919	319,762,727	8,680,243	140,354,096 estimate	23,895,976	14,055,906	21,618,071
1929	519,870,279	19,065,050	182,988,041	30,252,422	20,264,165	25,116,481

SOURCE:

Report of the Chief of Engineers, 1920, Part 3.
Corps of Engineers, 1929, Part 2.

TABLE 3

WATERBORNE COMMERCE THROUGH
THE PORT OF BOSTON 1905 - 1929

(short tons)

Year	Foreign		Domestic	Total*
	Import	Export		
1905	974,712	1,294,815	5,289,764	7,559,291
1910	765,500	1,256,892	5,304,453	7,326,845
1920	1,673,899	573,489	7,023,605	9,270,993
1925	2,586,065	338,779	11,187,691	14,112,535
1928	2,964,876	403,486	12,734,997	16,103,359
1929	3,261,301	303,120	14,444,765	19,065,050

SOURCE:

Report of the Chief of Engineers, 1920, Part 3.
Corps of Engineers, 1929, Part 2.

* Total includes "Other Domestic".

TABLE 4

INDUSTRIAL GROWTH OF NEW ENGLAND STATES, 1889, 1904, 1909

Year	No. of Plants	Capital Employed	Workmen Employed	Raw Material Used	Sale of Product
1909	23,351	\$2,503,854,000	1,101,290	\$1,476,297,000	\$2,670,650,000
1904	22,279	1,870,995,000	940,752	1,116,273,000	2,025,999,000
1899	22,576	1,507,630,000	-	994,037,000	1,660,348,000

SOURCE:

U. S. Department of Commerce, Bureau of the Census, Bulletin of the Census Bureau on Manufactures in the United States, 1910 (Washington, D.C.: Government Printing Office, 1911).

during this period was, predictably, the development of new and expanded manufacturing industries and their unquenchable appetite for raw materials. (Table 4). The Port continued to receive a mass of these necessities from foreign trade. Vast quantities of grain materials from the East Indies, Australia, Egypt, Argentina and more than 40 other countries were included among the port's in-bound cargoes. It remained the second largest foreign import center behind New York and the leading wool market in the United States. By 1929, Boston's foreign import tonnage had risen to a record 3,261,301 tons.¹⁵

It was the port's domestic trade, however, which occupied an increasingly larger proportion of its maritime activities. (Table 5). Throughout the early twentieth Century, Boston's coastal trade ranked second only to New York and through the 1920's constituted over 2/3 of the Port's entire business. Unfortunately, coastal receipts greatly outnumbered coastal shipments with vast and growing amounts of raw materials arriving from the Gulf of Mexico, other North Atlantic ports and later even the West Coast. With no indigenous natural resources of its own, New England was still forced to rely on imports to feed its population and sustain its industrial growth. Coal became the leading import product, doubling to 3,000,000 tons from 1902 to 1916 and comprised over 60% of the coastal receipts through the 1920's. The character of Boston's foreign and domestic imports is reflected in Table 6.

It was the Port's reduced export base, however, which dealt the death blow. While New England tool and machinery

TABLE 5

TOTAL WATERBORNE COMMERCE THROUGH
THE PORT OF BOSTON 1919, 1929

(short tons)

Year	FOREIGN		DOMESTIC			Total
	Imports	Exports	Coastwise Receipts	Coastwise Shipments	Other Domestic	
1919	1,465,251	1,366,708	5,075,399	772,885	-	8,680,243
1929	3,261,301	303,120	12,742,708	1,712,057	1,045,864	19,065,050

SOURCE:

Report of the Chief of Engineers, 1920, Part 3.
Corps of Engineers, 1930, Part 2.

TABLE 6

LEADING FREIGHT THROUGH THE PORT OF BOSTON

1910, 1929

(Short tons)

1910	FOREIGN		DOMESTIC	
	Imports	Exports	Coastwise Receipts	Coastwise Shipments
	Wood and wood manufactures 299,923	Breadstuffs 267,563	Coal 7,151,629	
	sugar 204,482	Iron and steel manufactures 88,031	Oil 221,594	
	fibres, grasses & manufactures 119,532	Meat and dairy products 77,745	sugar 157,000	
	Fruits and nuts 94,312	Wood manufactures 56,293	Lumber 64,711	*
	chemicals, drugs, dyes 67,004	Hides and skins 54,015	sand & gravel 27,592	
		wool 40,586		
		cotton 29,535		
1929				
	Crude petroleum 520,823	Wheat 56,563	Coal 6,905,464	Refined petroleum products 371,676
	Sugar 431,884	Wheat flour 34,247	Crude oil 2,437,948	Fuel oil 365,327
	Fuel oil 384,957	Barley 45,759	Refined petroleum products 641,528	Pig iron 85,864
	Coal 307,229	Iron & steel scrap 38,485	fuel oil 577,413	Fertilizer 40,900
	Woodpulp & cellulose 237,531	Paper 10,725	sand & gravel 551,939	
	Ore 152,089		Lumber & logs 379,302	
	Lumber 103,582		Fish 127,861	
			Gasoline 107,752	
			Wool 35,526	

SOURCE: Report of the Chief Engineer, 1920, Part 3. Corps of Engineers, 1930, Part. 2

* Combined domestic commerce for 1910. Not differentiated as coastwise receipts and shipments until 1929. Vast majority of this combined total, however, was made up of coastwise receipts.

production had developed extensively, it presented the familiar dilemma of high value-low bulk goods, unable to fill departing ships and, in any case, primarily absorbed domestically. More critical to Boston's commercial traffic was the loss of grain from the Midwest on which the port had become dependent for bulk exports. The nature of Boston's deficient export medium is seen in Table 6. The net result of this situation was that the port's foreign export trade suffered a rapid decline. Its share of total national foreign exports dropped from 8.2% in 1882 to 2.3% in 1920 and to less than 1% in 1929. In 1905, Baltimore surpassed Boston in foreign exports and Philadelphia did likewise three years later. By 1929, with only 303,120 tons of overseas exports, Boston ranked 18th among all U.S. ports.¹⁶ Domestic receipts of bulk imports continued to sustain the Port's activity, and Boston's coastal arrivals soon exceeded those of both New York and Philadelphia.

Although imports were greater than exports along almost the entire North Atlantic seaboard, the disparity was greatest at Boston, where the ratio of imports to exports was 4 to 1 in 1920 and 10 to 1 in 1929. While this traffic allowed substantial growth in overall tonnage, it became increasingly damaging to the Port's actual commercial state.

A number of interrelated factors exposed the Port of Boston's vulnerability and paved the way for an era of stagnation. One national trend during this period affected all

North Atlantic ports. The United States began to consume the agricultural production upon which all these ports had relied for bulk exports. This led to increased competition for the remaining Midwest produce. Other developments, however, hurt Boston in particular. In the early Twentieth Century, Canada became increasingly sea-conscious and diverted much of its previous business through Boston to its own ports at St. John's and Halifax. Boston came to handle only the spill-over farm produce from these ports. Furthermore, Boston's thriving export trade with Liverpool, the gateway to the North English industrial area, at the time the world's largest consumer of imported food-stuffs, effectively disappeared. Boston, with its northerly latitude and cool adjacent water, had always been a favored port for the export of livestock and provisions and in the late Nineteenth Century had been the country's leading port in the European cattle trade. Dwindling farm exports, however, and a growing British preference for Canadian and Argentine cattle reduced the Port's export of cattle from 16,620 head in 1897 to practically none by 1929.¹⁷ Lastly, in 1902, the International Mercantile Marine was formed, consolidating the major U.S. lines to the United Kingdom, and established its headquarters in New York. It absorbed the three major Boston lines to England, the Leyland Line, the Dominion Line and the Wilson-Furness-Leyland Line, and the city lost its independent management of these services. Local management had tended to fill ships at any cost, but these lines would not get western exports if they did not

come through Boston. Under the new, consolidated control, cargoes would be available at New York, Philadelphia or Baltimore, and Boston lost much of the frequency and regularity of its North Atlantic service. This hastened the attrition of Boston-owned vessels. By 1929, except for a few vessels in the Canada trade and some locally owned tankers and colliers, Boston did not have a single ship of its own engaged in foreign commerce. The once great shipowner-merchant community had been displaced by fleets under outside control. The local employment, revenues and preferential treatment generated by the earlier maritime structure were lost forever.

Though these events contributed to Boston's decline, the major villains in the Port's drama were the railroads, the heroes of an earlier age. Boston had been at a disadvantage since the development of the great American rail systems. For years, North Atlantic ports have been of two types, New York and all the others. Since the completion of the Erie Canal, western traffic has naturally sought New York. The railroads accommodated themselves to New York's pre-eminence and all trunk lines were concentrated at the port, perpetuating its monopoly of the western export trade. In the competition for a share of the total western volume of exports, Boston was distinctly handicapped among the North Atlantic outports. It was the only port without a line west of the Hudson River, and, hence, no western export traffic naturally came through Boston. The Boston railroads were

dependent upon the traffic handed over to them at switching points by carriers who were primarily interested in taking these exports to their home ports, giving them the longest hauls and the largest earnings. Not only did the Boston railroads have to absorb these switching charges, but the Port was forced to rely on the northern trunk lines located in New York which, in effect, controlled the local lines. Since the interests of these trunk lines always centered about another port, Boston got very little business funneled to it from the interior hinterland.

The local structure and operations of Boston's railroads aggravated these disadvantages. The three Boston lines owned and maintained three separate piers. This diversified ownership of the waterfront resulted in an utter confusion of wharfage and dockage rates which hampered traffic movement through the Port. More harmful, however, were the mutually exclusive relationships between the railroads and their respective steamship lines. Having supplied a steamship line with a free pier, a Boston rail carrier saw the line as an extension of the railroad and attempted to monopolize the traffic moving by means of that extension. It would be established under contract that the steamship line, wholly or to the greatest possible extent, would only do its export and import business with one particular railroad. Each steamship line became preferentially bound to a single rail carrier. Instead of having all Boston railroads working for every

steamship line, each line was committed to a single road. No steamship line could berth at the terminal of more than one railroad. Competition for freight was thus stifled and operations became inflexible. This inflexibility was further sustained by a system of switching charges. If a railroad carried freight for a steamship line other than one of its own, it suffered a switching charge to move that freight over the pier of the railroad to which the line was contracted. This practice was common to all North Atlantic ports without a public belt line serving all terminals. New York, however, had the distinct advantage of an extensive lighterage system which could transport export freight from any railroad to any steamer in the harbor. Through these lighters, all piers could be easily reached by all railroads. This system's capacity, flexibility, convenience and ease of expansion were far superior to any belt line.

Though all these elements contributed to Boston's decline, they were minor compared to the loss of western grain exports due to a discriminatory railroad rate differential. In the intense competition for Midwest exports, the major trunk lines had waged a series of disastrous rate wars. Several unsuccessful attempts were made to divide this traffic and establish compensatory rates for carrying it. Finally, the railroads reached an agreement on import-export commerce in 1877 that bore some relation to relative distance and cost of service. Philadelphia was allowed an export rate 3¢ per

hundred weight (40¢ per ton) lower than New York and Baltimore was allowed one 2¢ lower (60¢ per ton) than New York. Boston was assigned the same rate as New York.

In 1880, dissatisfied with this arrangement, New York withdrew from the agreement and the worst rate war of all soon followed. In 1882, the dispute was submitted to a prestigious Arbitration Commission. The Commission reaffirmed the 1877 agreement and further extended the preferential rates of Philadelphia and Baltimore to imports. This decision was accepted, and, with minor modifications, remained the basis of the relative rate structure until 1963. The primary justification for these port differentials was the principle of competition. Because Boston was nearest to Europe and the channels of Philadelphia and Baltimore were not as deep as those of both Boston and New York, these southern ports had traditionally had higher ocean rates to Great Britain and the Continent. Tramp steamers, handling most of the grain cargo at the time, charged Philadelphia and Baltimore rates 2¢ and 3¢ per hundred-weight higher, respectively, than those at Boston and New York. It was felt, therefore, that unless throughrates from the Midwest were equalized, no traffic would flow through the higher cost southern ports. By compensating for this with an exact counter-balance of inland rates, all North Atlantic ports were theoretically put on an equal footing to attract competitive freight.

At first, Boston did not feel the full effects of this

preferential rate system. Export and import rates were not rigidly maintained and when the Boston roads needed western traffic for their steamship lines they cut their rates and got the business. In 1903, however, the enactment of the Elkins Law, which required strict adherence to prescribed freight rates, put an end to this practice. From then on, Boston began to realize the full impact of port differentials (Table 7).

Exacerbating this situation was the increasing competition of New Orleans and Montreal for import freight. These two ports recognized that to attract regular steamer service to carry cotton from the Gulf and grain from Canada they had to generate imports for ships returning from Europe. To do so, the railroads of both ports offered extraordinarily low import rail rates at least to the lower level of Baltimore. In 1909, another rate war ensued.

In 1911, it was decided to submit both import and export disputes to the Interstate Commerce Commission. In its decision the following year, the Commission ordered the status quo maintained for all ports on both imports and exports. Boston's foreign commerce was not really threatened.

Four years later, the Port's fate was sealed. In 1916, the North Atlantic Conference of steamship lines operating in the overseas trade, equalized ocean rates to all North Atlantic ports. This decision deprived Boston of its only competitive advantage in relation to through inland-ocean rates, namely

TABLE 7

FULL CARGOES OF GRAIN SHIPPED
THROUGH SPECIFIED PORTS 1908 - 1913

	1908	1909	1910	1911	1912	1913
Baltimore	1	5	9	18	66	130
Philadelphia	19	12	1	16	34	34
New York	0	5	0	4	26	45
Boston	0	0	0	0	1	6

SOURCE:

Edwin J. Clapp, The Port of Boston, (New Haven: Yale University Press, 1916), p. 120.

the lower ocean tariffs which naturally accrued to the Port as the closest U.S. North Atlantic port to Europe. Boston still remained 194 miles closer to Liverpool than New York, 337 miles closer than Philadelphia, and 493 miles closer than Baltimore, but these distances would no longer be an asset.

These developments forced upon Boston a crippling handicap in the intense competition among Atlantic coast ports for the critical traffic of the western hinterland. Import rates to the designated Control Freight Association Territory were lower via St. John's, Halifax, Montreal, Portland, Philadelphia, Baltimore and Norfolk. More importantly, export rates from the west were lower via Montreal, Philadelphia, Baltimore and Norfolk. Boston's dependence on this area was such that in 1911, nearly 78% of the port's export tonnage originated outside New England. (Table 8). This "unique form of torture", as ex-Governor Thomas E. Dewey described it to the Supreme Court, was to persist for over 50 years despite constant legal efforts by both New York and Boston to abate it.

While Boston's rival North Atlantic outports were formally granted this decided advantage, Boston was theoretically allotted equality with New York. This parity, grounded upon a myopic consideration of only equal rail rates, was illusory. New York enjoyed advantages and afforded inducements which attracted to it a large portion of the interior commerce which might otherwise have gone through Boston. The New York State Barge Canal System gave the city the most extensive arrangement of inland waterways. Its harbor was connected to Lake

TABLE 8

PERCENTAGE DIVISION OF EXPORT
 TONNAGE VIA BOSTON, YEAR ENDING
 JUNE 30, 1911

Roads	From New England		From U.S. Points other than New England		Total
	%	Grain	Other Traffic		
Boston & Albany	15.1	44.6 %	40.3 %		100%
Boston & Maine	26.4	25.5	48.1		100
Average	22.1	32.7	45.2		100

SOURCE:

Export Exhibit 25 of Boston Chamber of Commerce
 in 1912 Differential Cases.

Erie, Lake Ontario and Lake Champlain by all-water routes. By 1937, over 5,000,000 tons of cargo was carried over these waterways. The historical concentration of western traffic in the largest port continued, further enhanced by expanding facilities and a superlative lighterage system. With the great number of ships calling on New York, it could offer shippers of grain opportunities absent in Boston. A parcel of grain sent to New York for shipment several weeks ahead of time, would have a chance to get "distress room" on another steamer sailing immediately. This "distress room" diversion meant a lower freight rate to the shipper because the departing ship, unable to acquire a full cargo, would carry the grain for next to nothing rather than sail half empty. Storing grain in New York while awaiting sale for export was also more advantageous. Such grain had a choice of shipment on any of New York's numerous steamship lines. At Boston, on the other hand, with its inflexible terminal arrangement, a shipment had the choice of only about one-third of the few lines serving the port.

More determinant, however, was New York's ability to absorb charges for accessory services that Boston and other outports had to assess the shipper or consignee. Since the city owned all covered piers, New York did not levy wharfage charges for merchandise using such a pier. "Side-wharfage" for handling goods between ship and lighter was also free, as was the entire lighterage system. The New York railroads, moreover, offered free grain elevators and low warehouse

rates. In Boston, with its dispersed and privately owned waterfront, the three local railroads charged for all these services. Along with the switching charges cited earlier, this high cost structure for shipments through Boston gave New York an even greater competitive advantage.

Boston Port interests perceived that the Port was further impeded in the contest for freight traffic by the absence of independent control over its carriers. As noted earlier, the port's three railroads were at the mercy of trunk lines whose primary allegiance was to rival ports and its major steamship lines had fallen under New York control. Boston's traditional xenophobia, especially regarding New York, aroused suspicions that the local rail lines were being manipulated to the benefit of other ports and the detriment of Boston. Eventually, the Port's three rail carriers came gradually "under the domination if not actual control of foreign railroads".¹⁸ The Pennsylvania Railroad owned controlling stock in the Boston & Maine and the New York, New Haven & Hartford. Boston's distrust, however, was vented most toward New York. The leasing of the Boston & Albany to the New York Central, aroused the conviction that the local line was not allowed by its mother line to grant the valuable inducements of free services to attract traffic that was the practice of all New York rail carriers. The Boston shipping community felt that such policies were deliberately followed to minimize competition from the port and assure its status

as a secondary transportation unit.

All of these development, severing Boston from the common Midwest hinterland, had dire consequences for the Port's maritime commerce. Since the majority of imports at the time were coarse commodities such as clay, fish, ores, brewers rice and burlap, their transport was influenced by slight differences in through rates. Ocean rates being equal, Boston's outport competitors could attract most of this traffic because their lower rail import rates gave them a lower through rate from foreign ports to the American interior. This lack of western imports, however, was primarily a railroad problem. The Port had never had such trouble since great amounts of imports were readily absorbed by New England itself. The railroads, without sufficient imports, were forced to send back west empty box cars that had brought food and raw materials east.

Unfortunately, the loss of Midwest exports was much more severely damaging for Boston. The Port's total foreign exports of grains dropped from 267,563 tons in 1910 to 136,783 tons in 1929 and to 7,863 tons by 1938.¹⁹ The rate differential made it impossible to load with grain the tramp steamers which carried bulk import cargo to the Port. Since they had to make an extra move to another port for export cargo, charter rates for imports to Boston were set higher than those to Philadelphia or Baltimore. New England manufacturers, reliant upon imported raw materials, were burdened with this additional expense.

The effect of the differential on liners using Boston was even more serious. The large and constant traffic between U.S. North Atlantic ports and Europe resulted in regular liner schedules with lower ocean rates than tramps. Such liner service is crucial for any port. The essence of a great seaport was aptly stated fifty years ago as

"...the number and frequency of its water connection, particularly its over-seas lines. The traffic that feeds these lines consists of exports and imports for an extensive hinterland; the port is merely a gate through which this traffic passes."²⁰

The same holds true today. Boston, then as now, was a rusty gate, unappealing to most cargo traffic.

The regular steamship lines out of Boston were forced to quote lower ocean rates for western cargo in order to compete with Philadelphia and Baltimore which had lower through rates based on lower rail rates. Thus, the differential led steamship companies to load export cargo at ports other than Boston. The loss of western grain and Boston's comparatively small amount of foreign shipments unbalanced the Port's foreign trade even further. (Table 9). A debilitating shipping pattern with Boston as the first port of call was established and continues to the present. With its great demand for imports, Boston became the first port a ship would visit to unload much of its cargo. Without sufficient outbound cargo available in Boston, the ship would proceed to New York and then to one or several of the other North Atlantic outports to unload its remaining cargo and take on exports. Finally, it would return to New

TABLE 9

PORT OF BOSTON FREIGHT TRAFFIC 1929
(short tons)

Classes of Commodities	Foreign		Domestic, coastwise		Local	Total
	Imports	Exports	Receipts	Shipments		
Animals and animal products	96,696	16,939	116,435	35,179	36	315,285
Vegetable food products	743,578	151,585	76,575	29,229	11,535	1,012,502
Other vegetable products	35,726	3,465	42,052	12,623	-	93,866
Textiles	253,676	18,388	131,055	55,189	-	458,308
Wood and paper	414,578	22,099	422,671	40,566	38,733	938,647
Nonmetallic minerals	1,449,746	3,714	11,301,764	913,953	549,510	14,218,687
Ores, metals, manufactures of	200,821	50,659	8,453	106,540	688	367,141
Machinery	5,676	4,693	4,207	3,682	60	18,318
Chemicals	33,578	28,273	131,194	78,326	8,783	280,154
Unclassified	27,226	3,305	458,302	436,770	436,539	1,362,142
TOTAL	3,261,301	303,120	12,742,708	1,712,057	1,045,864	19,065,050

SOURCE:

Corps of Engineers, 1929, Part 2.

York to complete its export cargo before sailing.

This pattern made Boston a favorable in-bound port but a horrid out-bound port. Once this indirect export service from Boston was established, it diverted shipments which would have naturally used the Port. The prime reason was the long delay between when a ship left Boston, called on New York and a differential port or two and eventually sailed for Europe. Gradually, this unfavorable export service was extended to include not just European ports, but most other world ports likely to receive shipments from Boston.

This bad situation was made even worse by a vicious cycle which resulted in a mass defection of local shippers to New York. Attracted by the frequency, multiplicity and directness of the major port's steamship services, increasingly larger amounts of New England commodities were exported through New York. By the 1920's, about 65% by value of New England manufactures intended for export moved through New York, while only about 14% by value moved through Boston. This process was self-perpetuating. As Boston generated fewer out-bound shipments, the frequency and regularity of liner service was further reduced. This in turn caused more local exports to sail from New York, diminishing further Boston's ability to supply overseas shipments. And so it went. This procedure continues today, despite the higher cost of transporting New England export products to New York by rail or truck.

So the once great Port of Boston was reduced to the humi-

liation of a port of call rather than a major terminus of world trade. Natural conditions no longer governed the volume of traffic that might be expected geographically to flow through the port. This tenacious dilemma was summarized with foresight when the downward spiral was just becoming obvious:

"The determining factor is not nearness to European ports, but inland rates, speed and frequency of railroad service from the interior to the seaboard, inter-railroad alliances and feuds, the relative strength and zeal of soliciting forces in the interior, deep-rooted prejudices on the part of shippers, rates of ocean carriers, relative frequency of ocean service, coastwise services feeding ocean lines, and other such factors... Certain charges and practices at the seaboard, on the part of rail carriers, have an influence on traffic moving via the port they serve. Such matters are more intangible than geographical location and be beneath the surface of things."²¹

By 1920, these diverse factors had established the pattern that was to dominate the rest of the port's development, or lack thereof. It seemed that all the historical flaws of Boston's maritime commerce converged, with a little assistance from the Interstate Commerce Commission, to seal the port's fate. This period marked a watershed in Boston's history, just as the passing of the clipper ships ended Massachusetts' independent maritime development. Only then, the transition brought Boston into the mainstream of America's commercial growth. Now, it segregated Boston as a languid port with an insignificant foreign trade and a consumptive reliance on imported bulk materials for its survival. It regained a distinctive character, but this time it was the distinction

of exclusion from the general trend of expansion of United States water-borne commerce.

Though total tonnage increased impressively to a record 19,065,050 tons in 1929, it masked the unhealthy nature of the port's business. This growth was due solely to increased imports of raw materials, especially coastal receipts of coal. With the loss of western grain and the mounting desertion of New England shippers to New York, Boston's foreign trade deteriorated. The ruinous texture of the port's commercial condition is reflected in Table 9.

After 1929, U. S. total tonnage grew and maintained an acceptable balance of trade, given the almost inevitable disequilibrium of modern world shipping. Boston's total tonnage, however, remained static, consistently hovering around 20,000,000 tons. Until very recently, it experienced only minor fluctuations and the temporary disruptions of the Depression and World War II. (Table 10).

Boston's competitive position was further weakened by labor problems, deteriorating facilities, a rising cost structure and community lethargy. Burdened with this reputation, it has lost ground to its competitors. All other North Atlantic ports have shared in the national progress, although their combined percentage share of total U.S. tonnage has been declining. Though they have experienced trade imbalances of about 3 to 1, they are not nearly so acute as Boston's 10 to 1 disequilibrium. The Port has made substantial gains in

TABLE 10

NET WATERBORNE COMMERCE THROUGH
THE U.S. AND THE PORT OF BOSTON 1919 - 1972
(short tons)

	Net Total Waterborne Commerce of the U.S.	Net total Waterborne Commerce of the Port of Boston
1919	319,762,727	8,680,243
1929	519,870,000	19,065,050
1932	286,494,000	14,012,172
1939	526,684,000	17,842,212
1941	623,837,000	18,826,770
1943	546,719,000	8,471,046
1945	605,594,000	12,850,522
1947	766,816,730	18,502,902
1950	820,583,571	19,446,897
1951	924,128,411	19,804,814
1952	887,721,984	19,961,128
1953	923,547,693	18,076,260
1954	867,640,207	17,878,336
1955	1,016,135,785	19,051,715
1956	1,092,912,924	20,977,834
1957	1,131,401,434	20,326,258
1958	1,004,515,776	19,275,022
1959	1,052,402,102	20,464,817
1960	1,099,850,431	19,019,567
1961	1,062,155,182	19,505,936
1962	1,129,404,375	18,984,380
1963	1,173,766,964	19,792,076
1964	1,238,093,573	20,011,441
1965	1,272,896,243	19,854,685
1966	1,334,116,078	20,287,217
1967	1,336,606,078	21,549,086
1968	1,395,839,450	22,610,760
1969	1,448,711,541	24,818,746
1970	1,531,696,507	26,867,918
1971	1,512,583,690	26,156,517
1972	1,616,792,605	26,483,438

SOURCE:

Report of the Chief of Engineers, 1920, Part 3.
Corps of Engineers, 1930 - 1972, Parts 1, 2,
and 5.

tonnage only recently, but still suffers its abnormally large excess of imports over exports.

Boston's status *vis-a-vis* the other North Atlantic ports is seen in Table 11. These comparisons are valid indicators of the Port's perennial troubles: a reliance on imported raw materials, especially domestic receipts, and an insufficient base for either bulk or general cargo exports.

The character of Boston's commodity trade has changed little. (Table 12). Petroleum has displaced coal as the predominant import, in latter years amounting to 85% of the Port's total traffic. Scrap iron and tallow have demeaningly replaced the once prestigious grain shipments as the major bulk exports. In 1972, of 757,707 tons of foreign exports, iron and steel scrap accounted for 603,372 tons and tallow and animal fat for 63,959 tons.²² Moreover, all this type of import and export freight is handled over private facilities and generates minimal port revenues. Foreign commerce has also remained depressingly familiar. General cargo imports, principally food products, have come to constitute about 85% of the Port's total general cargo trade. New England manufactures continue to deprive Boston of an adequate overseas export medium.

The Port's suspended condition has felt the winds of change just recently. Whether, as with wars and depressions, this is only a temporary deviation from its deep-rooted, spiritless doldrums is uncertain. The Boston Seaport has,

TABLE 12

LEADING FREIGHT THROUGH THE PORT OF BOSTON, 1972

(Short tons)

Foreign		Coastwise					
Imports		Exports		Receipts		Shipments	
Crude petroleum	128,195	Tallow, Animal		Gasoline	5,048,306	Gasoline	286,162
Limestone	152,616	Fats and Oils	63,959	Jet Fuel	610,549	Kerosene	134,485
Salt	212,951	Iron and Steel		Kerosene	125,777	Distillate	
Sugar	487,691	Scrap	603,372	Distillate		Fuel Oil	982,282
Lumber	88,392			Fuel Oil	6,429,000	Residual	
Gasoline	91,724			Residual		Fuel Oil	204,612
Kerosene	372,204			Fuel Oil	1,504,674		
Residual Fuel							
Oil	5,539,538						
Liquified Gases	89,881						
Coke, Pet Asphalts							
and Solvents	105,685						

SOURCE:

Corps of Engineers, 1972, Part 1.

TABLE 11

TOTAL COMMERCE THROUGH MAJOR NORTH
ATLANTIC PORTS 1938, 1948, 1959, 1972
(Short tons)

Port	Foreign		Domestic		Total*
	Imports	Exports	Coastwise Receipts	Coastwise Shipments	
<u>1938</u>					
Boston	1,798,064	321,445	11,594,091	998,674	15,881,487
New York	11,063,421	6,663,303	30,911,353	7,074,593	147,655,675
Philadelphia	3,879,817	1,208,922	16,471,433	4,598,977	32,265,869
Baltimore	4,821,509	1,310,537	4,959,186	1,712,318	20,451,730
Hampton Roads	826,739	1,992,564	2,332,159	15,888,456	24,083,019
<u>1948</u>					
Boston	2,833,989	319,772	12,691,170	810,407	18,317,356
New York	19,678,027	10,259,918	42,364,833	8,952,384	180,884,287
Philadelphia	12,712,376	3,863,839	21,389,260	3,370,121	69,471,635
Baltimore	10,325,399	6,269,976	6,581,868	1,009,617	35,038,546
Hampton Roads	2,144,251	14,360,954	4,405,620	17,067,510	40,915,938
<u>1959</u>					
Boston	5,975,048	752,234	11,341,538	1,179,136	20,464,817
New York	39,108,306	6,808,863	43,643,002	13,582,417	154,155,873
Philadelphia	40,222,850	2,098,483	23,457,182	6,598,147	72,376,662
Baltimore	18,985,569	4,216,912	7,062,026	1,499,726	40,223,607
Hampton Roads	4,600,379	25,172,376	5,795,782	6,185,794	48,817,998
<u>1972</u>					
Boston	7,872,977	757,707	14,597,257	1,775,863	26,483,438
New York	10,243,429	13,537,963	20,106,413	9,467,539	117,865,396
Philadelphia	21,813,714	2,933,411	6,517,654	2,336,433	48,356,885
Baltimore	18,442,952	8,177,096	6,063,983	1,614,256	45,798,776
Hampton Roads	8,743,743	35,647,419	2,481,445	169,154	58,356,932

SOURCE:

Corps of Engineers, 1938, 1948, 1959, 1972, Part 1.

* Total includes "Internal Receipts and Shipments" and "Local".

however, a heritage as glorious as its later repute has been inglorious. Its present dilemma is obviously not a novelty in historical perspective. But the Port's history certainly offers it numerous instances of stubborn Yankee determination and proud eras of commercial supremacy which it could more profitably emulate rather than resign itself to the more recent syndrome of frustration and inertia.

CHAPTER I

THE HISTORY OF THE PORT

Footnotes

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All authority is quite
degrading.

Oscar Wilde

CHAPTER II

ADMINISTRATION OF THE PORT

Introduction

From the mid-nineteenth century on, various administrative structures were established to arrest the decline and foster the development of the Boston Seaport. The organization of these agencies varied, as did the administrative power vested in them and the financial base afforded them. Eventually the continual stagnation of Boston's maritime commerce and the insufficient effectiveness of these administrative experiments instigated the creation of a modern, independent and powerful Port Authority to guide the fortunes of the Seaport.

Under Chapter 149 of the Acts of 1866, Massachusetts' first Board of Harbor Commissioners was established. It consisted of five unsalaried and part-time persons appointed by the Governor for five year terms. They were reimbursed expenses for actual work done up to \$5 a day. They were entrusted with the care and supervision of all harbors in the Commonwealth. All work to be done in these harbors, such as the construction of bridges, wharves and dams, required the approval of the Board. The Board was given the power to order court suits on behalf of the Commonwealth, but was only allowed appropriation expressly made by the legislature.

In 1877 the Board was reestablished, along with a new Board of Land Commissioners.¹ The Board retained its former power and duties, but was reduced to three persons appointed by the Governor for three year terms. In 1879 both of these Boards were combined into a Board of Harbor and Land Commissioners.² The new Board retained all previous powers and duties and consisted of three unsalaried persons appointed by the Governor for three year terms. By 1910 Port interests realized that to retain its competitive position Boston needed improved and expanded port facilities. In that year the legislature appropriated \$3 million for the Board of Harbor and Land Commissioners to purchase land in East Boston necessary for a railroad line and to construct whatever piers or wharves were required in the area.³

It was soon apparent, however, that the administration and development of the Port demanded more attention than the part-time commissioners could spare and more statutory power than they could wield. Hence, in 1911, "An Act Relative to the Development of the Port of Boston" established a new board known as the Directors of the Port of Boston, the city's first real Port Authority as now defined.⁴ The four members, three appointed by the governor and one appointed by the mayor of Boston, served for three year terms. Each Director received an annual salary of \$1,000, but the full-time chairman, designated by the governor, received \$15,000 per year. The Directors were given unprecedented power. They were given charge of all the Commonwealth's harbor property, and delegated the power to take by purchase or eminent domain, with the

consent of the governor and council, other property and easements they considered necessary. While exemptions from eminent domain were granted private owners who planned construction of new port facilities, the Directors were given broad power to take any land necessary for connecting rail lines to port terminals. The importance of the railroads to port commerce was further reflected in the provisions to grade and surface railroad locations and provide track connections serving the piers to any railroad reaching the area. The Directors could construct any piers or other public works and equip them with fireproof sheds, railway tracks, cranes, machinery and other accommodations. They were empowered to administer all terminals under state control, set rules and regulations and charge "reasonable" rates for the use of the facilities. They were allowed to lease out for up to twenty years, wharves, piers, sheds, warehouses and other facilities. The income from these facilities was paid into the general treasury of the Commonwealth.

As important as these administrative functions was the directive to make and execute plans for the comprehensive development of the harbor, including,

" . . . adequate piers, capable of accommodating the largest vessels, and in connection with such piers, suitable highways, waterways, railroad connections and storage yards, and sites for warehouses and industrial establishments."⁵

The Directors were to report to the general court on these plans and recommend any legislation needed to implement them. They were allocated \$50,000 for salaries and studies, and \$9 million from the sale of state bonds for other expenses. Massachusetts had come

around to the fact that a strong, dynamic well financed administration was necessary for the Port of Boston to compete with the other North Atlantic ports and develop rather than dissipate its maritime commerce.

In 1914, the Directors were reduced to three, to be appointed only by the governor.⁶ They all received an annual salary of \$6,000, and all members were required to devote their full time to Port activities. Furthermore, the need for solicitation of exports from the Midwest prompted an appropriation of \$10,000 for a publicity bureau to extoll the virtues of the Port. This legislative revision increased the powers of the Directors and gave added impetus for improved port facilities. By 1915, the directors had invested \$3.5 million in improvements, including the construction of the 1200 foot long Commonwealth Pier, touted as "the greatest passenger and freight pier in the world."⁷ Boston remained the fifth largest port in the world in total tonnage, behind only New York, London, Hamburg and Rotterdam, despite rapidly declining exports.

In 1916, however, port administration was weakened when the Directors of the Port of Boston and the Board of Harbor and Land Commissioners were abolished and a new Massachusetts Commission on Waterways and Public Lands was established.⁸ Though the new agency assumed the powers, duties and obligations of the previous boards and superintendents of commerce and engineering were appointed, the autonomy and effectiveness of the port's administration was subsequently weakened.

This trend was continued when, in 1919, under a general reorganization of the Commonwealth's executive and administrative functions, the Commission on Waterways and Public Lands was transferred to a new Department of Public Works.⁹ There, the task of harbor management was assumed by the Division of Waterways headed by two full time associate commissioners with annual salaries of \$6,000.

While the steady decline of Boston's relative commercial status may have been inexorable, diluted port administration did not help matters. While Boston's total tonnage did increase, it did so at a much slower rate than that at competing ports. Furthermore, critical exports declined drastically from 1,256,892 tons in 1910 to 338,779 tons in 1925.¹⁰

In reaction to this trend, the autonomous Boston Port Authority was established in 1929.¹¹ It consisted of five unpaid members, two appointed by the governor and three appointed by the mayor of Boston. For the first ten years, the expenses of the board were paid by the City of Boston and were limited to \$50,000 per year. Later the Commonwealth shared these expenses with the city. The Authority's powers were severely circumscribed, leaving all management functions in the Division of Waterways. Its limited role was to "investigate any and all matters relating to the port of Boston" and, with the assent and approval of the mayor, to

". . . initiate or participate in any rate proceedings, or any hearings or investigations concerning the port of Boston before any other body or official."¹²

The new Authority was set up as an advisory rather than an operational body. Handicapped by lack of funds and power, it could do little except devise plans and issue reports to combat the Port's commercial stagnation. To the persistent dilemma of an export shortage were added an escalating cost structure, deteriorating facilities, labor disputes and a general lethargy towards the port's worsening condition and its likely destiny. Boston lost an increasing amount of business to its North Atlantic competitors, especially New York. Even the trend of increasing total tonnage was reversed; exacerbated by the Depression, it dropped from 18,009,186 tons in 1929 to 15,739,926 tons in 1936. Exports fared even worse, as usual; they dropped from 303,120 tons in 1929 to 166,090 tons in 1933, and climbed pathetically up to 312,410 tons in 1936.¹³ While applauding the Port Authority for the "splendid work" it had done, such as discovering and calling attention to the fact that Boston was nearer than Los Angeles to the Panama Canal, a legislative study commission in 1938 succinctly summarized the situation:

"This Board up to the present time has been more or less helpless to correct certain evils which exist at the Port and concerning which there is a general opinion that if the Port of Boston is to progress and is to be a thriving port they must be eliminated."¹⁴

Unfortunately, the study commission felt the Authority would lose its independence and neutrality if it were given sufficient operational power and funding to compete with private enterprise. It concurred with the attitude that the Authority's appropriate role was advisory and saw salvation only through implementing its

sole recommendation that two additional members be added to the Board to stimulate the "Port enthusiasm" and "Port spirit," the lack of which it surmised to be the major cause of the Port's ills. Although the Board was so enlarged, the study commission may as well have recommended a booster club.

In fact, though, a new interest in the Port did emerge very shortly; World War II, however, was more responsible for it than any legislative proposal. Despite the serious disruption of steamship services and the normal flow of commerce, the war years saw a refurbishment of port facilities and were fairly prosperous for Boston. Under the prevailing emergency conditions, the efficient allocation and routing of ships and coordination of port activities demonstrated to local leaders the advantages of concentrating certain maritime activities in the hands of a few responsible officials. Moreover, the unprecedented movement of men and materials impressed many with the Port of Boston's stature as a principal national asset during wartime.

This ironically parallels the historical United States view, since the beginning of the nineteenth century, towards its merchant marine. Only during wartime has the government recognized the absolute requisite for national security of a large and efficient merchant fleet. This has always stimulated a crash, emergency construction program. In the ensuing peace, however, the cycle begins again and the American merchant marine is allowed to deteriorate while the country's waterborne commerce is carried in foreign flag vessels.

Nevertheless, interest in Port was revived, with a view towards a commensurate commercial role for it in times of peace. This new attitude was reflected in a legislative report in 1943:

"There is a new interest in the Port in important transportation circles both abroad and in this country. Boston is one of the great war ports of the United States and the United Nations. We believe it can become one of the great peace-time ports as well."¹⁵

During the war, various civic groups and maritime interests devoted serious efforts to Port studies. They found the Boston Port Authority, jointly operated by the city and state, with limited powers, personnel and finances, inadequate if Boston was to prosper as a seaport. Their basic recommendation was that it be replaced by a stronger, more autonomous authority, which, as a state agency, would be responsible for all phases of port administration.

As a result, in 1945, the primarily advisory Boston Port Authority was abolished and a new Port of Boston Authority was established.¹⁶ The Authority consisted of five unpaid members appointed solely by the governor for five year terms. The operative head was a full time salaried Director with the authority to hire such experts as commerce counsels, traffic solicitors and rate experts. The Authority was closely modeled after the Directors of the Port of Boston, and its extensive powers, duties and obligations were nearly identical to those of the earlier body. It was to investigate all matters related to the port, plan for port development and exercise the licensing power over harbor projects previously invested in the Department of Public Works.

The only significant differences between the Authority and the earlier Directors were in the areas of facility, construction and financing. The Authority was required to secure a minimum lease contract for any proposed facility before it was constructed with a bond issue. Furthermore, bonds issued by the Commonwealth for port construction were limited to \$15 million and were to be specifically designated as Boston Harbor Facilities Loans. Finally, the Authority's finances were further distinguished from the state's general fiscal structure by the establishment of a Port of Boston Fund, into which all port revenues were placed and from which legislative appropriations for port expenses were derived.

The Authority soon developed an ambitious "Port of Boston Master Plan" for a coordinated development of port, trucking and rail facilities into an efficiently integrated transportation system that would serve an expanded tributary area including states north of the Ohio River and west of the Mississippi and the Canadian Provinces. To implement this plan by 1950, the Authority and private enterprises had invested \$21,158,857 in harbor improvements and port facilities, carefully planned along a functional pattern to allow rapid interchange of cargo between highway and rail carriers and ships.¹⁷ Hoosac Pier No. 1 was the first general cargo terminal constructed in Boston in 37 years. It was followed by the construction of the Mystic Terminal and East Boston Pier No. 1. A Division for Promotion and Solicitation was established in 1947 with branch offices in New York, Washington

and Chicago and successfully acquired for the Port significant food exports under the Foreign Aid Program (Marshall Plan). An active Public Relations Division was effective in improving public opinion of the Port and the Authority helped to maintain sufficiently good labor management relations to avert any major disruptions. By 1949, the Port could boast a 25% increase in total tonnage over 1937, the last normal pre-war year.

In 1953, the name of the Boston Port Authority was changed to the Port of Boston Commission and an advisory council was established.¹⁸ The council consisted of the mayor of Boston and 20 representatives from industrial, shipping trade, civic, labor and transportation organizations. A year later the legislature transferred the responsibility for dredging tidelands, shore protection and other related matters to the Division of Waterways of the Department of Public Works.

Unfortunately, despite all this attention, the Port of Boston did not prosper as was hoped. Total tonnage showed no appreciable increase, while the import-export imbalance worsened, notwithstanding the increased costs of solicitation and publicity. In 1949, Boston ranked 37th in exports among U.S. ports. Meanwhile, rival North Atlantic Ports were increasing both their total and export tonnage. General figures for dry cargo exports in 1954 reflect Boston's declining competitive position:

Boston	281,000 tons
Hampton Roads	13,700,000 tons (coal)
New York	4,700,000 tons
Baltimore	3,500,000 tons
Philadelphia	7,000,000 tons ¹⁹

Even minor ports like Toledo, Sandusky and Port Sulphur, Louisiana, exceeded Boston in tonnage of dry cargo exports. The character of Boston's imports was equally discouraging. It was estimated that the arrival of one general cargo ship represented a total income of \$100,000 to Boston. Dominated by such bulk commodities as petroleum, coal and sugar, which are handled through private facilities, the vast majority of vessels arriving at the Port generated only minimal revenues.

By the mid 1950's, there was growing concern about not just the Seaport, but Boston's entire commercial future. It was felt that without bold even radical steps, Boston never could expect to assume its proper place as a thriving metropolitan center. A critical component of this revival was the future expansion and operation of the area's land, sea and air transportation facilities. Consolidated administration of these components in a self-sustaining authority operated on sound business principles was believed to be the only approach to counter increasing competition and strained financial resources. International adoption of various modifications of such a system had been expanding for some time:

"The delegation of port administration to a non-stock, non-profit public corporate agency created by statute with a legal personality of its own, the right to hold property, make contracts, adopt budgets, employ its own personnel, and function with considerable financial autonomy, is a development of the past half century which has spread to an increasingly larger segment of the ports of the world."²⁰

In 1948, the management of the two state owned airports, Logan International and the much smaller, civil/military Hanscom Field,

was placed in the State Airport Management Board. It gradually became obvious that both the Airport Board and the Port of Boston Commission were severely handicapped in operating their facilities as business enterprises by their inclusion in the general structure of the state government. This disadvantageous position seemed inevitable if such bodies were subjected to competition for funds during times of scarce resources, jurisdiction divided among several state officers and legislative committees, and the political requisites of patronage, pork barrels and partisan influence. Progress was difficult when such bodies were enmeshed in

". . . the intricate and complex web of legislative and executive controls over policy, management, budgeting, financing, personnel and building construction, all of which are desirable and necessary for activities of the regular state departments and agencies."²¹

The consequences of such a situation were manifested in the operation of the state's transport facilities: rigid and inflexible management; constrained decision making and an inability to take fast action; lack of coordinated and long range planning for an integrated transportation system; and insufficient funds for necessary promotion and capital investment. Boston could not compete successfully with such a management and financial structure.

The other major incentive for a self-supporting authority was the Commonwealth's deplorable fiscal condition. The state was in a financial crisis with over an \$800 million debt and a recently lowered credit rating. While there was a compelling need for an aggressive, forward-looking action program, money was not at hand

for the required promotion, and expansion of the state's commerce. Moreover, while the over \$100 million public investment in the two airports and the seaport had to be protected, these facilities had become an unbearable burden on the taxpayers. The 1957 difference between revenues and operating costs for all facilities was to be \$3,890,178. From 1949 to 1955, the accumulated deficit for the Port of Boston was \$6,372,857.60; that of Logan Airport was \$28,022,105.26; and that of Hanscom Field was \$366,667.57.²² There was mounting pressure to relieve nonusers of this additional tax burden spearheaded by state legislators from the suburbs and the western part of the state.

In glaring contrast to this sad state of affairs was the thriving transport system of Boston's nearest competitor. The self-sufficient Port of New York Authority, established in 1921, had already invested \$.5 billion dollars in facilities and was embarked on a development program with another \$.5 billion, \$140 million of which was earmarked for marine terminals. In fact the Director of the Port of New York Authority defined most clearly the ethos of the international adoption of such bodies:

"A governmental business corporation set up outside of the normal structure of government so that it can apply continuity, business efficiency and elastic management to the construction or operation of a self-supporting or revenue-producing enterprise."²³

Boston's rival ports had already recognized the value of such a management scheme and similar authorities were successfully operating in Philadelphia, Baltimore, Norfolk, New Orleans and the St Lawrence Seaway. Massachusetts had already witnessed the

effectiveness of such an approach in the construction and operation of the Mystic River Bridge and had subsequently established the Massachusetts Turnpike Authority.

In the process of historical development, institutions experience widely different rates of maturation. Thus, as New York was historically ripe for a new method of port management 35 years earlier, Boston's slower evolution resulted in a much later coincidence of its struggle to relieve its belabored transportation system and its capacity to adopt a new approach to this task. Boston's day, in effect, had arrived. Despite heated legislative debate the concept of a Massachusetts Port Authority had the support of organized labor, civic leaders and, most importantly, the business community and won the day. An emergency bill survived 28 amendments and the Commonwealth had a new Authority. An across-the-board administrative, political and fiscal reform of Boston's transport system was too appealing. The special legislative commission that studied and recommended the establishment of the new authority summarized the prevailing attitude:

"It is a program that envisions large new construction and unlimited job opportunities. It is a program which has for its goal the highest and most efficient use of our major traffic, terminal, transportation, port and airport facilities. It is a program of tax relief for the Commonwealth. It is a program that could light the spark for the economic resurgence of an entire community."²⁴

Under Chapter 465 of the Acts of 1956, the Massachusetts Port Authority (Massport) was established, to become effective in 1959.

The original legislation was filed in 1955 by Governor Christian A. Herter, but did not include the Seaport. Opposed by some powerful legislators, it was rejected by the Great and General Court. A recess study commission was appointed to report on the matter, and its basic recommendations were embodied in the final enabling act. Of the seven members of the Authority appointed by the governor for seven year terms, one had to be a labor representative, and not more than four could be from the same political party. The "body politic and corporate" created was nominally placed in the Department of Public Works, but was not

". . . subject to the supervision or regulation of the department of public works or of any department, commission, board, bureau or agency of the Commonwealth."²⁵

The Authority constituted a "public instrumentality" and the exercise of its powers was deemed to be "the performance of an essential government function."

All state properties in the Port of Boston, Logan International Airport, Hanscom Field and the Mystic River Bridge (later the Tobin Memorial Bridge) were transferred to the new Authority, and it was granted expansive general powers, including those formerly held by the Port of Boston Commission. It was authorized to control, operate and maintain all the properties given it, and to fix, revise and collect tolls, rates, fees, rentals and other charges for their use. It could establish rules and regulations for these facilities and construct and acquire new ones. The Authority was given the power to acquire by purchase or eminent domain public and private property, easements or other interests in land. It

was to devise a plan for the development, improvement and handling of commerce in the metropolitan area, including the construction and operation of a trade and transportation center. It could appear in its own behalf before boards, commissions, departments or agencies, apply for and accept federal grants, enter into contracts and agreements, sue and be sued, and initiate or participate in rate proceedings or any hearings or investigations concerning the Port of Boston.

Though these powers were substantial, most pertaining to the Port had been invested in previous authorities. The keystone to Massport's coordinated administration of all Boston's transportation components was the autonomy which only its new fiscal structure could allow. The Authority's self-sufficiency was intended to be derived from its power to issue its own revenue bonds, payable solely from user-charges at its facilities, and borrow money in anticipation of these issues. Since the Authority's operations were "essential governmental functions," its bonds as well as its property were exempt from federal and state taxes, making them especially attractive and allowing their sale at an interest rate about 2% lower than the market rate. The Authority did not need the consent of any other state or city body to issue these bonds, which neither constituted a debt nor pledged the "faith and credit" of the Commonwealth or any political subdivision. The Authority's financial independence was hoped to stop the drain on the Commonwealth's treasury, reimburse the state for previous investments in the Seaport and airports, and generate the money necessary for

the Authority's operating expenses and future construction and improvement of transportation facilities.

The Commonwealth transferred to Massport its extensive port holdings, including Castle Island, the Boston Army Base, the Boston Fish Pier, Commonwealth Pier, the Mystic Piers, the Hoosac Piers and the East Boston Piers. This was not a total giveaway, however, since the state sought to re-coup some of its losses from these facilities. When the airport properties were transferred, the Authority had to pay the state the aggregate principal amounts of all previous bonds issued and cash payments made for airport improvement, amounting to \$20,972,151. Furthermore, the state's earlier investment in port facilities was to be gradually repaid by the yearly net revenues from port properties after overhead and construction expenses and principal and interest requirements. A total of \$17,057,321 was to be paid by the year 2019.

The critical component that allowed the new Authority to meet these initial obligations was the Mystic River Bridge, a crucial highway link to Boston's populous North Shore and the entire northern New England area, which in 1958 enjoyed the traffic of over 20 million toll paying motor vehicles. The Mystic River Bridge Authority, established in 1946 to construct and operate the toll-bridge was not only self-supporting, but generated an annual excess of revenues over operating costs of about \$3.5 million. This abundance of user-fees would have retired the Bridge's bonds and allowed it to become toll-free by the late 1970's. The establishment of Massport, however, altered this arrangement. The

Authority was allowed to refinance the Mystic River Bridge Revenue Bonds. It thus acquired the immediate payment for the airport facilities and the use of the proven, long-range revenue generating abilities of the Bridge as a secure, initial credit base for new bond issues to finance the operation and expansion of the other Port facilities. In February, 1959, Massport floated its first revenue bond issue of \$71,750,000 at 4-3/4% interest. From this it paid for the airport properties, retired \$22,160,500 of Mystic River Bridge Bonds and acquired a comfortable bit of capital with which to start its operation. When the other facilities were able to turn a profit, the "closed-system" nature of Massport's financial structure was strengthened and it had no difficulty floating additional bonds.

This scheme seemed to satisfy everyone except those Bridge proponents who had been anticipating the toll-free era as a fitting reward to the Massachusetts taxpayer and a monument to that rare specie, the efficient public project. Otherwise, all parties seemed satisfied. The Supreme Judicial Court, when asked for its advisory opinion on the enabling act, found the new body, despite its corporate appearance, to be in no sense a private or business corporation:

"It has no stockholders; no person can derive a profit through its operation. Only the public is to be benefited."²⁶

The Court deemed that, not only was the bill constitutional, but its fiscal provisions were

". . . necessary parts of the whole enterprise conceived and intended for the maintenance and extension of great improvements wholly for the public benefit."²⁷

Everyone seemed to win. Massport was handed administrative and financial power and a package of facilities worth about \$237 million; the Commonwealth was rid of a drain on its strained fiscal resources and could look forward to eventually recovering at least \$38 million of its past investments; and the public, relieved of a tax burden, could await the commercial renaissance the vigorous, dynamic, autonomous Port Authority would usher in through its air terminals, piers and toll booths.

FOOTNOTES

CHAPTER II: ADMINISTRATION OF THE PORT.

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- ²An Act to Create a Board of Harbor and Land Commissioners, Chapter 263 of the Massachusetts Acts and Resolves of 1879.
- ³An Act to Purchase Land in East Boston, Chapter 648 of the Massachusetts Acts and Resolves of 1910.
- ⁴An Act Relative to the Development of the Port of Boston, Chapter 748 of the Massachusetts Acts and Resolves of 1911.
- ⁵Ibid., p. 991.
- ⁶An Act Relative to the Directors of the Port of Boston, Chapter 712 of the Massachusetts Acts and Resolves of 1914.
- ⁷Directors of the Port of Boston, Port of Boston USA, (Boston: 1915), p. 1.
- ⁸An Act to Create a Commission on Waterways and Public Lands, Chapter 288 of the Massachusetts Acts and Resolves of 1916.
- ⁹An Act to Organize in Departments the Executive and Administrative Functions of the Commonwealth, Chapter 350 of the Acts and Resolves of 1919.
- ¹⁰Report of the Special Commission Relative to the Boston Port Authority and the Promotion and Development of the Port of Boston, Massachusetts Legislative Documents: House 1938, No. 29, p. 14.
- ¹¹An Act Establishing the Boston Port Authority, Chapter 229 of the Massachusetts Acts and Resolves of 1929.
- ¹²Ibid., p. 239.
- ¹³U. S. Army Corps of Engineers, Water Borne Commerce of the United States, Calendar Year 1972, Part 1.
- ¹⁴Report of the Special Commission, 1938, p. 18.
- ¹⁵Special Report of the Boston Port Authority Relative to the Causes for Withdrawal of Shipping Business From the Port of Boston and to Wharfage Charges at Said Port, Massachusetts Legislative Documents, House 1943, Vol. 4, No. 1273, p. 6.

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- 24 1956 Report, p. 37.
- 25 An Act Establishing the Massachusetts Port Authority, Chapter 465 of the Massachusetts Acts and Resolves of 1956, p. 2.
- 26 Senate Requested Supreme Judicial Court Opinion on the Bill to Create the Massachusetts Port Authority, Massachusetts Legislative Documents: Senate 1956, Vol. 2, No. 704, p. 20.
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Between the idea
And the reality
Between the notion
And the act
Falls the Shadow
T. S. Eliot

CHAPTER III

THE CONSTITUTION OF THE PORT

Introduction

Despite the ministrations of these various boards and authorities, the Port of Boston inexorably declined. Its economic viability has been questioned and there is uncertainty as to whether it can emerge from its present state of stagnation. Behind this deterioration has been a complex of numerous and interrelated factors, many of which have origins in the distant past. The resolution or persistence of these problems will determine the Port's future. Recently, under the aegis of the Massachusetts Port Authority, there has been a more positive and concerted assault upon some of the principal dilemmas that impede the Port's progressive development. This section will deal with some of the chief components in this process, focusing on their present impact and the efforts being made to accommodate or alter them.

Part 1 Trade Imbalance

Although the plethora of ailments the Port has endured are not unique to Boston, they have peculiarly combined to exacerbate the principal malady that has afflicted the Port for most of its history:

a crippling trade imbalance. Basic economics dictates that no one makes money when a ship, having discharged its cargo, is forced to sail empty from a port. A fair balance of trade prevents this to the greatest possible extent. Severe imbalances, however, are a chronic condition of sea-borne general cargo trades and have resulted in concentrations of freight movement in large, regional ports.¹

An acceptable trade balance, nevertheless, is a prerequisite for a healthy, growing seaport. It alone can attract major shipping lines which offer the necessary frequent and regular general cargo service schedules. This in turn attracts even more freight, both import and export, as exemplified by the Port of New York, and also those industries dependent on cheap water-borne transportation. These scheduled general cargo services not only enhance a port's competitive stature, but also generate maximum port revenues. It has been estimated that North Atlantic ports generate \$16 to their respective state economies for every ton of general cargo handled.² The traditional sources of these revenues are the purchases of stores, water and bunkers, tugboat and harbor pilot fees, pier charges and stevedore wages. Even with Boston's small general cargo traffic, this means about \$30,000,000 a year to Massachusetts. Bulk cargoes, both liquid and dry, usually use private facilities and so generate only minimal port revenues.

The key to Boston's excess of inbound over outbound traffic was that the Port was gradually confined to servicing only the New England economic configuration. The extent and nature of a

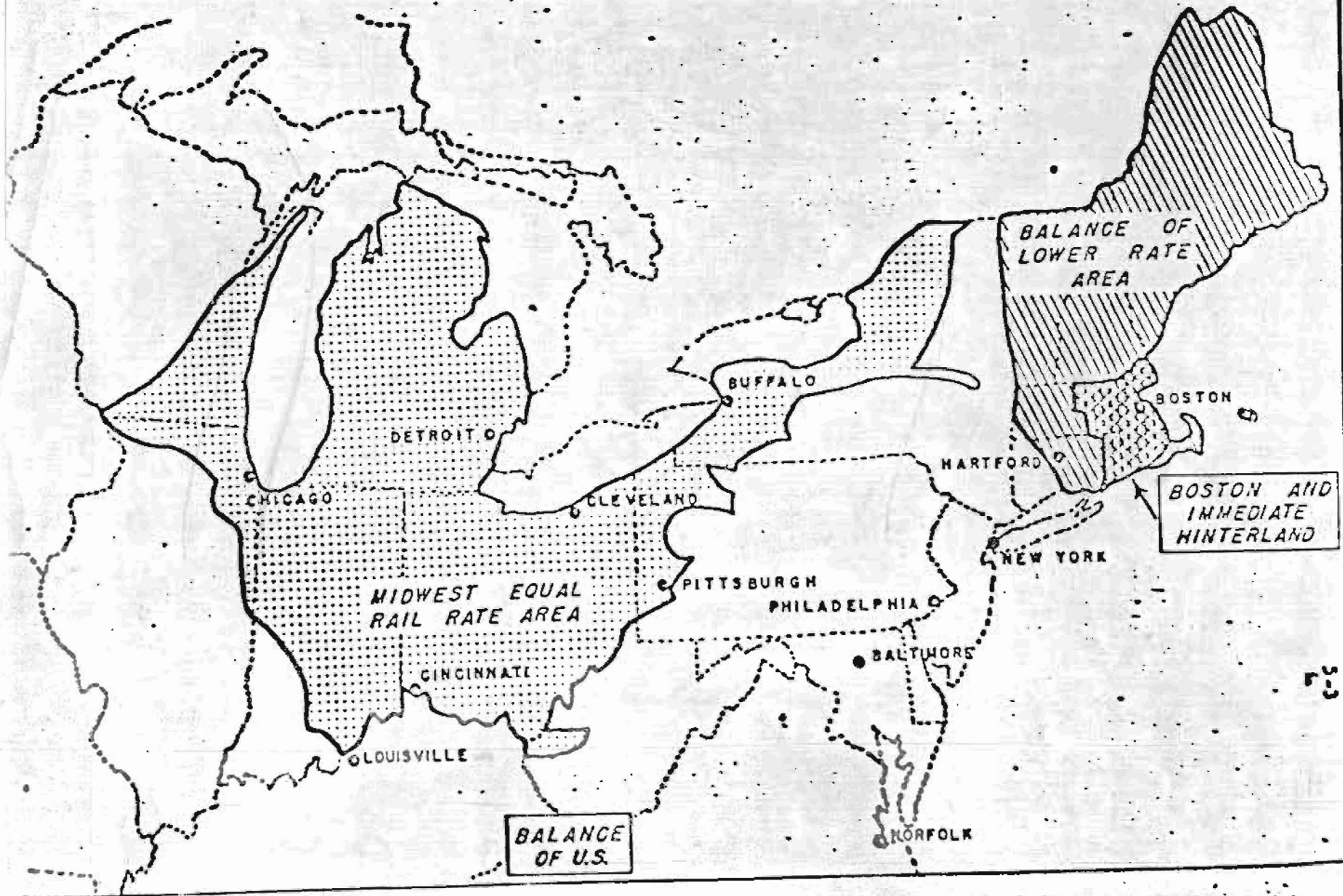
hinterland served, not limited to just contiguous areas, shapes the size and character of a Port. Specialized ports may develop to handle the predominant product of a large region, as Melbourne, Capetown and Santos have done for wheat, minerals and coffee. Great world ports such as Rotterdam, New York and Kawasaki thrive because of the extent and diversity of the industrial, agricultural and commercial needs of their hinterlands.

Boston's initial hinterland was probably artificially large due to its early establishment as a major port, the physical limitations of the young nation and the manageable competition from other North Atlantic ports. It truly served as an entrepôt for the entire country and could draw on the western regions for import and export traffic. The make-up of this hinterland was destined to change, however. By a gradual but inexorable attrition, The Port was restricted to a more immediate hinterland. The main forces behind this process were seen in the Port's history: geographical disadvantages, increased competition, shifting centers of population, consumption and production, and a discriminatory cost structure.

To appreciate the effects of such a restriction, the waterborne commerce market areas of Boston can be divided into four distinct groupings.³ (see map p.) Since inland carrier rates played a critical role in the Port's decline, they are appropriate criteria for this delimitation. The four groupings are:

- 1) The Boston port area and immediate hinterland.
This covers Rhode Island and Eastern Massachusetts.

BOSTON MARINE COMMERCE MARKET AREAS



- 2) The balance of Boston's lower inland rate area. This covers the rest of New England except three counties in Connecticut. This and the above area are the only areas in which Boston enjoys a rail and truck rate advantage.
- 3) The equal rate area. This includes, roughly, Ohio, Indiana, Michigan, and the metropolitan areas of Milwaukee, Chicago, Pittsburgh, Buffalo, Rochester and Syracuse. No other North Atlantic port enjoys a rail rate advantage over Boston for this area, but several have lower truck rates.
- 4) The balance of the country. In these areas, Boston's rail and truck rates would be higher than those of at least one other major port.

As to be expected the vast majority of the Port's import and export traffic is generated in the port area and immediate hinterland, with a much smaller amount coming from the rest of New England. The equal rail rate area and the rest of the country are responsible for only minimal traffic through Boston. This is demonstrated by general cargo import traffic:

<u>Area of Destination</u>	<u>Percentage of All Boston General Cargo Imports</u>
Port Area and Immediate Hinterland	79%
Rest of New England	14%
Equal Rail Rate Area	4%
Balance of the Country	3%

Source: R & M (FMC)

Thus, the limits of the hinterland Boston is able to service have been closely defined. The character of this area is more responsible than its extent for the Port's condition. Resources

poor, New England is barren of those bulk exports needed to fill a ship's hold. The basic economic structure, determined by nature, necessity and enterprise, has traditionally demanded huge amounts of imported food, raw materials and fuel. With the early exception of the codfish and the later exception of a biannual apple crop, the region has offered no consistent, indigenous export base. Manufactures, in small lot shipments entailing time and profit consuming excessive handling, did not prove to be the much needed and long hoped for export medium.

This pattern continues today. Even dry bulk imports pale before the complete domination of petroleum products which the area relies upon to produce its power, feed its factories, heat its homes, and fuel its motor vehicles and aircraft. Future industrial development and population growth, the energy crisis notwithstanding, are expected to result in a faster acceleration of this consumption rate around Boston.⁴ The Port's major role as a seaport has become primarily that of a terminus of the life-line of raw materials from foreign and domestic parts.

The New England states have a smaller than average proportion of the basic materials industries, such as petroleum, coal and primary metals that generate bulk exports. They do have a far greater than average proportion of paper, textile, leather and rubber, and plastic industries which produce expensive but low volume goods.⁵ The trend of declining general cargo tonnage in the Port will continue as specialized construction of small components, such as the electrical machinery industry becomes an ever

more important sector of the local economy.⁶ It goes without saying that most of these products are consumed domestically and that of those intended for foreign commerce, 85% are exported through New York, along with 50% of the area's industrial foreign import needs.

The question remains: what has been done to alleviate this dilemma? Boston's import-export imbalance is an old problem and efforts to abate it were initiated early. The thrust of these efforts has been the solicitation of shippers, industries, railroads and steamship lines, a practice that has become the backbone of most major competitive ports. Since 1914, solicitation programs had been executed by the Directors of the Port of Boston, the Boston Port Authority and the Port of Boston Commissioners. Notwithstanding increased expenditures, they were generally ineffective.

The Massachusetts Port Authority inherited a quandary not of its own making, whose roots--the basic economic structure of New England--it was powerless to attack directly. Solicitation, however, was one of the prime responsibilities assigned it. Massport's early policy in attempting to attract new commerce, especially export shipments, fluctuated in seemingly contradictory fashion. This apparent inconsistency makes sense, however, if one assumes that the way was being prepared, long before public articulation, for Massport's "master plan" for the total containerization of the Port, a strategy so intangible, poorly defined and haphazardly pursued that it might be better termed a state of mind.

Massport undertook an initially successful campaign to attract to Boston waterfront industries to increase bulk imports and hopefully generate some much needed dry bulk exports. At the time Boston was seen by many observers to be a potentially important specialized port for bulk imports.⁷ In the early 1960's, progress was marked by the establishment of the Eastern Gas and Fuel Associates facility for handling molten liquid sulphur, an American Sugar Company plant and three cement companies--Universal Atlas Cement, Marquette Cement and Atlantic Cement--with combined storage facilities for 222,500 barrels.

Little more was done after this, however, and Massport was criticized for slackening its pace and not developing and implementing a comprehensive plan for Boston's commercial future. In fact, in 1973, the Port lost one of its oldest bulk industries when the Revere Sugar Refinery in Charlestown closed down, depriving Boston of three sugar ships a month.⁸ The Authority's Port Director blamed the lack of gains after this initial flush of success on inadequate site locations and the 7.5% Massachusetts income tax on business corporations, the highest in the country.⁹ Other ports, however, exhibited more persistent efforts to attain integrated industrial centers similar to Europort (Rotterdam). This was evidenced by such developments as the Port of Oakland (Cal.), Industrial Park and the River Gate Industrial District of the Port of Portland (Oregon). In retrospect it seems that Massport's waning enthusiasm for such industries was as much inspired by its vague conviction that the Port's future lay in containers and

not bulk. Boston already possessed sufficient bulk traffic and the Authority correctly recognized that additional cargoes would generate little revenue for it and most other Port interests.

This reasoning also helps to explain Massport's reaction to the possibility of renewed grain exports. Boston found parity was not a panacea. In 1956, the Port of Boston Authority, joined by the local railroads and New York port interests, began a legal drive to remove the discriminatory rail rate differentials. The effort was carried on by Massport. In 1960, the Interstate Commerce Commission refused to equalize rates with the "Southern tier" of North Atlantic ports, citing the greater distances to Boston and New York.¹⁰ This decision was appealed to the Federal District Court in Boston, where it was argued that Norfolk was only 38 miles closer to the Central Freight Association territory than Boston. The Court overturned the ICC decision, finding "the Commission's decision is erroneous in law and lacks the rational basis to uphold it."¹¹ In 1963, the U. S. Supreme Court, dividing evenly, four to four, on the case affirmed the District Court's ruling.¹² The eight year struggle had cost Massport \$150,000, but the Port's burden of 86 years had been lifted.

There was understandable jubilation in Boston. The president of the Greater Boston Chamber of Commerce felt the ruling to mean "the rejuvenation of Boston's window on the world."¹³ The Mayor called it "one of the most important judicial decisions in almost a century, a major victory for Boston which will now have the opportunity of again taking its position as a major world port."¹⁴

The executive director of Massport heralded it as

" . . . a potentially tremendous benefit to Boston and the entire area and a chance to expand the Port's marketing area as far west as the Mississippi."¹⁵

A \$25,000 sales campaign was to be fully organized and undertaken to beat the bushes for Midwest bulk and general cargo.

Feelings were high that for Boston to regain its former status as a grain exporter, it needed improved railroad service from the west based on large, self-discharging freight cars which could transform a trainload automatically into a shipload, the construction of modern silos and facilities, and the commitment of a large exporter. Nothing materialized, however. Massport was honestly unable to find a private investor willing to risk the establishment of expensive new grain-handling facilities in the Port. Shortly after its invigorating promise of an ambitious grain crusade, the Authority was roundly criticized for allowing the New York Central Railroad to prematurely abrogate its lease and shut down the Port's last grain elevator in East Boston. In 1966, Boston lost its share of a 3 million ton emergency wheat shipment to India because it had no operating grain elevators. At the time, a Department of Agriculture spokesman could truthfully say that "Boston is not in the grain business anymore."¹⁶ While established traffic patterns through other North Atlantic ports were admittedly difficult to break, Massport's solicitation efforts were minimal and half-hearted, including an entertaining but not very productive color-sound movie, presumptuously entitled, "The Port of Boston-Gateway to the West."¹⁷ Massport's actions seemed to belie its earlier words.

Behind this contradiction seems to have been the Authority's deliberate policy to avoid the futility of a frontal assault on the St. Lawrence Seaway. Though grain traffic through all U. S. Ports, including Boston, had increased substantially in the post-war period, after its opening in 1959, the Seaway quickly developed a stranglehold on much of the bulk grain exports from the Great Lakes region. While it diverted some trade from all U. S. North Atlantic ports, it in effect destroyed Boston and New York, the northernmost, as grain shippers while the "Southern tier" continued to thrive. (Table 1)

Massport's assessment of the grain situation proved wise. Utilizing shipload lots, the Seaway offered lower freight rates through a longer water-haul. Not only was the inland carriage cheaper, but the Canadian Shipping Conference quoted lower ocean freight tariffs than the American Shipping Conference which governed Boston's traffic. Moreover, the subsidized Canadian National Railroad quoted cheaper rates to St. John's and Halifax than did the American lines to U. S. coastal ports, if a full rail carriage was necessitated by the Seaway's freezing over. Boston was only treated to an occasional spill-over from these Canadian ports and its grain traffic was reduced to a trickle.

Massport recognized the threat this new competitor represented and filed early protests against the federal promotion of the Seaway. In 1962, the Executive Director stated,

". . .the promotion of the St. Lawrence Seaway is not a responsibility of the Federal government.

TABLE 1

FOREIGN EXPORTS OF CORN, WHEAT AND SOYBEANS THROUGH U. S. NORTH ATLANTIC PORTS
(short tons)

Year	Boston	New York	Philadelphia	Baltimore	Hampton Roads	Total Foreign Exports of Corn, Wheat and Soybeans, Through all U.S. Ports	Grain Exports as % of Total Foreign Exports Through All U. S. Ports
1959	323,521	420,621	534,642	1,215,914	2,425,377	20,442,939	7.5%
1969	10	28,246	365,387	451,857	2,666,759	37,982,209	6.6%
1972	71	18,248	1,360,667	2,197,008	4,277,551	60,828,800	8.9%

Source: U. S. Army Corps of Engineers, Waterborne Commerce of the United States, 1959, 1969, 1972.

The Seaway ports should shoulder their own responsibilities, as do other ports of the United States."¹⁸

This agitation was of no avail. By 1972, total cargo traffic on the Seaway reached a record 53.7 million tons. Twenty-one and a half million tons of grain accounted for 47% of the 45.9 million ton total bulk traffic. Windfalls, such as the U. S. - Soviet Shipping Agreement of 1972 increased the normal flow of wheat, corn, soybeans and barley through the Seaway. In the same year, the Seaway also handled 7.9 million tons of general cargo and 12.6 million tons of iron ore.¹⁹

The Seaway's full potential may not yet be fully realized. The U. S. Congress has funded a three year Navigation Season Extension Demonstration Program. If successful the year-round use of the Great Lakes and the St. Lawrence Seaway through the development of sophisticated ice booms seems imminent.²⁰

Boston's loss of grain shipments meant more than just losing the \$4.24 that each bushel was estimated to contribute to the local economy. An industry observer noted that

". . . the large grain movements, which Boston formerly had, served to generate other cargoes. Since grain needs very rapid movement, the port which can provide such service acquires a favorable reputation which helps to attract other commodities."²¹

With just the opposite reputation, the Port has had to hobble along with exports of scrap iron and tallow.

Besides this pessimism about competing with the St. Lawrence Seaway, there seem to have been other motives to Massport's behavior.

Besides the differential decision, 1963 also marked the ascendancy of Edward King as the new Executive Director of the Authority. A strong and dynamic leader, he gave first priority to an immediate and vigorous development program for Logan Airport; but he also seems to have been committed to an as yet inchoate design for the long-term containerization of the Seaport, which unfortunately had to be temporarily deferred. Thus, as with bulk industries, grain exports may have appeared dispensable and even incompatible with Boston's containerized future, barely worth the effort to pry them from the Seaway's grip. This notion is supported by the interesting fact that Massport has recently undertaken a small solicitation drive for Midwest grain and even popcorn, now that such traditional bulk shipments are being increasingly containerized.

Massport's campaign to attract regional shippers of general cargo presently using New York is part of its total program of containerization and will be discussed later in a separate section. Suffice it to say here that its efforts to sell Boston as a cheaper and faster shipping center than New York, for both containerized and break-bulk cargo, has been successful in New England and inroads have even been made in New York state. The Authority's conviction that most of the area's high-value, low-bulk manufactures are ideally suited for containerization must consider, however, the strength of local shippers' habits to use New York and the increasing competition for this freight from the burgeoning air cargo business. Furthermore, Massport should recognize the disadvantage of delaying intense solicitation efforts in the Midwest, which led

by Illinois is presently the nation's largest source of both agricultural and industrial exports.

FOOTNOTES

CHAPTER III: THE CONSTITUTION OF THE PORT

Part 1 Trade Imbalance

- ¹Samuel A. Lawrence, International Sea Transport: The Years Ahead, (Lexington, Mass.: Lexington Books, 1972), p. 64.
- ²"Boston Hasn't Halted Its Shipping Decline," Christian Science Monitor, March 31, 1967, p. 2.
- ³Federal Maritime Commission, Bureau of Domestic Regulation, Division of Terminals, Staff Study of the Port of Boston, (Washington, D. C.: Government Printing Office, 1967), Section IV, p. 22.
- ⁴Abt Associates, Inc., The Boston Seaport, 1970-1990, (Cambridge: Abt Associates, Inc., 1970), p. 21.
- ⁵FMC Staff Study, p. 24.
- ⁶"New Cargoes for Boston Harbor," Christian Science Monitor, May 6, 1967, p. 2.
- ⁷Ibid.
- ⁸"Boston Expected to Continue Container and Cruise Gains," Boston Globe, Jan. 13, 1974, p. A-10.
- ⁹Legislative Research Council, Report Relative to the Promotion of the Port of Boston, Massachusetts Legislative Documents: House 1968, Vol. 10, No. 4852.
- ¹⁰Equalization of Rates of North Atlantic Ports, 311 Interstate Commerce Commission 689 (1959).
- ¹¹Boston and Maine Railroad v. U. S., 202F, Supp. 830 (1962).
- ¹²Baltimore and Ohio Railroad v. Boston and Maine Railroad, 373 U. S. 372 (1963).
- ¹³"Rates Verdict to Spur Port, New England Railroads," Boston Globe, Nov. 19, 1964, p. 6.
- ¹⁴Ibid.
- ¹⁵Ibid.

- ¹⁶"Bins Closed--Boston Loses Grain Deal," Boston Globe, Feb. 10, 1966, p. 3.
- ¹⁷Massachusetts Port Authority Annual Report, 1964, p. 10.
- ¹⁸MPA Annual Report, 1962, p. 19.
- ¹⁹U. S. Department of Transportation, Saint Lawrence Seaway Development Corporation 1972 Annual Report, (Washington, D. C.: Government Printing Office, 1973), p. 18.
- ²⁰Ibid., p. 9.
- ²¹1968 Legislative Report, p. 59.

Part 2 Petroleum

Most bulk traffic requires specialized, private facilities and generates only minimal port revenues. These private vessels do not necessarily enhance the status of a great common carrier, conference-liner seaport. But petroleum imports dominate Boston's total tonnage and have allowed its only real indispensable function. The Port could justify itself solely as the terminus of an energy lifeline. Though fuel prices are certainly not low, but cheap sea-borne transport and Boston's proximity to the eastern Massachusetts center of consumption, keep them from climbing even higher. There has been some resentment that New England, especially sensitive to environmental dangers, prefers to use imported petroleum products and thus preserves its coastline from the threat of crude terminals, off-shore oil drilling and refinery-industrial complexes. The area has not had the best of both worlds, however, During the peak of the recent energy crisis New England's external sources proved expensive and unreliable and the northeast states suffered the most acute fuel shortages. This situation could be even worse, for without immediate and extensive improvements, Boston could be displaced as a major petroleum port. There is a demand not just for capital investment, but also for a comprehensive plan that genuinely considers environmental factors in integrating new facilities into an invaluable yet already strained coastal zone. Though the Port does not have a reputation of facile adaptation to technological developments and an impulsive stampede should be

avoided, local sentiment of late has been less uncompromising and there is a possibility of a more realistic accommodation of progressive conversion.

The New England region has an historical and singular reliance on energy supplies from foreign and domestic sources inexpensively carried by the bulk trade. The area has no indigenous resources, relatively cold winters, a high degree of industrialization, a high population density, especially in eastern Massachusetts, and no pipeline system. Its imports fall into three categories of approximately equal size:

- 1) Gasoline and jet fuel.
- 2) Distillate fuel oils--#1 and #2 (home heating fuels) oils, kerosene, range oil and diesel fuels.
- 3) Residual fuel oils--#5 and #6 fuel oils for utilities and industries and bunkers for ships.

In recent years, the market for imported petroleum products had grown at an average rate of 1.3% per year,¹ and industrial development and population growth is expected to result in a faster acceleration of the consumption rate, especially in the Boston area. This pattern of dependence should persist to at least 1985 and more probably till the end of the century, despite recent efforts toward conservation, the discovery of new domestic sources and the development of alternative sources.

New England's unique reliance on petroleum products as compared to the U. S. as a whole is shown in the following tabulation:

	<u>New England</u>	<u>United States</u>
Percentage Residential/Commercial Energy Needs Met by Oil	76%	33%
Per Capita Consumption of Distillate and Residual Fuel Oil	12.7 bbl	3.3 bbl
<u>Frederick R. Harris, Inc., Feasibility Investigation: Massport Out-To-Sea Oil Terminal System, Interim Report, (1970), p. 12.</u>		

Massachusetts used 52.2% of the entire New England oil consumption. Seventy-six percent of this or over 40% of the entire regional supply is consumed within 50 miles of Boston and is distributed from oil brought through the Port.² In 1972, Boston handled 22,838,239 tons of petroleum products.³ This distribution arrangement is expected to continue in the future with increases in total New England demand and the volume passing through the Boston Seaport (Table 1).

New England's gasoline and distillate heating fuels originate in the Gulf of Mexico. They are processed at the Philadelphia refinery complex and are carried by U. S. flag vessels to Boston, where they constitute 2/3 of the Port's total petroleum tonnage. Since U. S. refineries prefer to use the "cracking process" to produce the more profitable gasoline and distillate heating fuels, New England relies upon foreign imports for its residual fuel oils. Transported in foreign flag vessels primarily from the Caribbean basin, it amounts to 1/3 of the Port's petroleum tonnage.

As with most U. S. ports, Boston's oil terminals have been unfortunately locked into the conventional Port. These inner-harbor

TABLE 1
REGIONAL PETROLEUM PROSPECTS

	1968		1975		1980		1990	
	%	MST	%	MST	%	MST	%	MST
New Hampshire	5.7	1.79	5.6	1.92	5.4	2.05	5.1	2.3
Maine	9.6	2.94	9.5	3.26	9.3	3.46	9.0	4.06
Massachusetts	52.2	16.52	53.1	18.2	53.9	20.4	55.2	25.0
Greater Boston	41.1	13.21	42.1	14.4	42.4	15.8	42.7	19.2
Vermont	3.6	1.13	3.2	1.23	3.0	1.25	2.8	1.27
Rhode Island	6.9	2.17	6.7	2.28	6.6	2.46	6.4	2.9
Connecticut	22.0	6.95	21.8	7.42	21.7	8.07	21.4	9.5

Source: Abt Associates, Inc., The Boston Seaport, 1970-1990, (Cambridge = Abt Associates, Inc., 1970), p. 42.

terminals, located principally along the Chelsea Creek and Mystic River, handle most of the Port's petroleum traffic. The complex access routes offer beam and depth restrictions, with mean low water depths of 35 to 40 feet, and the location of these facilities presents time consuming turn-around problems.

Since petroleum products require special off-loading and storage they are handled by private companies who are responsible for the redundancy and unsatisfactory condition of the terminals. At present 26 facilities ~~owned~~ by 15 private companies handle 97.5% of all petroleum traffic.⁴ Infrequent deliveries due to such an excess of facilities have made capital investments for improvements unattractive. All the terminals are old, lack room for expansion and will probably be obsolete within ten years. Though some are fairly well maintained, they generally lack adequate safety and oil-pollution prevention and abatement equipment. While the existing distribution and storage capacity of approximately 13 million barrels is sufficient at present, with an estimated through-put increase of 2% a year, it will not be able to accommodate all petroleum traffic after 1975.⁵ Despite this unsatisfactory situation and forecast, the large controlling corporations, vertically integrated do not at present need or want public port services.

The character of the tanker fleet currently serving Boston is equally discouraging. Boston's facilities were developed to handle the standard workhorse World War II vintage T-2 tanker, of about 16,000 dwt. Most other U. S. North Atlantic ports did likewise, and for years their channel depth limitations were no great liability. (Table 2).

TABLE 2

PORT AND HARBOR CAPABILITIES

<u>Port or Harbor Area</u>	<u>Controlling Depth (feet)</u>
Portland, Me.	45
Boston	40
New York (Ambrose)	45
(Kill Van Kull)	35
Delaware Bay to Philadelphia	40
Philadelphia, Pa.	40
Baltimore, Md.	42
Hampton Roads, Va.	45
Jacksonville, Fla.	40
Port Everglades, Fla.	40
Tampa, Fla.	34
Mobile, Ala.	40
Pascagoula, Miss.	38
New Orleans, La.	40
Baton Rouge, La.	40
Beaumont, Tex.	40
Galveston, Tex.	36
Houston Ship Channel	40
Corpus Christi, Tex.	45
Los Angeles, Calif.	51
Long Beach, Calif.	52
San Francisco,	50
Bay Entrance, Calif.	
Columbia River	42
Entrance	
Puget Sound	100-500

Source: U. S. Army, Corps of Engineers, Waterborne Commerce of the U.S.

The Federal policy requirement of shipping oil products from U. S. refineries in U. S. built flag vessels has buttressed this unfortunate pattern for Boston since Philadelphia can only handle vessels up to 50,000 dwt. Since only recently have government construction subsidies been offered for tankers, most oil companies have been reluctant to build new U. S. flag tankers in light of the fact that it costs two to three times as much to build a tanker in an American shipyard than it does in a foreign yard. Even the foreign trade, with newer and larger vessels, has accommodated itself to Boston's antiquated facilities by utilizing older and smaller tankers. So the Port's inner-harbor terminals have been left shackled to approach channels unable to float large tankers upwards to 35,000 with drafts over 40 feet (Table 3).

The complexion of Boston's present tanker traffic reflects the unfortunate size limitation and subsequent age necessitated by its unfavorable terminal sites. In 1969, approximately 660 tankers called at the Port with the following average sizes:

Present Tankers Serving Boston

Average American Tanker Size	25,000 cwt
Average Foreign Tanker Size	34,000 dwt
Average Size of All Tankers	29,000 dwt

Source: Frederic R. Harris, Inc., Feasibility Investigation: Massport Out-To-Sea Oil Terminal System, Interim Report, (1970), p. 25.

TABLE 3
TANKER SIZE AND DRAFT

Deadweight (thousand tons)	Length Overall (feet)	Maximum Draft (feet)
300	1140	80
250	1100	62
100	940	50
65	820	42
32	660	34
27	630	32
20	565	30
17	525	30

Source: Frederic R. Harris, Inc., Feasibility Investigation: Massport Out-To-Sea Oil Terminal Study, Interim Report, (1970), p. 25.

This fleet is composed primarily of converted or jumboized World War II and early 1950's tankers, 80% of which are over 20 years old.⁶ By 1980, these ships should all be scrapped and it is doubtful that they will be replaced by uneconomic, small tankers in the 15 to 35,000 dwt range given the low comparative cost of terminals versus tankers. Thus Boston finds itself in a dilemma; presently restricted for the optimum operation of modern tanker traffic, it must somehow accommodate these larger tankers if it is to remain a major petroleum port.

In marked contrast to Boston's situation has been the trend in world tanker shipping towards increasingly larger ships. It began in the 1950's when prosperity in Western Europe and Japan's post-war industrial recovery brought about an enormous and rapid growth of demand for petroleum. In Europe alone from 1957 to 1967, gasoline consumption tripled and consumption of home heating oil and of industrial fuel almost quadrupled. As this thirst for petroleum increased, it became the economic impetus behind the steady growth in tanker size. The closing of the Suez Canal in 1956-57, adding 5,000 miles to the voyage from the Middle East to Europe and the United States hastened this process. This trend has accelerated in recent years with further proliferation of the

automobile, continued industrialization and expanding residential demands, especially in Western Europe, the U. S. and Japan. The energy crisis seems only to have made consumption more self-conscious without any significant abatement.

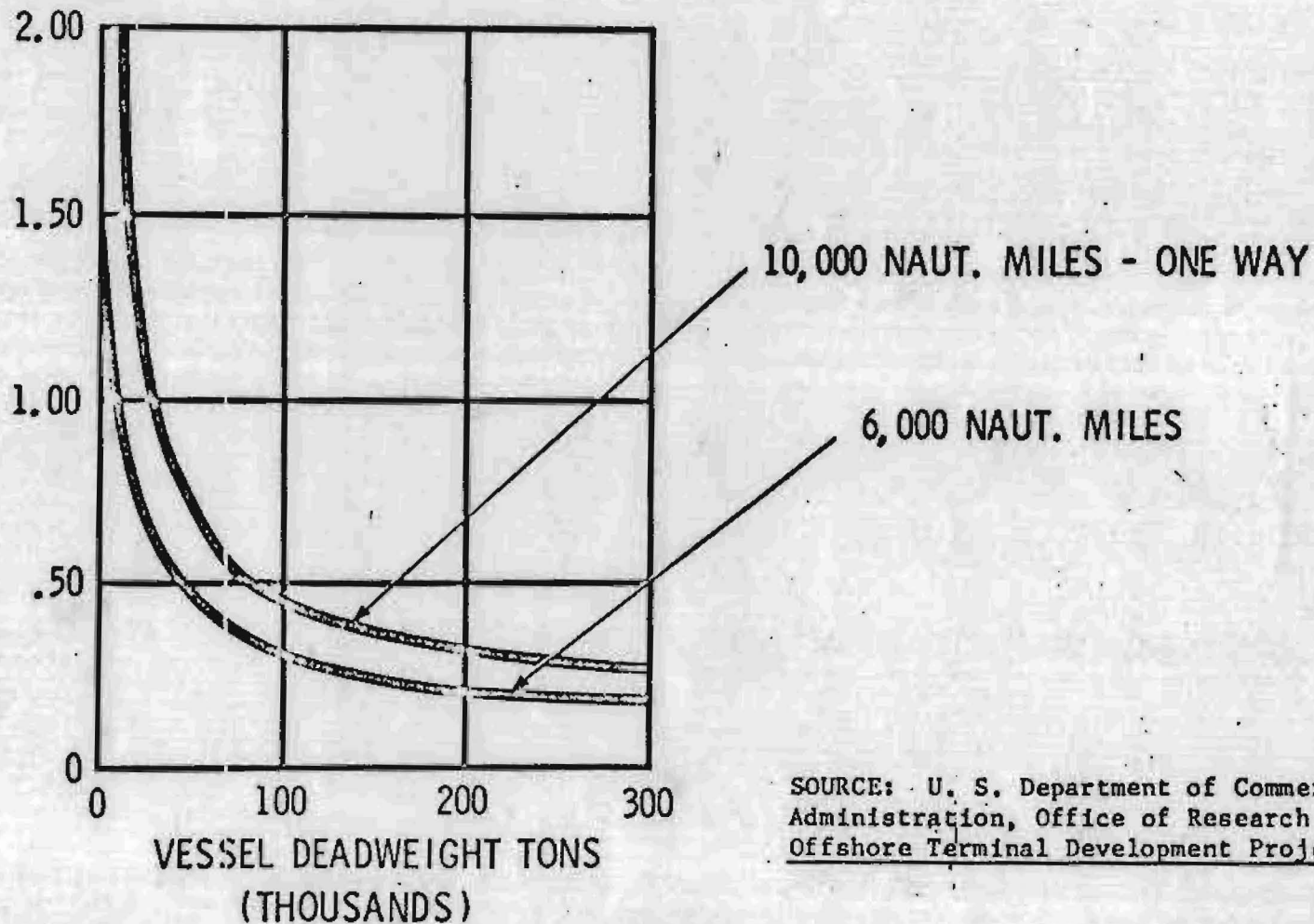
The intense construction of supertankers during this period had been predicated on their ability to transport large volumes of oil cheaply over long distances to meet the growing demand for petroleum products. The economies of size intrinsic in these larger carriers are irresistible. Since bulk weight doesn't increase proportionately with cargo capacity, the construction cost per deadweight ton for a 50,000 dwt tanker is about \$300, while that for a 500,000 dwt tanker is about \$156. Thus a fleet of ten 50,000 dwt ships would cost \$150 million while one equal capacity 500,000 dwt vessel would cost \$78 million.⁷ Furthermore, the cost per deadweight ton also decreases for manning requirements, auxiliary equipment, maintenance, power requirements and bunker fuel. In consequence of all these factors, the bigger the tanker, the cheaper it is to transport a barrel of oil (Figure 1).

In response to this economic maxim, the world tanker fleet has undergone rapid changes. It has been occupying an increasingly larger proportion of the world's total merchant fleet, and the size of its individual components has swelled incredibly. Total tonnage of the tanker fleet is forecast to increase by 4.7 percent annually until 1990, with large vessels dominating more and more. In 1971, there were 167 tankers of 200,000 dwt or over in operation. In 1975, it has been predicted that 47% of the total tanker tonnage

FIGURE 1

OIL TRANSPORTATION COST VS. VESSEL SIZE & ROUTE LENGTH

COST PER
BARREL OF OIL TRANSPORTED
(DOLLARS)



SOURCE: U. S. Department of Commerce, Maritime Administration, Office of Research and Development, Offshore Terminal Development Project, Sept. 1971.

FIGURE (1)

will be in vessels of 115,000 dwt and over; for 1980 the estimate is 64% and for 1990 it is 76%. At present 533 tankers in this category are under construction around the world.⁸ In March, 1973, Britain's Globetank tankers signed a letter of intent with a Japanese shipyard for a 706,000 dwt tanker--the largest so far in the world. Evaluation and preliminary designs have been completed for a 1,000,000 dwt vessel. It strains the imagination to compare these behemoths with Columbus's 60 dwt NINA and the later 180 dwt MAYFLOWER. This dramatic and rapid evolution from supertankers to Very Large Crude Carriers (VLCC's) to Ultra Large Crude Carriers (ULCC's) is demonstrated in a listing of the periodic record-holders of "the world's largest tanker" (Table 5).

Since depth limitations in most world ports preclude their accommodation of these larger vessels, there has necessarily been a corollary trend towards deep water off-shore oil terminals. Since 1958, approximately 100 off-shore monobuoy terminal systems have been installed around the world. Some are capable of handling tankers of any size even in severe weather conditions. There are about 60 foreign deep water port facilities in operation, under construction, or planned which can service 200,000 dwt vessels.⁹ A consolidation process is also underway where a single transshipment terminal serves an entire region. This more developed stage seems well advanced in the Bantry Bay, Ireland--Western Europe distribution system.

These international trends have had a profound impact on the U. S. petroleum scene. Even without a modernized, expanded U. S.

TABLE 5
WORLD'S LARGEST TANKERS

Name	Deadweight	Built	Launched
Sinclair Petrolore	56,089	Japan	1956
Universe Leader	85,515	Japan	1957
Universe Apollo	104,520	Japan	1959
Nissho Maru	130,250	Japan	1962
Tokyo Maru	157,290	Japan	1966
Idemitsu Maru	206,000	Japan	1966
Universe Ireland	326,000	Japan	1968
Nisseki Maru	372,700	Japan	1971
Globtik Tokyo	477,000	Japan	1973

Source: Joseph D. Porricelli and Virgil F. Keith, Tankers and the U. S. Energy Situation--An Economic and Environmental Analysis, Presented at the Intersociety Transportation Conference, Denver, Colorado, Sept. 24-27, 1973, p. 42.

tanker fleet, domestic ports will soon be unable to handle the increasingly larger foreign tankers that seem inevitable.

Predictably, New England is especially ripe for such a system. In 1970, a study was done to assess possible development plans for oil processing and distribution in New England.¹⁰ It found the region's present system to be in the least developed phase: a large and growing number of small terminals serving associated demand centers. A more developed phase would utilize the economies of scale of transshipment by consolidation several individual terminals into larger transshipment terminals, such as Portland and Boston, to serve subregions. The most mature phase would be total consolidation in which the entire region would be served by a single transshipment terminal. The study found New England approximately at the stage at which final consolidation of its oil distribution system should take place. A transshipment center in either Eastport or Searsport, Maine, two of the few places on the East Coast where drafts of 70 feet can be accommodated in sheltered waters, was found unfeasible without a companion refinery. The remoteness of both from the principal consumption centers would make for prohibitive distribution costs. Furthermore, later observers have also felt that even a terminal-refinery complex in either Maine or New Hampshire, as recently proposed by Aristotle Onnassis, would initially only service northern New England, with none of the subsequent benefits of an economic and reliable petroleum supply accruing to the Eastern Massachusetts population center.

An alternative off-shore terminal in Boston, however, corresponds to a minimum distribution cost configuration. Since transshipment from any terminal location would be by product tankers and seagoing barges rather than an inflexible pipeline system, Boston's proximity to the center of consumption would allow it the least ton-miles to be distributed. Massachusetts would thus realize a reliable oil supply with substantial savings on fuel costs. The construction of a refinery would further enhance these advantages. Besides bare necessity then, there would be other beneficial reasons to circumvent the limitations of Boston's existing terminal facilities.

In light of these promising alternatives to counter the ominous threat world shipping trends posed to Boston, Massport, in its own inscrutable manner, came to rescue the Port from its impending downfall as a major petroleum distribution center. Foreseeing both the future difficulties and opportunities for the Port, it had commissioned a feasibility study for an off-shore oil terminal system that was completed in 1970.¹¹ It assessed the projected growth of demand against Boston's physical limitations and also evaluated the area as to the feasibility of a local refinery. It found a refinery appropriate since 25% of the local market would support a 100,000 bbl/day minimum size refinery. (It took 25% of a market as the maximum that can realistically be assigned to any one company in the intensely competitive oil business.) Its final recommendations were for a marine-industrial complex focused around two off-shore terminals, a pipeline and tank farm system and a refinery. The report flatteringly stated that,

". . . The Massachusetts Port Authority, marine and politically oriented, is considered a practical vehicle to meld and bridge the chasm between the real needs of the people and industry. The Massachusetts Port Authority is indeed in this instance 'catalyst between Commerce and Industry.'"¹²

It further believed Massport,

". . . would be fulfilling the covenant for which it was established; that is, for the benefit of the people of Massachusetts."¹³

Subsequent to these heady encomiums, the study offered a two phase, multiple-user development scheme. The first step would be the construction of a products facility three miles out to sea in water deep enough (mean low water of 55 feet) to accommodate the largest estimated products delivery vessel (70 - 80,000 dwt). The two berth island pier would use an expandable pipeline system to pump the oil to storage tanks leased by the oil companies or directly to existing terminals. The study saw this project as economically feasible with Massport constructing it for approximately \$34 million. The total average annual costs (debt service, maintenance, operations) were estimated at \$5.99 million. By the fifth year of operation the annual revenues of \$6.05 million would be greater than the annual cost. By about the tenth year, the deficit would be paid off and the system would provide a source of income for other improvements.¹⁴

The second stage was to construct an off-shore crude oil receiving facility capable of handling tankers in the 300,000 dwt class and above. The proposed two length floating pier would be located six miles off-shore in 100 feet of water. The cost, estimated

between \$17 and \$23 million, would be shared by several oil companies and paid for by user charges. Simultaneously, a private company would build a \$100 to \$150 million, 100,000 bbl/day refinery. There were adequate sites for both terminals and land available on Belle Isle for the tank farm and in the Lynn Marshes for the refinery. Completing the complex would be the secondary process industries and the tertiary consumer-oriented industries attracted to the area by the availability of petroleum raw materials from the refinery.

The potential benefits from this proposal were tantalizing. The direct delivery of cheap foreign crude, the economics of large tankers, the lower distribution costs with a local refinery and the increased competition among oil companies could save the area as much as \$10,500,000 by 1975 in reduced fuel costs.¹⁵ Direct employment in the refinery and petro-chemical industries could mean 3,000 new jobs with the potential for another 7,500 jobs in spinoff industries. Not only would Massport have another source of revenue, but the local property tax rolls could be increased several million dollars. On top of everything else the entire development would cost the taxpayers absolutely nothing. The inherent value of a reliable supply of fuel, however, was not yet fully appreciated during this carefree, pre-Energy Crisis age.

Massport had seemed to come up with another gem in which all concerned won. Its reception, however, was less than enthusiastic, to say the least. The Authority's first mistake was to keep the report a secret for two years, a decision compatible with its pen-

chant for autonomous and exclusive actions, but of no relief to its sagging public relations image. The firm which prepared the study had obviously been well instructed, for it dutifully, but without further explanation, reported in its Letter of Transmittal,

". . . We have proceeded cautiously with the minimum of local contacts. . . the total involvement of the Port Authority in the Political, Social and Economic environment of the Greater Boston and New England Regional Community requires such a course."¹⁶

With the report made public, all Massport's Executive Director could offer critics as a justification for the delay was that, ". . . there was no need to alarm anyone."¹⁷

The general public was indifferent to the disclosure, except in East Boston which had long suffered with the nefarious Logan Airport for a neighbor and was more than slightly paranoid about Massport. These residents saw it as the usual plot to impose another Port Authority project upon the defenseless citizenry, despite Massport's insistence that there were five local communities that had expressed interest in the refinery. The proposal was opposed by many elected officials, especially the ecology-minded state senator who chaired the powerful Special Legislative Committee on Marine Boundaries and Resources. He did not mince words, branding the proposal

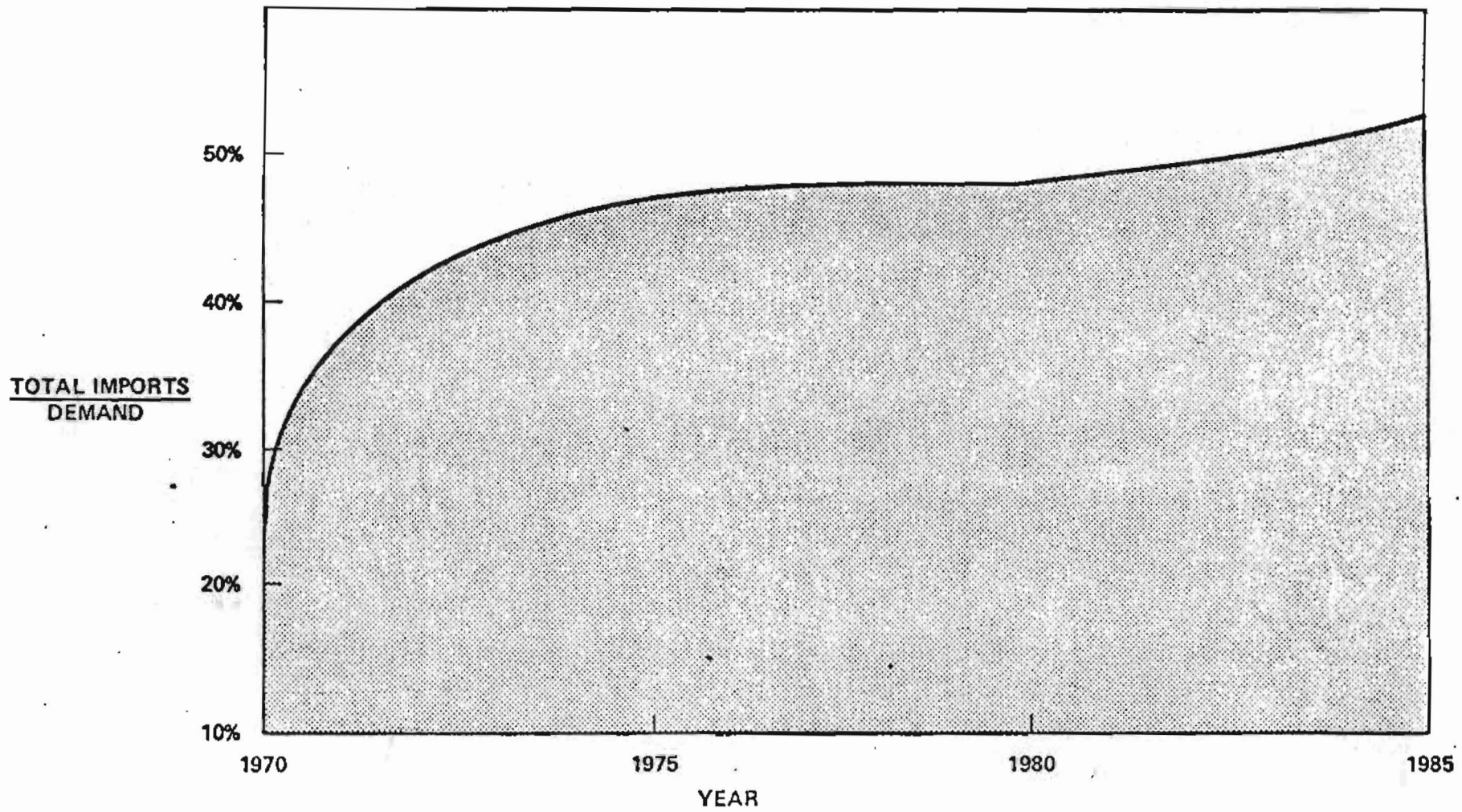
". . . an ambitious plan replete with its own sets of contradictions, non sequiturs and rationalizations so steeped in its own self-interest that it failed to consider. . . factors such as national and regional economic and energy policies."¹⁸

The Governor, a long-time conservationist and no fan of Massport, simply ignored the study.

And so the grandiose proposal never really got off the ground. It was put aside to await a more receptive atmosphere. This new climate was to be assured by two developments. At the time a new national policy toward oil transport was being implemented which, hastened by an impending energy crisis which Massport so opportunely forecast in 1969, was to revive the concept of an off-shore terminal for Boston.

Despite recent conservation efforts, increased exploration for new domestic sources and intensified R and D for alternative sources with no major breakthrough in sight, national energy self-sufficiency is in the far future. General consensus seems to be that to meet growing demands, The U. S. will have to significantly increase foreign oil imports (Figure 2). Some estimates set imports at 7.5 million bbl/day in 1975, 9.3 million in 1980 and 11.6 million in 1985, 65% of the total U. S. supply.¹⁹ As the Caribbean basin dries up, U. S. imports will come more and more from North Africa and the Middle East, notwithstanding current political difficulties, necessitating round trip voyages of 8,400 and 24,000 nautical miles respectively. Since at present, U. S. flag tankers carry only 5% of the total U. S. oil imports, the U. S. has had to embark on a crash construction program of VLCC's. Some experts predict that by 1985, it will require 112--80,000 dwt and 284--250,000 dwt tankers to transport all foreign oil imports on U. S. flag vessels.²⁰ The benefits of using such a system to meet current and projected energy needs until at least 1980 are obvious. Not only would the necessary volumes be more assured, but the economics of VLCC's would result in significant savings. On

TOTAL OIL IMPORTS AS PERCENT OF TOTAL U.S. OIL DEMAND



113.

Fig. 2

the Persian Gulf to the Atlantic Coast run, the per barrel costs for a 50,000 dwt tanker are \$.89 and \$.40 for a tanker of 200,000 dwt.²¹ In 1985, the cost savings to the U. S. would be approximately \$6 million per day or almost \$2 billion per year. Other advantages to such a program would be an improved balance of trade, strengthened national security in times of emergencies, and the supplemental benefits of increased shipyard employment and a general boost to the economy.

This new approach to the U. S. tanker fleet was indicated in the Merchant Marine Act of 1970. In that year the U. S. had 301 tankers totalling 7,835,000 dwt compared to a world fleet of 4,144 tankers totalling 142,652,000 dwt.²² Enabling legislation, sponsored by the Nixon Administration with overwhelming bipartisan endorsement, launched the U. S. on a new maritime program. While the prime purpose was the private construction of a modern, balanced fleet which would meet the country's needs in both peace and war, it was significant that, for the first time, tankers were to come under the subsidy program.

This new policy was soon implemented by the Federal Maritime Administration (MARAD) through its program of Construction Differential Subsidy and Operating Differential Subsidy. Though at first it was difficult to attract the necessarily large capital investments for tanker construction, MARAD soon recognized that vessel operators were convinced that the economies inherent in the use of VLCC's would dictate their use in all possible trades. Investors felt that building large numbers of "handy" (35,000 dwt) and

"intermediate" (85,000 dwt) tankers would economically penalize them by restricting oil imports to smaller vessels. Despite any contrary advantages of flexibility of operation and schedule, especially in the coastal trade, MARAD's policy is one of accommodation rather than direction:

"The construction subsidy program is structurally designed to be responsive to the private interests who will own and operate the vessels and invest 60 to 65 percent of the vessel's cost in their own capital. Since operators always have the option of building and registering their ships abroad, the government's influence over the number and types of ships they build with construction subsidy is constrained."²³

This increasing commitment to VLCC's is indicated in recent construction statistics. Only three tankers were built in U. S. shipyards in 1973, but one was 225,000 dwt and another 190,385 dwt.²⁴ Of the tankers under contract for construction, eight are greater than 200,000 dwt and 16 are in the 90,000 dwt class.²⁵ Construction applications for 65 additional tankers are pending before the Maritime Subsidy Board; of these, 42 are greater than 200,000 dwt, 17 are within the 80,000 dwt class and only six are less than 40,000 dwt.²⁶ This emphasis on larger tankers is likely to increase even further if a bill pending in Congress to require 30% of oil imports to be carried by U. S. flag vessels by 1977 is passed. A similar bill requiring a 50% carriage was defeated in the Senate last year, however.

As the trend toward VLCC's intensifies there is increasing pressure to construct off-shore terminals to accommodate them. Most existing U. S. ports are limited to 50,000 dwt tankers with a

few able to handle the intermediate size in the 90,000 dwt class. Since no U. S. port at present can handle VLCC's above 200,000 dwt (Table 2), off-shore facilities are a necessity if the U. S. is to satisfy future demands with huge quantities of oil and realize the economies of size of large tankers. Since private investors are determined to utilize VLCC's, to the greatest possible extent, the U. S., in effect, has no choice but to receive them in deep-water terminals.

Currently there are about a dozen off-shore oil facilities in the U. S., virtually all of them on the West Coast. Generally they are of the monobuoy type in depths of 50 to 60 feet of water. More terminals in deeper water, especially along the other U. S. coasts are imperative. Some experts, however, feel that such a facility will not be located in the Gulf of Mexico until sometime after 1975 and on the East Coast only after 1980.²⁷ Even before the fuel shortage the urgency of the situation was expressed by President Nixon:

"Given these considerations, I believe we must move forward in an ambitious program to create new deep-water ports for receiving petroleum imports."²⁸

This conviction is shared by MARAD in its Environmental Impact Statement for its Tanker Construction Program which also considers the impact of off-shore facilities which it views as inevitable adjuncts to VLCC utilization. It concludes that the primary pressure for the construction of such facilities

". . . comes from both industry and government sources interested in the very sizeable economic savings involved."²⁹

It predicts that the development of these terminals will alter the historic port, terminal and petroleum distribution patterns in the U. S. This national commitment to deep-water terminals has resulted in the High Seas Oil Port Act (H.R. 5898) which should pass Congress this year, after initial difficulties over the choice of a lead agency. The bill basically provides for the licensing of construction and operation and the establishment of rules and regulations. Conceding that foreign oil imports will constitute a substantial part of U. S. energy sources till at least the end of the century, the House Committee on Merchant Marine and Fisheries in its report on the bill stated that:

"Based upon the economic and environmental considerations involved, the Committee believes that the need for off-shore oil ports is clearly demonstrated. . .there is, therefore, need for the creation of a license system related to high seas oil ports if the nation is to be able to take advantage of this transportation system."³⁰

The only stumbling block on the road to unbridled enthusiasm for the VLCC--off-shore terminal system has been the key issue of environmental protection. The original Harris Study for Massport identified environmental opposition as a "psychological barrier" that especially afflicted New Englanders who valued their scenic and recreational resources, fought against off-shore oil drilling on George's Bank, initiated quixotic law suits such as U.S. v. Maine and rejected refineries offered by benevolent foreign capitalists. An increased concentration of public attention on environmental problems and oil spills since the first report led Harris to feel it necessary to prepare a Supplemental Report one year later on the potential environmental impact of its proposed off-shore terminal

complex. It put forth the usual contention that such a project would not interfere with the adjacent community environment and that there would be minimum detrimental effect on the on-shore and off-shore ecology. The heart of the argument was one which has now become standard for deep-water terminal proponents, that one could actually expect

". . . a reduction in oil pollution from oil delivered to a single, ultra-modern terminal designed under the strictest environmental safeguards to accommodate larger shipments from deep draft tankers, as opposed to the present arrangement of delivering oil in smaller ships to two dozen older terminals."³¹

A high-quality terminal, concentrating all the oil companies efforts and operated by the Port Authority would not only reduce the chance of an oil spill, but located off-shore with better equipment and trained personnel, it would permit a faster and more efficient containment and collection of any oil if there were a spill. Massport later projected the reduction in traffic in 1985 to be from 1,140--35,000 dwt tankers without an off-shore terminal to 252--35,000 dwt tankers and 114--300,000 dwt tankers with a terminal.³²

The environmental conclusions reached by the Harris Report and Massport are not isolated. They have been substantiated through extensive studies by the Intergovernmental Maritime Consultative Organization (IMCO), the Coast Guard, MARAD, the Army Corps of Engineers, the Council on Environmental Quality, the University of Maryland and prestigious consultants such as Soros Associates, Inc., Robert Nathan Associates, Inc., and Arthur D. Little, Inc. All these major studies have shown that the risk factor for oil pollution

is much less with the utilization of VLCC's and off-shore terminals than with the present arrangement of older, smaller tankers and inner harbor terminals. In the fine print, however, most of them admit not considering a VLCC catastrophic spill, a consideration which would "seriously alter" their results. MARAD went so far as to say that

"...the chances of all these circumstances being exactly right for maximum damage and resulting irreversible consequences are in the staff's opinion, remote."³³

The basic reasoning behind these conclusions is convincing. Even the Chairman of the Council on Environmental Quality was led to comment that

"In sum, then, the United States is going to need increasing amounts of imported oil. This oil will be imported in small ships--at greater risk of oil spills--if deep water ports are not available to serve supertankers."³⁴

It has been estimated that oil transport accounts for about 1.457 million metric tons or 30% of the total 4.897 million metric tons of annual oil pollution in the oceans. This contribution is made through either casualty discharges or operational discharges. Of casualty discharges, structural failures, groundings and collisions account for over 86% of the total outflow, and with the exception of structural failures, occur predominantly in the coastal waters, harbors and entranceways, and at piers. VLCC's and off-shore terminals would dramatically reduce these occurrences in several ways. VLCC's, based on the most advanced technological designs, would be far less susceptible to structural failures than older and smaller tankers. Since transfers would take place in

deep off-shore waters, groundings would be practically eliminated. The use of a few large ships would also greatly reduce the collisions presently unavoidable in congested, narrow inner-harbor channels. Thus it can be concluded that supertankers are less prone to accidents, and that accident proneness is more closely a function of age than of size. Furthermore, a spill at an off-shore terminal would be less damaging than one in an ecologically fragile coastal marine area. The end result of these advantages is that

". . Tankers 80,000 dwt and larger can transport a given quantity of oil over a given distance some seven times safer than tankers below 80,000 dwt, from a viewpoint of tanker casualties and subsequent pollution."³⁵

Operational discharges are even more important, however, since they account for about 82% of total oil outfall from oil transport, with the following breakdown:

Tank Cleaning	70%
Ballast and Other Discharges	7%
Terminal Transfers	5%

But both casualty and operational discharges in the VLCC--off-shore terminal system are minimized by design, construction, equipment and operational standards, rules and regulations incorporating the latest technological advances for safety and pollution prevention, abatement and clean-up. These safeguards are established under a variety of laws and implemented by a plethora of agencies. These include: IMCO Conventions and its Subcommittee on Ship Design and Equipment and Subcommittee on Standards of Training and Watchkeeping, the Environmental Protection Agency, The Coast Guard Rules and

Regulations on Pollution Prevention, Vessel and Oil Transfer Facilities, the Port and Waterways Safety Act of 1972, the MARAD Standard Specifications for Merchant Ship Construction, and the pending High Seas Oil Port Act. MARAD's more rigid standards under Section 70 on Pollution Abatement Systems and Equipment are tactfully urged, but not required because of the present policy of avoiding affecting a vessel's economic viability in foreign trade.

The alternatives to such an appealing arrangement are neither economically nor environmentally attractive for the nation, for New England, or for Boston. Retention of the present system would not lower the cost of oil transportation and greater use of Canadian and Caribbean deep water ports would only increase traffic and consequently pollution. Dredging is expensive and would still limit a port to 80,000 dwt ships; it presents a dredge-spoil disposal problem and would only increase traffic and pollution. Furthermore, there has been mounting opposition from both Maine and Canada to using Eastport, hitherto, the most probable site, because of the ecological perils to a pristine coastline that the concomitant traffic of mammoth tankers would entail. One of the few pilots now licensed to guide large ships into Eastport, Captain Amos Mills, testified at public environmental hearings:

"The only thing that Eastport has going for it is deep water; and when that is balanced against the fog and the currents, there is little to recommend the place for tanker traffic."³⁶

So in the end, it has begun to appear that the only way out of their respective dilemmas for both the nation and Boston is the rising

tide of VLCC's and off-shore oil terminals. More people are starting to share the perplexity of a leading industry spokesman:

"I am astonished that we are still talking and doing little for the off-shore systems we will require, that we are allowing a few objectors to delay action on something that is so important to the nation."³⁷

The climate in Boston seems to have mellowed to such a proposal since its initial indifference in the fall of 1972. The "psychological barriers" have been noticeably weakened by the well extolled economic and environmental virtues of a VLCC--off-shore terminal system and the inconvenience of long gas lines and the discomfort of lowered thermostats. In late 1973, Massport called for a final \$500,000 in-depth study by the consulting engineers at Harris. Shortly thereafter, Massport's Executive Director termed an off-shore terminal ". . . more important than ever now that the nation is in the throes of an energy crisis."³⁸ He found unexpected supporters. The Massachusetts Congressional delegation telegraphed their endorsement, calling the plan ". . . timely, innovative and deserving of further complete study."³⁹ Even the Governor's Secretaries of Transportation and Environmental Affairs now approved it as a "worthwhile venture."⁴⁰ Eventually, even the unregenerate Chairman of the Special Legislative Committee on Marine Resources and Boundaries made a proposal strikingly similar to the Port Authority's except, viewing Massport's state plan as inefficient and uneconomic, he, along with the governor's most recent appointee to the Authority's Board, favored a more regional approach.⁴¹

In the end, however, it was the Governor who, overcoming his original indifference, proved the tone bell-whether. In December, 1973, while his own Energy Emergency Program was being cut to pieces by a special session of the Legislature, he issued a "major policy statement on oil refineries" to assure that Massachusetts was not left out of the planning for terminal complexes then going on for Sanford and Eastport, Maine and Durham, New Hampshire. His proposal called for: 1) one or two deep water terminals owned and regulated by a public agency which would receive all the crude oil for New England; 2) a regionally owned or regulated pipeline system; 3) environmentally designed inland refineries; and 4) a public voice in what kinds of petroleum products are produced.⁴² Since, with a few embellishments, his plan was curiously similar to the Harris recommendations, the Governor, to his credit, said his proposal was based in large part on what Massport had originally suggested.

So now, with bi-partisan encouragement, a second and more serious and expensive study has been undertaken as to the feasibility of an off-shore oil terminal complex for the Port of Boston. Whether Boston's traditional technological lag will prove its undoing as the major oil port for New England has yet to be seen. Petroleum traffic has played a critical role in the Port's recent history and could play an even more important role in the future. The outcome, decided by necessity, politics or passions, is problematic.

FOOTNOTES

CHAPTER III: THE CONSTITUTION OF THE PORT

Part 2 Petroleum

- ¹Seaport, p. 21
- ²Ibid., pp. 42 and 152.
- ³Waterborne Commerce, 1972.
- ⁴Frederic R. Harris, Inc., Feasibility Investigation: Massport Out-To-Sea Oil Terminal System, Interim Report, (Boston: 1970), p. 21.
- ⁵Seaport, pp. 98, 99.
- ⁶Ibid., p. 168.
- ⁷Joseph D. Porricelli and Virgil F. Keith, Tankers and the U. S. Energy Situation--An Economic and Environmental Analysis, Presented at the Intersociety Transportation Conference, Denver, Colorado, Sept. 24-27, 1973, p. 42.
- ⁸Edwin M. Hood, Statement Before Committee on Merchant Marine and Fisheries, House of Representatives, July 11, 1973, p. 2.
- ⁹U. S. Department of Commerce, Maritime Administration, Draft Environmental Impact Statement, Tanker Program, (Washington, D.C.: Government Printing Office, 1973), sec. I, p. 198.
- ¹⁰Massachusetts Institute of Technology, Economic Factors in the Development of a Coastal Zone, (Cambridge: The M.I.T. Press, 1970).
- ¹¹Harris.
- ¹²Harris, "Letter of Transmittal."
- ¹³Harris, p. 11.
- ¹⁴Ibid., p. 7.
- ¹⁵Ibid., p. 69.
- ¹⁶Ibid., "Letter of Transmittal."

- 17"Massport's oil project labelled contradictory by State Sen. Bulger," Boston Globe, Oct. 6, 1972, p. 3.
- 18Ibid.
- 19MARAD, Tanker Program, sec. IV, p. 4.
- 20Joseph Kasputys and Joe Bill Young, "Subsidies, Seed Money, and National Security," Seapower, September, 1973, p. 24.
- 21MARAD, Tanker Program, sec. IV, p. 203.
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- 30U. S., Congress, House, Committee on Merchant Marine and Fisheries, High Seas Oil Port Act, Report 93-692 to Accompany H.R. 5898, 93rd Congress, 1st Session, 1973, p. 15.
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- 32Massachusetts Port Authority 1972 Annual Report, p. 7.
- 33MARAD, Tanker Program, sec. IX, p. 2.
- 34U. S. Congress, House, Offshore Ports and Terminals, Hearing before the House Committee on Merchant Marine and Fisheries on H. R. 5090 and H. R. 5898, 93rd Congress, 1st Session, 1973, p. 142.
- 35Porricelli and Keith, p. 73.

- 36 "New England's Dilemma," Time, April 22, 1974, p. 50.
- 37 William E. Shoupp, World Energy and the Oceans, Second Annual Sea Grant Lecture, (Massachusetts Institute of Technology, Sea Grant Program: Report No. MITSG 74-7, 1973).
- 38 "King Presses for Offshore Oil Terminal," Boston Herald American, Nov. 12, 1973, p. 3.
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Part 3 Port Facilities

In Boston, as with many ports, waterfront facilities can be divided into two broad categories. First there are the privately owned and operated facilities for handling bulk cargoes. While petroleum terminals were discussed earlier, dry bulk traffic, of relatively less importance, will not be treated with any depth. Public general cargo facilities, however, deserve more attention. Although the condition of terminal facilities and cargo handling equipment has rarely been a decisive factor in a shipper's decision to use a port other than Boston, until recently, these important components of the Port's image have been a negative influence and a needless financial drain.

Besides its petroleum facilities, Boston has 9 other private facilities for bulk commodities, including 2 for scrap metal, 2 for bulk cement, 2 for salt, 1 for gypsum, 1 for sugar and 1 for mixed products. While adequate at present with water depths of about 43 feet, these facilities face imminent problems similar to those of the Port's petroleum terminals. As dry bulk carriers undergo a parallel rapid increase in size, they will greatly exceed the capability of the available bulk-off-loading facilities in Boston. This incompatibility will eventually evolve as another unavoidable predicament for the Port.

General cargo facilities, however, are of much more importance to any port. "The capacity and efficiency of the marine terminals represent the major investment of a seaport in providing for present cargo needs and also developing its future potential for an expanded

flow of commerce."¹ In light of this, Boston would seem to have certain advantages. Its facilities are generally well maintained and are adequate for the present and foreseeable volume of cargo moving through the port. It has an excellent natural harbor and is the closest U.S. port to Northern Europe. Its waterfront piers are only 5 to 7 miles from the open ocean, compared to 103 for Philadelphia and 150 for Baltimore. New York is also close to the ocean, within about 20 miles, but Boston has easier navigation due to less congestion. Boston's three major channels can handle all ships engaged in or planned for general world trade. It has 259 piers or wharves along 158,646 lineal feet (30 miles) of berthing space with about 30 active berths for ships up to 800 feet with drafts of 39 feet. The port offers more than sufficient related maritime services such as freight forwarders, commercial banking services, consular services, and relevant government agencies, i.e. U.S. Customs, Dept. of Agriculture, Food and Drug Administration, Immigration and Naturalization Service.

Despite these advantages, except for specialized operations, steamship companies don't lease or own any facilities because of the declining status of the Port and the low tonnage volume it offers. Boston is not alone in this situation. Over the last 50 years, the inability of terminals to operate profitably has resulted, especially in the North Atlantic ports, in facilities being turned over from private to public interests for operation, often with the aid of public funds. This process has given Massport the ownership of all but one of the regularly used general cargo berths in East Boston,

Charlestown and South Boston, which it either operates itself or leases. The irrefutable evidence that recent advances in seaport technology can significantly lower the cost of port operations, makes this stewardship all the more critical.

Undermining this apparently acceptable situation is the Port's vast excess of obsolete, inefficient facilities. In 1968, the Port Director explained that property expansion projects were deferred because Boston was operating at only 6% of its potential efficiency. Rather than lacking pier facilities, it was 15th among U.S. ports in efficiency.² A later study more clearly demonstrated this excess of facilities. It found that even with regular container service, Boston would average only 6 ships per day in port through 1990. The probability of more than 7 ships in port at any one time was set at less than 5%, and the probability of more than 9 "would conceivably only occur as a result of strikes or acts of God."³

Added to this burden of over-abundance was the obsolete condition of most facilities. Before they were permanently shut down in 1966, Boston's last two grain elevators were antiquated and undersized with a combined capacity of less than 2 million bushels. As a result, the loading of a 400,000 bushel cargo, which averaged 12 hours in Baltimore and Norfolk, required 28 hours in Boston.⁴ A more serious liability was the new railroad piers built after World War II that were soon obsolete in a port where trucks serviced 85% of the cargo traffic. Terminals designed essentially for rail freight are only with difficulty adapted to truck freight and therefore contribute to the high cost of cargo handling.

Another detriment to Boston's development has been an extensive and inefficient dispersion of small size facilities that prevent consolidation and coordination. Land transfers are slow and difficult due to this broad scattering of activities, many of which have extremely limited and confined access and are remote from cargo consolidation points and junctions of other transportation systems such as major arteries and feeder lines. Furthermore, the Port suffers from lack of cargo security, insufficient truck marshalling and apron space, and inadequate pier cargo handling facilities.

Given these obstacles to development, Massport has been the target of two major lines of criticism. The first of these is that it has ignored Port investments while lavishing funds upon Logan Airport. The Boston Shipping Association, with no love lost between it and the Port Authority, was constantly flinging such accusations as "The Massachusetts Port Authority has used twice as much money for improving an airport restaurant as it has allocated for improving all pier properties in the Port."⁵ Such charges were well justified until only recently. An example of this was the bond issue Massport floated in 1964, from which \$31,088,468 went for airport improvements while only \$1,040,000 went for port improvements. By its own reckoning, between 1959 and 1967, Massport invested over \$100 million for capital improvements in Logan Airport while less than \$10 million went for the "rehabilitation" of the Seaport.⁶

This policy of reconditioning the Port lent itself to the other major criticism that the Port Authority was improvidently expending funds to repair and maintain an excess of obsolete and inefficient

facilities while not initiating any new development projects. Some investments were warranted, such as the million dollar dockside freezer at Commonwealth Pier to stimulate shipments of frozen foods via Boston. Others, however, were disastrous, such as the \$448,000 reconstruction of Pier 3 in East Boston to accommodate the Challenger class vessels of the United States Lines, which shortly thereafter closed its Boston office. The worst example, however, was the millions of dollars Massport spent rebuilding its rail terminals, for which it was justifiably accused of perpetuating inefficiency. While 58% of Boston's port expenditures went for the repair of old facilities, its rival ports on the North Atlantic averaged only 21%. While they had all begun construction programs averaging \$50 million in each port, Boston had not even a plan for such projects. Till the late 1960's, Massport was deservedly rebuked: "The Massachusetts Port Authority is the only agency on the North Atlantic Range which has yet to undertake any significant building program aimed at providing new facilities for the efficient flow of commerce through the port."⁷

In defense of Massport on the first count, its disproportionate investment in Logan Airport and relative negligence of the Port should have been reasonably anticipated given the business ethic the new Authority was established to pursue. Because of the nature of its independent revenue bond financial structure, Massport, with the insight of a good merchant, felt it had to be certain that its initial investments were of high quality and promised significant returns in order to develop a commercial reputation that would guarantee it a receptive market for future bond issues. As Massport perceived this

scheme, the critical importance of bondholders and the sensitivity of the bond market forced it to appear highly attentive to the interests of its investors while seemingly callous toward any consideration of a countervailing public interest. Furthermore, as a later study pointed out, there was a collateral motivation for such a policy: "Statutory provisions requiring port profits to return to the Commonwealth to repay outstanding debts, coupled with the uncertain economic future of the port, have simply made it unattractive for the Massachusetts Port Authority to allocate large resources to the Port's improvement."⁸ Because of this complex of encouraging and discouraging factors, all indications for sensible investments pointed to airport runways rather than waterfront piers.

Since Massport receives no external financing as do the public agencies in Philadelphia, Baltimore and Norfolk, it is dependent entirely on internal resources. Initially it had only the Mystic Bridge for a credit base. Later, however, selective investments added Logan Airport to this secure base and allowed for additional bond issues to fund new and more ambitious capital projects. It all made good, if not unanimously appreciated, business sense. Many attacks on Massport's fiscal behavior as being inconsistent with the public interest and a just ordering of social priorities are self-admittedly valid only as an "extremely broad critique of the inherent nature of independent public authorities and the 'revenue bond cycle'."⁹ The Authority has set out to do what it was intended to do and its approach so far has been fairly successful. In its first ten years of existence it was able to float \$204.2 million worth of

bonds. Revenues in fiscal 1973 amounted to \$24,920,000 from the airport, \$5,424,000 from the bridge, and \$6,796 from the port.¹⁰ Port expenditures, however, exceeded revenues, as usual, so Massport paid nothing to the Commonwealth. In fact, it has run small deficits most years, which, added to the total port debt, have actually increased the amount Massport owes the state from \$16,752,021 in 1959 to \$17,584,000 in 1973. In contrast, both the Bridge and Logan have become more profitable ventures, as a direct result, in the case of the airport, of capital improvements:

Fiscal Year 1960

Mystic River Bridge

Total Motor Vehicle Traffic	20,744,116
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Logan Airport

Total Domestic & International Traffic	
Flights	114,070
Passengers	2,932,231
Cargo (lbs.)	57,436,000

Fiscal Year 1973

Tobin Memorial Bridge (AKA Mystic River Bridge)

Total Motor Vehicle Traffic	25,444,559
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Logan Airport

Total Domestic & International Traffic	
Flights	250,000
Passengers	10,757,000
Cargo (lbs.)	331,766,000

Source: Massachusetts Port Authority Annual Reports 1960 and 1973.

Not only have Massport's efforts made Logan the world's eighth busiest airport, but it has turned it into a community asset, one of the principal factors attracting new business to the area.¹¹

As for the early lack of new port programs and the wasteful maintenance-repair syndrome, Massport was surely remiss. A new Executive Director, both for the reasons cited above and for personal convictions, initiated a policy for immediate airport improvement with no comprehensive development plan for the Port. In fact, there appeared to be little genuine enthusiasm for Boston's future with either grain or break-bulk cargoes. Still it seems unwise, in retrospect, to spend large amounts of money to simply shore up existing facilities and half-heartedly try to keep the Port from falling too far behind its competitors. Eventually, in the late 1960's, attitudes and actions changed with the adoption of a policy of total containerization of the Seaport. Though more progress might have been made if Massport had assumed an earlier and more aggressive development program, there seemed to be little sense of urgency until the Authority, prompted by outside pressures, saw Boston's first real opportunity to escape its long-time stagnation threatened by faster adaptation to the new technology of inter-modal transport by its rival North Atlantic Ports. Since then, Massport has invested \$2 million in a Castle Island container crane, \$25 million in the Mystic Container Terminal and has plans for an additional \$40-47 million container terminal. The direction of the Port towards containerization will be discussed more fully in a separate section.

FOOTNOTES

CHAPTER III, PART 3: PORT FACILITIES

- ¹Arthur D. Little, Inc., North Atlantic Port Survey: Report to the Boston Shipping Association (Cambridge: 1966), p. 19.
- ²1968 Legislative Report, p. 45.
- ³Seaport, p. 98.
- ⁴Abe Plotkin, "The Port and Parity: How Boston Got the 'Business'," BOSTON, Vol. 55, No. 8, (Sept. 1963), pp.50-61.
- ⁵"BSA Charges Fly," Boston Globe, Feb. 10, 1966, p. 3.
- ⁶Massachusetts Port Authority 1967 Annual Report.
- ⁷A.D. Little, p. 90.
- ⁸Chester W. Hartman, The Massachusetts Port Authority: Public Purpose and Public Accountability (Cambridge: 1970), Sec. II, p. 12.
- ⁹ibid., Sec. IV, p. 5.
- ¹⁰Massachusetts Port Authority 1973 Annual Report.
- ¹¹Anthony J. Yudes, "Airport and labor top lures in bringing business to Boston," Boston Evening Globe, March 15, 1974, p. 23.

Part 4 Cost Structure

The main reason for evaluating the Port of Boston's cost structure is its significance to the campaign to lure local shippers and consignees presently using New York to shift their business to Boston. Since 85% of the exports and 50% of the imports of the New England region move through New York, this is no mean task. The actual cost per ton of cargo as determined by port efficiency, labor productivity and vessel turnaround time enters to a varying degree decisions to reroute. In the North Atlantic zone, the proximity of several major ports makes a transfer of traffic based on cost experience to an alternate port all that much easier. Studies have shown that the lack of frequent steamship schedules, a high pilferage and damage rate, and low labor productivity at Boston constitute the prime rationale behind the diversion of New England traffic through New York. Terminal charges, in this perspective, are not of decisive import, but they nonetheless are taken into consideration by shippers, consignees and vessels as to which port can be most economically patronized.

The most important terminal charges are those for dockage, loading and unloading, usage, wharfage and demurrage. Dockage is levied against a vessel for the use of berthing space. At 25¢ per ton, Boston's rate is as low or lower than those at the other 4 major North Atlantic ports. A relatively low cost item charged to steamship operators, it has little effect on cargo movements or ship scheduling. Moreover, Boston's method of assessment based on tons of cargo loaded and/or discharged is advantageous to a port handling

comparatively low volumes of cargo per vessel. New York's system of assessing about 3¢ per gross registered ton of the vessel, on the other hand, favors a port where more cargo is loaded per sailing. An example of this difference would be a vessel of 10,000 gross registered tons with 500 tons of cargo handled. The cost in Boston would be \$125 or \$.25 per ton at 500 tons, while at New York it would be \$300 or \$.60 per ton.¹

Loading and unloading charges are for moving cargo from a pier to a rail car or truck and in some instances includes placing the cargo inside of the rail car or truck. The rate of \$2.80 per ton at Massport operated piers is lower than any other North Atlantic port except Hampton Roads where it is \$2.40 per ton at Newport News and \$1.40 at Norfolk. Prior to Massport's control, the charges of independent contractors were the highest of all 5 North Atlantic ports.² The complete benefits of this favorable situation, however, are not realized. While truckers have either absorbed these charges in their line haul rate or passed them on to shippers or consignees, the railroads had always absorbed them. In 1965, however, the New York Central and the Boston & Maine stopped absorbing car loading and unloading charges and began publishing tariffs which covered the cost of this service. Boston is the only major North Atlantic port where rail lines do not absorb these charges on rail line haul traffic. Even in New York, these services, along with lighterage, are absorbed by the railroads and not passed on to the shipper or consignee. The refusal of the Boston rail lines to continue this practice results in the diversion of rail traffic to other ports and

the displacement of freight from rail carriers to truck lines.

A usage charge is levied against land carriers, especially truckers, who choose not to use the Port Authority's handling services and elect to perform their own loading or unloading using the equipment and labor of independent companies. At \$1.25 per ton, Boston has the highest usage cost of all North Atlantic ports and for a seemingly self-defeating purpose. It's believed such charges will act as an incentive to use the new terminal handling services and thus give local waterfront labor more work. There is irony in this scheme. While Boston's longshoremen must appreciate this solicitous gesture, it encourages the very situation, i.e. the use of local labor, which most shippers justifiably avoid like the plague.

Wharfage is a charge against cargo passing over or onto terminal facilities. Up to 1966, at Massport and all other piers, this was a uniform charge to shipper or consignee based on the tonnage volume of cargo. This proved to be "a discriminatory and undesirable practice,"³ however, since terminal operators, still influenced by the original ownership and operation of these facilities by the railroads, didn't assess or collect wharfage charges from the rail lines, while truckers had to bear the full freight cost. With 85 to 90% of Boston's traffic handled by trucks, this was a glaring inequity. Massport, with the responsibility to take the initiative in such situations, devised a new approach to shift the traditional ways and require full rates for all services performed. In 1966, under a new system, Massport facilities began a charge of \$1 per ton of cargo against the vessel for both rail and truck carriage. Other

operators continued to charge \$1.75 per ton against shippers and consignees for truck freight but not for rail freight. Boston has been the only port to attempt a more equitable distribution of this charge, a procedure vociferously protested by the Boston Shipping Association (BSA), the local trade agency representing shipping interests.⁴ Establishing the highest wharfage charges against vessels of all North Atlantic ports, Massport's new policy ignited an "ungentlemanly and even childish exchange of accusations."⁵ It was feared that such a charge when assessed against the water carrier might, depending upon the amount of the charge relative to other port costs and volume of cargo, influence the scheduling of vessels at Boston and possibly lead to the elimination of Boston as a port of call. This has not been the case, however, for since the new arrangement was instituted, general cargo traffic has increased rather than decreased. This was the first vigorous action taken by Massport in the realm of terminal charges, and in retrospect, it has been both equitable and successful.

The final charge, demurrage, is a penalty assessed for the failure to move cargo from a pier within a given period. In Boston, it is a modest two and one-half cents per hundred weight per day, but there has been insistent criticism from shippers and consignees that the five day free-time period, the shortest of all North Atlantic ports, works an unreasonable and costly hardship.

All in all, port terminal charges in Boston have been brought to a reasonable level and do not appreciably weaken, in themselves, the Port's competitive position. Massport has exerted effective

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leadership in this area and deserves the credit for a viable cost structure at the Port's terminals.

FOOTNOTES

CHAPTER III, PART 4: COST STRUCTURE

¹FMC Staff Study, p. 46.

²1968 Legislative Report, p. 22.

³A.D. Little, p. 30.

⁴"Boston Shipping Association protests MPA \$1 surcharge," Boston Globe, Jan. 27, 1966, p. 5.

⁵"MPA, New role," Boston Globe, Feb. 10, 1966, p. 1.

Part 5 Labor

Labor is a critical factor in any port's development or decline. Its cost and productivity are the major ingredients in a port's total cost structure. Moreover, the quality, consistency and reliability of waterfront labor can either maintain existing shipping or instigate its transfer to an alternate port, and either attract additional traffic or discourage it. Though all North Atlantic ports have experienced labor problems, Boston's troubles have been magnified and traditionally supplemented by certain unique and injurious labor practices. Its reputation in the trade as a high cost "dog port" to be avoided if possible, has persisted and proven difficult to shake.

Boston has had more than its share of labor problems and their impact on the Port has been regrettable. Longshore labor cost is the primary expense associated with cargo operation. As such, it and related costs compose the major consideration in assessing the comparative costs of shipping cargo through the various North Atlantic ports. The use of waterfront labor as a criterion has become even more decisive since the already high and still increasing costs, both direct and in-direct, associated with it at all East Coast ports are prompting steamship lines to consolidate traffic at fewer ports, and, if possible, solely at New York. This trend is even more noticeable among container lines.

At first glance, standard labor costs among North Atlantic ports would seem natural, given the existing system of labor contracts. New York is the center of labor-management activity, and the "master

contracts" negotiated there are adopted by the local branches of the International Longshoremen's Association (ILA) at all other North Atlantic ports. These agreements involve wages, hours, pension and welfare funds, and contract duration and cover longshoremen, terminal clerks, checkers, tallymen and watchmen. Local issues are left to be resolved at individual ports, but most are ultimately patterned after similar settlements in New York. It is the great disparity among local labor rules, customs and practices, however, that gives rise to varying levels of productivity and stevedore and longshoremen costs at each port. As the traditionally bottom rung on this ladder of efficiency, Boston has maintained the lowest labor productivity and consequently the highest actual labor costs, in most instances, of all East Coast ports (Tables 1 and 2).

There are other factors, moreover, which aggravate this situation. General cargo vessels calling on Boston load or unload relatively small average shipments. The tasks of preparing and finishing a ship, when spread over the entire total cargo, result in only a slight increase in expense per ton. When they are required for a small cargo, however, as in Boston, the increase in expense per ton is significant. Boston's traffic also consists of mixed cargoes of many small shipments. This entails time consuming changes in commodity handling techniques and reduced productivity. Finally, cargo destined for Boston is stowed differently than New York bound cargo. The larger New York shipments are usually stowed in the center of a hold, where they are quickly and easily reached. Boston's shipments, on the other hand, are stowed in the back or on the sides of a hold, from which unloading requires more time.¹

TABLE 1

TONS PER HOUR AND UNITS PER DRAFTSELECTED COMMODITY TYPESDischarge Cargo only

Commodity	Tons Per Hour				
	Boston	New York	Philadelphia	Baltimore	Hampton Roads
General Cargo	13	20	NA	26	28
Burlap bales	26	35	35	38	45
Wool-raw, Aust. bales	19	NA*	26	NA*	35
Tapioca flour bags	16	25	23	NA*	36
Lumber	16	29	28	35	NA*
Sugar bags	19	NA*	25	42	36
					36
Avg. discharge/hr.	18.2	27.3	27.4	35.3	36

Source: Arthur D. Little, Inc., North Atlantic Port Survey: Report to the Boston Shipping Association (1966).

*Commodity not discharged at that port or figure not available.

TABLE 2

STEVEDORE COSTS PER REVENUE TON
(\\$)

Average of Loading Costs - 18-Month Sample Survey

Port	Accessorial Costs	Longshore Costs	Total
Boston	9.96	6.58	16.54
New York			
North River (old piers)	12.99	5.45	18.44
North River (new piers)	9.52	5.05	14.57
Brooklyn	5.77	10.01	15.78
Philadelphia	9.74	4.26	14.00
Baltimore	6.00	3.58	9.58
Hampton Roads			
Newport News	6.24	3.59	9.83
Norfolk	5.21	4.14	9.35

Average of Discharging Costs - 18-Month Sample Survey

Port	Stevedoring Costs	Longshore Costs	Total
Boston	7.55	5.36	13.01
New York		5.20	18.14
North River (old piers)	12.94	5.20	18.14
North River (new piers)	12.50	5.46	17.96
Philadelphia	7.97	3.48	11.45
Baltimore	3.54	3.18	6.72
Hampton Roads			
Newport News	2.61	3.91	6.52
Norfolk	2.32	2.85	5.17

Source: A.D. Little Port Survey.

These elements constitute only a minor contribution to Boston's unfavorable labor conditions. It has been the high labor costs and low productivity that have created the problems with which the steamship lines cannot profitably live. Vessels costing \$4,000 a day to operate can no longer endure being idle due to labor troubles. In 1967 alone, 62 ships were lost to Boston and 183 landings cancelled due to labor difficulties.² As conventional vessels are phased out in favor of container ships, labor inconveniences will be even more intolerable: "Ships will continue to be diverted from Boston because they encounter delays and uncertainties, miss sailing dates and lose business in other ports."³

This process of attrition would seem especially relevant to local business lost to New York. Many observers feel that if Boston's stevedoring costs were equal to or lower than New York's, Boston would soon be sought as a port for all the traffic of its natural hinterland that has customarily used New York. This is not necessarily true, for although Philadelphia, Baltimore and Hampton Roads have lower per ton labor charges than New York, they all lose much cargo to New York for other reasons. Nevertheless, in the long run, reduced labor costs will aid Boston in its efforts to maintain present ship services, attract new ones and increase its volume of general cargo freight.

Furthermore, even without an exclusive correlation between labor cost and cargo diversion, a survey of local importers and exporters revealed that 3 of the 4 major reasons they use New York are labor-related.⁴ Boston has the worst record on pilferage of all U.S.

ports, and since the steamship companies usually pay for these losses, their increased reluctance to call on Boston is easily understandable. Local shippers blame government officials and port management for low labor productivity and efficiency. Finally, careless cargo handling by longshoremen has been both irritating and costly. It has been common for them to use grappling hooks indiscriminately on furniture and damage 20 to 25% of a cargo of special paper by using crowbars on the rolls. Such cavalier attitudes are an additional reason New York seems more attractive a port than Boston, notwithstanding extra land carrier charges often amounting to \$2.38 a hundred weight and \$250,000 a year.

Behind this ruinous set of waterfront circumstances lies "a long history of labor difficulties, many of which stem from union efforts to maintain outmoded practices out of a fear of losing wages. Labor conservatism takes the form of overly restrictive work rules and general resistance to technological innovation."⁵ The most important of these rules and practices that have historically engendered the underutilization of manpower in the Port of Boston are:

- 1) Featherbedding - the use of excess personnel, especially clerks.
- 2) Shape-ups - a procedure by which dock workers were hired and gangs formed at eight o'clock each morning. Usually entailing a delay of up till two hours before actual work began and resulting in chronic gang shortages.
- 3) Refusal of longshoremen to work until a full gang was present. In most other ports, regular gangs worked short until they were filled through their hiring systems.
- 4) Practice of leaving work uncompleted on one ship to go to work on another that offered work of longer duration.

- 5) Limited flexibility in job assignments - gangs could not be shifted from one location or task to another demanding more immediate attention.
- 6) Lapping - an ingenious system of continuous work breaks which kept at least two men missing from a gang at all times.
- 7) Refusal to palletize goods, although prepalletized cargo would be handled. Unnecessary break-bulk resulted in extra time consumption during loading and unloading.
- 8) Sling loads had been restricted to one ton, whereas one and one-half to two tons is accepted practice in other ports.
- 9) The esteemed prerogative of individual members to pick and choose their hours, the amount of work to be done and what cargoes they would and would not handle. No punitive action was ever taken by the union.
- 10) Pilferage - highest rate of all U.S. ports. Local long-shoremen consider it an established fringe benefit. Security has been lax, especially when a shipment of good scotch whiskey arrives. Further delays result from the customary walk-out or work-stoppage when an indignant violator is apprehended.
- 11) Wildcat strikes - Boston labor has strategically relied on "quickies" of about 30 minutes rather than the general strike which attracts bad publicity. The precipitating issue is usually over the classification of cargo to make possible extra wages. Work-stoppages on loaded piers, given the tight economics of shipping, are usually successful.

With this great a choice of topics to clash over, labor-management relations in Boston have been understandably rocky. In 1946, the Boston Shipping Association (BSA) was established to represent the carriers in negotiations with the ILA. By 1954, a new, rational approach was perceptible on the part of management in contrast to its prior crusty and stubborn pomposity. The BSA was gradually realizing that certain union claims were valid and could be equitably granted. In the end, however, it has not been very much more successful than its predecessors. Traditional labor rules and practices have been grudgingly and superficially modified, but no

genuine, permanent or comprehensive improvements in Boston's labor structure have been attained. Day-to-day operations belie optimistic waterfront rhetoric.

The relations between management, labor and Massport have not been as amicable as would be desired. Massport has charged that the weak management of the BSA has allowed the unions to perpetuate outmoded work practices.⁶ Concurrently lashing out in the other direction, the Authority's Port Director, convinced labor is strangling the Port, bluntly stated that "Labor is featherbedding in every possible way. Union leaders believe they have a God-given obligation to put as many men on a job as possible." To which the New England Vice President of the ILA smartly retorted: "He's a liar. If anything, we do better than anybody. They (management) cry all the way to the bank."⁷ Meanwhile, all factions have been roundly criticized on the same controversy by the press: "The fat-cat days of the 1950's are over. No longer can the port, the steamship companies or labor afford the luxury of excessive manning tables for gangs working ships."⁸

Two basic issues have hampered cooperative labor-management relations: wages and automation. Wage disputes have been historically founded upon the dilemma of providing reasonable and adequate income to individual laborers while minimizing employer costs. The spiralling cost of living has necessitated periodic consultation and conflict between management and union leaders. With automation, labor's goal of maximum employment is incompatible with management's efforts to reduce costs by utilizing new technological developments.

Unilateral attempts to impose capital-intensive operations on dock workers desperately clinging to labor-intensive procedures inevitably increases tension and strife.

Though some settlements have been reached, a "pattern of non-cooperativeness" has persisted that appears to have two historical roots. One is the long struggle for existence that longshoremen unions had to endure, breeding a bitterness toward shipping management that still exists. The second source is the conservatism of the shipping industry, which, until recently, has allowed archaic traditions on the part of both labor and management to harden as in no other business. Innovations have generally never been well received in the maritime community.

There have also been secondary factors which have abetted poor labor-management relations in Boston. The Port's union is considered "closed" with limited membership cards passed down to members of the family. No other North Atlantic port has such a strict barrier to enrollment. An inadequate number of union members has, in the past, necessitated a high dependence on the time consuming recruitment of "casual" labor. The average age of union members is 58, with men of 50-75 years predominating. Not only can't these men efficiently work a full day, but their years tend to focus their attention on their own short-term interests rather than the future welfare of the Port. Longshoremen in Boston tend to be more independent and undisciplined than most, often not honoring the agreements negotiated by their own representatives and accepted by a vote of all union members. Union leadership, meanwhile, sensitive to its constituents, has protected labor rolls from interference and reduction.

Despite all these obstacles, some agreements have been consummated formally, if not in practice. In 1954, the first workable grievance procedure was established which, through the conscientious actions of both the BSA and the ILA, has somewhat limited "quickie" strikes. In 1966, the traditional shape-up was abandoned and a central hiring system was adopted. Under this procedure, longshoremen would begin work at a scheduled time because of day-before hiring. Thirty permanent gangs of 22 men each would commence work at 8:00 am even if short and a longshoreman would not be allowed to move on to a more favorable ship. Union rolls would be opened and regular gangs with allegiance to a particular stevedore would eliminate "casualization" of the labor force. In exchange for these concessions, longshoremen were guaranteed 1600 hours of pay a year. All port interests were optimistic that this new arrangement would result in steadier work and increased productivity. Soon, however, management claimed that the union was deliberately understaffing gangs, and lack of discipline and confusion among the new gangs actually reduced labor productivity.

In 1969, after more hopeful bargaining and a 104 day strike, a new agreement was reached. It was touted as the first modernization in the Port's labor contracts since 1935, and insuring higher labor productivity, it was taken as proof that Boston was assuming a stability of seaport operations which it had not enjoyed in many years. Both the BSA and ILA were to be congratulated: "With the firm footing of a workable labor contract, they are erasing the myths of the old Boston, and concentrating on bringing as much additional

business as possible into the Port of Boston."⁹ Behind this optimistic 3 year contract was the conviction of John F. "Red" Moran, International Vice President and President of Boston's local ILA. Moran finally decided that the lot of the dock workers could only be improved by a truce with management that would allow the revival of the Port. Thus he conceded not to fight containerization and agreed that his men would work on the same basis as those in New York's container terminal at Port Elizabeth, New Jersey.

The 1969 contract largely lifted work restrictions. It abolished all artificial sling-load requirements, allowed the full utilization of pallets and the handling of containers with the use of ship's gear, reduced the size of gangs and eliminated the minimum manning requirement. It gave management more latitude in the numbers and uses of clerks and gave it the right to shift gangs from one ship to another or from one hatch to another. Furthermore, it prohibited strikes, walk-outs and lockouts, opened the union register to additional men and allowed management participation in the hiring hall to insure that all available men were assigned where they were needed the most. In exchange for these improvements and limited cooperation with automation, the ILA's demands were met for 2,080 guaranteed hours of work per year at more than twice the previous hourly wage.

Unfortunately this progressive, comprehensive agreement has been undermined by the continuation of the infamous work habits of Boston's waterfront labor. Gangs of unspecified number report for work late and/or short of men. A gang will still leave a ship without

permission for another that offers longer work and will often leave a ship before a job is completed. Inevitably, resort to the "quickie" strike has been neither abolished nor even abated. The last major waterfront settlement was even more discouraging. In November 1971, a 58 day strike, during which numerous ships were diverted to Canadian ports, was ended by a court order. Its most important accomplishments were to raise wages to \$5.50 an hour and make it evident that an optimum solution to Boston's labor-management problems was yet to be found.

The Port's labor future rests upon meeting two requirements: the employment of the labor force at a level of efficiency which will ensure economic use of valuable port equipment; and the satisfaction of the needs of the Boston longshoremen so that the labor unions will accept such a policy.¹⁰ The unions must exercise wise leadership and impress upon their members the self-defeating consequences of a vicious cycle in which inefficiency leads to greater costs and hence reduced traffic. The rank and file must abide more discipline in port operations. Boston labor should follow the example of the West Coast, where as early as 1960 a Mechanization and Modernization Agreement was reached due to the progressive union leadership of Harry Bridges of the Pacific Maritime Association who recognized that port efficiency can benefit the unions as well as management. As for Boston management, in order to make port modernization viable, it must recognize the right of labor to jobs or monetary compensation, although this approach may be repugnant to traditional business disciples.

Opportunities for specific reforms abound in Boston's labor picture. Some recommendations which have been put forward include genuine changes in work rules and practices to permit decasualization, labor flexibility and better use of manpower. An open union and an intensive training program would stabilize employment, improve wage practices and working conditions, and increase productivity. Labor morale could be advanced by steady work conditions, appropriate pier equipment and productivity bonuses. Finally, a mandatory retirement age and generous pension benefits for long-shoremen and clerks would enhance the character of Boston's labor force. Though innumerable suggestions could be offered within this general outline of the Port's labor predicament, a few more precise issues will await mention till a later section on containerization.

FOOTNOTES

CHAPTER III, PART 5: LABOR

- ¹FMC Staff Study, pp. 42, 44.
- ²James Hammond, "Problems that Plague the Port," Boston, Vol. 60, No. 2, Feb., 1968, p. 45.
- ³Edward Francis, The Truth About the Port of Boston, (Boston: City of Boston Printing Section, 1967), p. 13.
- ⁴1968 Legislative Report, p. 54.
- ⁵Massachusetts Institute of Technology, Report No. 21, Project Bosporus, Boston Port Utilization Study, (Cambridge: The M.I.T. Press, 1970), p. 16.
- ⁶"Boston Port Decline Faces Quiz," Christian Science Monitor, March 28, 1967, p. 7.
- ⁷"Containers Crucial to Boston Shipping," Boston Globe, July 9, 1972, p. 25.
- ⁸Hammond, p. 46.
- ⁹Massachusetts Port Authority 1969 Annual Report, p. 30.
- ¹⁰Bosporus, p. 238.

Part 6 New York: Competition & Control

The Port of New York has played nearly as important a role in Boston's maritime history as any of the Port's various indigenous components. It has been a competitor, model and threat to Boston for well over a century. Its influence, both visible and invisible, proper and improper, has been increasing recently. New York, though of late, for the first time, losing ground relative to other U.S. ports, may be as decisive a determinant of the future of the Port of Boston as any other single factor.

The futility of Boston's struggle with New York began with the opening of the Erie Canal which initiated the concentration of traffic for the western hinterland in the larger port. This trend continued and has been recently accelerated as few trades are sufficient enough to support scheduled, regular sailings and service must increasingly be on a regional basis. The spread of containerization will exacerbate this situation even further. Along the U.S. North Atlantic, Boston, along with Philadelphia, Baltimore and Hampton Roads, is an out-port or a fringe-port and New York is the premier regional and national port. It enjoys international stature as a focus of commercial activity and as such attracts huge volumes of diversified cargo and a multitude of vessels from every corner of the globe. Boston, meanwhile, fights for its survival as the major port for New England and competes with its voracious neighbor which threatens to deprive it of even this local business.

New York has always been more mature than Boston and, in a more advanced developmental stage, better prepared to adapt to

innovations, both technological and institutional. In contrast to Boston's belated and bumbling exertions, it had the capacity to promptly and advantageously exploit the railroad, the steamship, containerization and a new concept of port administration. The Port of New York Authority, a joint venture of the states of New York and New Jersey, was established in 1921 and has successfully operated the port without interruption since then. It has had 53 years to acquire expertise and experience, develop organization and policy, and learn to effectively exercise increased responsibility and power. During the same period, the Port of Boston has been administered by 5 different agencies, the present one, Massport, the only truly autonomous, corporate authority modeled after the Port of New York Authority, still an adolescent. The Port of New York Authority, blessed with great internal revenues, has been able to maintain, with no external funding, a General Reserve Fund equal to at least 10% of its total debt for continuous capital investment. Massport, on the other hand, has had to rely on revenue bonds for investment capital and only recently has undertaken a major port improvement program. Even with this, the scales of respective projects are almost embarrassing in comparison, as the Mystic Container Terminal pales before its counterpart, the immense Port Elizabeth, N.J., complex.

It is not difficult to understand why New York has been able to successfully capture and maintain 80% of New England's general cargo outbound traffic and 50% of its inbound traffic, which should naturally flow through Boston. There are numerous and varied reasons

that make New York a more attractive port than Boston. Boston has a reputation of labor difficulties, the highest loss and pilferage rates of any major U.S. port, and the highest cost structure and lowest labor productivity of any East Coast port. The port consists of a proliferation of facilities, most outmoded and decrepit, scattered over miles of waterfront with congested and narrow access roads. While New York's railroads absorb the costs of loading and unloading and the port's excellent lighterage service, the Boston carriers are the only lines in the North Atlantic that pass these costs on to shipper or consignee. Moreover, New York, as the hub of U.S. foreign and domestic waterborne commerce, is more able to sustain a higher level of charges without affecting its competitive position than is a secondary port like Boston. Port costs in Boston are so close to those in New York that any advantage it might otherwise enjoy has been largely negated.

Many feel that Boston can only compete if it can offer a more favorable cost structure and better waterfront services than New York. This is true to an extent. Recent Massport solicitation efforts centering around the lower tariffs offered by non-conference general cargo ships calling at the Port have met with moderate success in luring local firms from New York. Variations in cost, however, are not of major significance to most shippers and receivers in selecting a port. Steamship service is the single most important reason among New England manufacturers for choosing New York over Boston. Though able to realize considerable savings by using Boston, local businesses route their cargoes through New York because of the advantages of

frequent and regular steamship schedules, an asset largely lacking in the home port. With the same price quoted Free Alongside Ship (F.A.S.) New York or Boston, a customer deciding a routing will also be influenced by these advantages in New York despite higher inland freight rates. Another advantage in New York is traffic to and from infrequently served ports, such as several in South Africa with which New England firms are doing increasingly more business. Since Boston is customarily the first port of call and New York the last, Boston can compete for imports but not for those exports which it is always so sorely wanting. This is based upon the time elapsed between the date of readiness of cargo and the date of departure of that cargo on the overseas leg. Boston is in a relatively more favorable position with respect to elapsed time on inbound services with an average 7.9 days compared to 2.4 days for New York, than on outbound services, with 15.8 days to 2.0 days for New York.¹

Despite New York's disadvantages of truck congestion at piers and increased "lead" time for the movement of cargo, New England shippers will continue to use the port even if the extra land carrier charge is raised. It is possible that, ultimately, the total volume of New England trade will pass through New York unless drastic improvements are quickly and permanently actualized in the Port of Boston.

Beneath this not-so-friendly rivalry, has been Boston's traditional xenophobia towards both Washington and especially New York. The local conviction that President Jefferson was out to destroy New England is paralleled today by Massport officials who

have considered the Port's principal menace to be "a national maritime policy which dictated abandonment of the Boston Port in favor of concentrating shipping activities in other areas."² But the most intense suspicion is reserved for New York, whose supreme financial structure has always evoked parochial resentment and defensive condescension on the part of proper Bostonians. Earlier, the Port had watched helplessly as its shipping lines and railroads gradually came under foreign domination if not control. This indignity was recently resurrected when New York flaunted the Shipping Act of 1916 and the Merchant Marine Act of 1920 which forbid the diversion of cargo from a natural tributary port to another. With dubious legality, several steamship companies and conferences began to absorb the additional overland freight charges for transporting cargo to and from New York, thus cutting even further into Boston's business. The strategy was ended only after a series of complaints by Massport to the Federal Maritime Commission in Washington and the U.S. Federal District Court in Boston.³

Beneath such surface manifestations, however, lie more clandestine and invidious efforts to frustrate and even destroy the Boston Seaport. There is a general conviction that the pressure and control of New York shipping interests has been one of the main contributions to the Port's decline:

"The objective of the New York complex is to concentrate all major shipping activity in the New York area by forcing Boston out of the picture. New York shipping interests directly control most of the local factions which affect the maritime industry in Boston. They have total control over freight forwarders, agents, stevedores, ship scheduling and routing, labor policy or the lack of it, rail charges and other costs."⁴

When Boston's potential as a port threatened to infringe on New York's convenient and profitable hegemony, the "big squeeze" was applied. This took the form of a program of diversions, delays, cancellations and labor disputes that Boston's Port Director described as "a cycle of unfortunate conditions generated by New York maritime interests."⁵ All Boston shipping companies are based in New York and many believe that the BSA is dominated by New York interests and that local labor is manipulated in accordance with New York's rather than Boston's ambitions. Under these conditions, New York shipping companies are felt to have a powerful if not controlling voice in Boston's labor-management pacts. As objective an observer as the Federal Maritime Commission has noted that:

"Many of the stevedores, steamship agents and freight forwarders in the Port of Boston are owned, operated or in some fashion controlled by firms in the Port of New York. New York control tends to affect managerial decisions in favor of the Port of New York, but the ultimate effects on the utilization of the Port of Boston has not been determined."⁶

Whether all this is an exaggerated neurosis or a naive understatement, the ultimate effects on Boston may well be decisive. The conviction that the decision making processes in the Port are not entirely independent would tend to dampen impulses toward imaginative and aggressive policies. Above all, this state of affairs would tend to further demoralize the already insecure Boston maritime community.

CHAPTER III, PART 6: NEW YORK: COMPETITION AND CONTROL

¹FMC Staff Study, p. 38.

²Hartman, Sec. II, p. 15.

³Massachusetts Port Authority 1969 Annual Report, p. 29.

⁴Francis, p. 2.

⁵Ibid., p. 6.

⁶FMC Staff Study, p. 18.

Part 7 Containerization

Containerization is one of the few relatively revolutionary concepts adopted by the archly conservative shipping industry since the Phoenicians. It takes a simple but novel approach to ocean conveyance as one integer in a rational and efficient system of transporting goods to and from inland sites making optimal use of the inherent advantages of several modes of transport. Marine transportation is now considered one phase of production and marketing with a premium on an integrated scheme of production, overland transport, port terminal transfer and sea-borne carriage. This intermodal method was first looked to as the miraculous, all-in-one solution to the stagnation of the Port of Boston. This view may ultimately be justified; but as containerization takes root in Boston it not only benefits from the Port's traditional assets and newly rediscovered enthusiasm, but must also confront its notorious liabilities and entrenched disposition. As such, the introduction of intermodal transport in Boston approximates a fairly accurate microcosm of the Port's total character.

Containerization, like all industrial or institutional innovations makes demands which not all can meet and offer benefits which not all may enjoy. The Boston shipping community, despairingly willing to grasp at any straw, believed the new technology to be the Port's panacea. While this perspective was myopically unrealistic, there are many aspects of containerization which appear attractively applicable to some of the Port's dilemmas. With an emphasis on speed, Boston was favorably located 200 miles closer to Europe than

any other U.S. North Atlantic port and could afford shippers a \$.30 per ton differential on sea carriage. The local industrial products of high value/low bulk, especially small electrical and machinery components, were easily and advantageously containerized. Containerization would hopefully improve Boston's inadequate flow of exports by attracting both new shippers and those New England firms which customarily use New York. Its minimization of cargo loss, damage, and pilferage was ideal for Boston where such incidents were rampant, and the subsequent lowering of insurance rates would ameliorate the Port's high cost reputation among shipping lines.

Most importantly, containerization could revive the Port by attracting new steamship lines with frequent and regular schedules. It might even break tradition and make Boston a last port of call, thus offering exporters more direct outbound service. Furthermore, containerization would reduce the number of ships in port because of the more regular service, shorter port time and larger cargo load per ship call. This would eliminate more quickly redundant and obsolete facilities which have yielded little utility while absorbing considerable funds for rehabilitation and maintenance. Intermodal transportation also promised to reduce freight rates by almost 50% primarily by its inherent technology and the minimal use of Boston's low productive labor force. The Port Director estimated that the unloading of 2000 tons of break-bulk cargo would occupy 5 gangs for 4 days. With containers, the labor cost could be as low as 1/6 that with conventional methods since the same unloading would require only 2 gangs and 2 cranes for 8 hours.¹ Potential through billing

and documentation could be expected to lower administrative costs. Finally, Boston's arrangement of inland transportation was well suited to the intermodal system. Boston had come to rely on the motor carrier as its primary means of overland transport because of its speed, dependability, flexibility and reasonable freight charges. Though efficiency could have been improved, there was sufficient truck service to satisfy any future demand and superhighways connect the Port with thruways to virtually all points in the U.S. and Canada. Though underutilized, Boston's three railroads offered equally good service to all sections of the U.S. and Canada.

While all these obvious benefits from containerization were justifiably enticing to Port management, there was little initial discussion of these facets of containerization which could be incompatible with Boston's defective maritime condition and even threatening to its development. These conspicuous disadvantages were as equally impressive and abundant as the presumed advantages of intermodal transportation. First of all, containerization would accelerate the concentration of shipping in large regional ports, such as neighboring New York, as enlarged service areas are needed to generate sufficient cargoes and assure a more stable cargo flow. This process is inherent in the intermodal system: "The introduction of container ships, capable of carrying twice the cargo each sailing and of making two to three times as many sailings each year, will exacerbate the problem (insufficient freight) and emphasize the need in a very high proportion of the world's trades to approach scheduling regionally rather than on a bilateral basis."² Though

many feel there is a need for several major container ports on the East Coast to account for labor closings, congestion and alternate ports for military use, developments have shown that such ports evolve into secondary, supporting facilities for a large primary port. So, Boston still finds itself in combat with its New York Goliath with even a possible increase in the vigor of the competition as an over-capacity in container port facilities seems certain. This competition is intensified by the magnified importance of exports, a rude fact Boston has hopelessly faced for years, since container ships are highly capital-intensive and demand full bottoms on both legs of a voyage. Since container cargoes are concentrated in larger lots, moreover, small shippers, who constitute the majority of local concerns using the Port of Boston, are placed at a disadvantage. Furthermore, consolidation and competition have resulted in a few very large container shipping lines with more power and control vested in fewer decision-makers located in a handful of premier international ports, again such as New York.

A more internal disadvantage was Massport's seemingly inflexible policy of immediate development of Logan Airport with minimal capital investment in the Port, with most of it appropriated for the rehabilitation of obsolete facilities. Large scale containerization would confront this investment pattern with a demand for an extraordinary and direct application of funds, prodigious compared to prior Port projects, in order to install the attendant sophisticated and specialized handling equipment. Equally important for the new intermodal scheme is that such specialization required optimization

of the total transport system. Though Boston had sufficient truck and rail services at hand and occupied a central location as to major highways, its important feeder lines were inefficient due to narrow and confined access roads, many remote from major arteries and consolidation areas. Furthermore, Boston did not have the advanced control mechanism which is an absolute prerequisite for a profitable container operation. Port activities were accustomed to lumbering along with no coordination of facilities and an inadequate organization and separation of cargo and vehicular flow.

The most obvious incompatibility, however, was between Boston's waterfront labor with its notoriety for rock-bottom productivity, delaying tactics and time-consumption and container ships which demanded an ultra-rapid turn-around time in order to justify their large capital investment and operating costs. An efficient, productive, reliant, semi-skilled labor force was mandatory for successful intermodal operation, and Boston could not even assume pretenses on any of these counts.

Despite these shortcomings, the ball of containerization did eventually get rolling in Boston, although tardily, as is customary with the Port's adoption of technological developments. Massport, possibly just testing the water for the feasibility of total containerization of the Port, made a small-scale initial venture that proved ill-advised, frustrating and self-defeating. In June, 1966, it completed construction of a \$1.25 million, 27½ ton gantry crane at Castle Island. It leased the crane, one berth and 10 acres of land to Sea Land Inc. for 25 years for over \$2.4 million. This move

was expected to give impetus to a revitalization of the Seaport. At first, this seemed to be the case, spurring other companies to improve their service to Boston and plan for their own container operations in the Port. U.S. Lines quickly leased space from the New York Central Railroad in front of Pier 1 in East Boston for container handling and storage.

The promise, however, turned into a fiasco, with inevitable labor difficulties as the catalyst. The scheduled inauguration of container services at Boston was postponed because of differences between the ILA and the BSA. The union demanded 7 clerks as at Port Elizabeth and the shippers would concede only 3. Finally, the issue was resolved along with several others in the 1966 agreement described earlier.

No sooner had the dust settled, however, than the local teamsters entered on the scene and demanded the right to move trailers between the marshalling area and ship side and insisted on two additional teamsters employed as mechanics inside the terminal, both functions normally performed by the ILA in New York. This jurisdictional dispute proved impossible to resolve at the local level and the controversy was sent to higher headquarters in New York in the fall of 1967.

Not long after ILA President Thomas W. Gleason and Teamster President James Hoffa reached an accord over these differences, Boston was plunged into a nationwide strike. On April 2, 1969, the 104 day strike, the longest and costliest ever, was settled. It had cost the Port of Boston about \$15 million in diverted shipping and lost

labor time. Behind the subsequent 1969 labor-management pact, the only modernized agreement in the Port for years, was ILA President John Moran's eventual conviction that labor, for its own long term sake, must cooperate with technological advances in port operations. It was an expensive lesson for all sides, but seemed auspicious for further containerization.

Boston lost more than port revenues because of these labor tribulations. They prompted many European lines that had initially been attracted by the prospect of containerization, such as Isbrandsten, to turn to New York where extensive container development was proceeding quickly and with no labor problems. A further blow to the Port in its competition with New York was the consolidation of four major European lines - Holland-American, Swedish-American, Cunard and Wallenius - into the giant Atlantic Container Line headquartered at Port Elizabeth. The Port's labor difficulties along with a general retrenchment among American container companies led U.S. Lines to close its Boston office and, after unsuccessfully attempting to get out of the container business altogether, concentrate on operations focusing around New York and Norfolk.

Throughout this burlesque of progress, Sea Land insistently professed that the two principal reasons for its postponing operations at Castle Island were labor problems and its shortage of available ships due to the logistics of the Vietnam conflict. The veracity of both rationalizations was impaired, however, after the labor situation was stabilized and U.S. Far Eastern activities began to wind down, Sea Land still, inexplicably, gave no indication of initiating

operations. Finally, in July, 1970, the Castle Island terminal began service, four long years after its completion. Soon, one ship arrived weekly to unload and load 200 to 250 containers for the North Atlantic, Puerto Rican and intercoastal trades. Not long thereafter, however, Sea Land announced the closing of its Castle Island terminal. The company claimed the \$1 per container surcharge it was required to contribute to the ~~longshoreman's~~ pension fund made Boston more expensive to operate in than other North Atlantic ports. It took three weeks of negotiation among Sea Land, the ILA, and the BSA before an agreement was reached whereby Sea Land could assess a usage fee to offset the surcharge.

These shipping antics, while amusing to a detached observer, had serious consequences, as container traffic was increasingly diverted from Boston to New York and a concentration, which although possibly unavoidable, was accelerated. Many in Boston's shipping community saw these developments less as a confluence of natural forces and more as the habitual machinations of its gluttonous rival to the south. They felt that the Port could have established itself as a leading container center if not for "foreign" instigation of delays, labor troubles and frustrations. Some felt containers were induced to move through New York by the "questionably legal means" of absorbing the higher overland freight charges to New York for New England cargoes.³ Others hinted that the President of the BSA, a branch manager of the New York based U.S. Lines, was "somehow responsible" for the Port's labor disputes and delayed settlement. Finally, even Sea Land was exposed as a villain. One explanation

that gained local favor as to why the Castle Island terminal was not used was that Sea Land was protecting its real interests in its major container facilities in New York. By retaining exclusive rights to Boston's only container terminal with no commitment to use it, the company could in effect control, at least temporarily, competition to its New York operations from the Port of Boston. This design was enhanced by the fact that the Boston facility was built to a size module that would not fit containers of other shipping companies.⁴

Despite these frustrations, Massport was convinced more than ever that the Port's future lay in increased containerization. Amidst mounting public support for an alternative utilization of harbour resources for urban renewal and recreation, Massport took a calculated risk to develop a modern seaport while minimizing damage to other harbor developments. With the 1969 labor contract on port modernization, which seemed to assure a dependable labor force, and the prospect of expanded containerization of the Port, many of the shipping lines which had earlier abandoned Boston were once again attracted to it. Four container lines began regular service from Europe, the Mediterranean and the Far East and a fifth planned service from Australia and New Zealand as soon as expanded facilities were offered. Meanwhile, Massport's construction of a new container terminal in Charlestown erupted in a public row with the Boston Redevelopment Authority (BRA). The BRA claimed Massport was operating in an urban renewal area and was endangering a larger development plan without coordinating or clearing its plans with the BRA.⁵

Although the BRA's indignation and opposition were predestined to futility given the Port Authority's autonomy and indifference, the incident nevertheless tarnished Massport's already mottled public relations image.

Anticipation over the new project continued unabated, however, and hopes for Port rejuvenation abounded. In the early summer of 1971, Massport could confidently state: "Although general cargo has been declining, it got worse more slowly in 1970. This year will be the turning point. The opening of the world's largest container crane in early July will produce a dramatic increase in tonnage."⁶ Soon thereafter, Massport's first major capital investment in the Port came to fruition. In July, 1971, the Boston-Mystic Public Container Terminal (later redesignated the John F. Moran Terminal in honor of the deceased ILA President) began operations under Massport. The \$25 million, 45 acre terminal has 1100 ft. of berth space. The 70 ton Hitachi crane is the world's largest capacity dockside general purpose and container crane and is supplemented by a 45 ton capacity Paceco container crane. Together the cranes can move up to 60 containers an hour from one or two vessels. The exultant greeting of this new Port addition can only be compared with the hollow rhetoric that followed the lifting of the railroad rate differential in 1963. John Larkin Thompson, former Port Authority Chairman saw Boston facing "probably the single greatest maritime opportunity in 50 years."⁷ Edward Dalton, New England Vice President of the ILA, more prosaically stated, "We're back in the ball game."⁸

So far, these claims do not appear to have been overly exaggerated,

as the dramatic increase in container traffic in Table 1 indicates. The trend in fact seems to be accelerating; the Moran Terminal handled 59,000 tons of cargo in the first two months of 1974, more than double than was handled by the facility in the same period last year. More promising, export cargo, long scarce in Boston, climbed to 153,000 tons in 1973, compared with 89,000 tons in 1972.⁹ All North Atlantic ports have shared this rise in exports due to a marked increase in the demand for American products overseas which stems from the devaluation of the dollar in mid-1973. This shift in trade patterns is reflected in the 1973 U.S. \$1.7 billion surplus in its import-export balance, thereby reversing a trend of several years.¹⁰ This abundance of exports also results from domestic price controls which make exports more attractive and have induced many American firms to open overseas offices to escape these restraints. In Boston these factors have produced the unique situation of export cargo growing at a pace faster than the shipping lines can cope with it. The president of a leading Boston shipping agency has said, "We are at the point now where you cannot get space on some runs for six weeks. There just are not enough ships to handle the growth of cargo."¹¹

This abundance of freight must also be accredited to the success of Massport extensive solicitation efforts. While it has concentrated on enticing New England shippers back from New York, it has also made inroads in New York State. Massport is also developing a consolidation system for Less than Container Loads (LCL's) to offer the many, small local shippers the maximum benefits of containerization.

TABLE 1

CONTAINER TRAFFIC IN THE PORT OF BOSTONCONTAINERS HANDLED
(Expressed in Twenty-foot Equivalent Units)

	Imported	Exported	Total
1971	22,704	19,768	42,472
1972	35,170	24,424	59,594
1973*	41,778	32,192	73,970

CONTAINER TONNAGE
(Expressed in Short Tons)

	Imported	Exported	Total
1971	211,519	144,799	356,318
1972	298,139	159,664	457,803
1973*	340,864	201,288	542,152

Source: Massachusetts Port Authority 1973 Annual Report.

*Estimated, based on nine months' figures.

It is also proffering to local liquor and bottling concerns an imaginative method of containerizing scotch whiskey and European wines to the disgruntlement of thirsty dockworkers. Massport has been rewarded for its efforts by a marked improvement of steamship service to the Port. A total of 24 regularly scheduled lines call on Boston, 5 carriers of which are on a weekly basis. Other ships are attracted to the Port as an "inducement basis" dependent on the needs of local shippers.

Less encouraging has been the local labor reaction which has not been as stable as was hoped. There has been one major strike and productivity is not yet optimum as the longshoremen have not completely abandoned their old work habits. Boston is developing a more reliable, semi-skilled labor force, however, which has even been willing to work nights for the first time in the Port's history when cargo volume demanded it.

The Terminal itself has already been operationally improved. A control tower similar to those at airports has been erected to coordinate activities through a communications system linked to the ships, the cranes and the marshalling carriers. A fully computerized inventory control system is scheduled for June, 1974, to maximize efficiency, speed of handling and security.

The new Container Terminal has not been without its problems, however. Having ~~reached~~ its capacity three years earlier than expected, it is now hampered by congestion difficulties including inadequate access and truck marshalling and storage areas. Recently the Authority voted to expand the Terminal's back-up or storage area

for containers by 19 more acres through the reacquisition of 8 acres from a scrap steel exporter and the purchase of 11 acres from the Boston and Maine Railroad. This expansion is designed to accommodate an anticipated growth in container traffic through 1978. Trucking problems have also become apparent with a great need for more chassis and pre-mounted containers and improved compatibility of truckers' hours and terminal operational hours. Trucking rates, moreover, remain structured for New York and local carriers are working to expand the Container Rate Concept. The Terminal has also experienced equipment failure stemming from overuse and there is general agreement that it lacks adequate management personnel. Lastly, an excess of paper-work has resulted in inefficiency and costly delays. Hopefully, the passage of the Intermodal Bill (H.R. 15465) presently pending before Congress will alleviate this situation through the licensing of intermodal carriers by the Federal Maritime Commission and the establishment of single-factor rates under a through bill of lading.

The Boston shipping community is very optimistic about the Port's containerized future. It foresees increased North Atlantic trade and with Yankee pragmatism views the saturation of these trade routes by 1975 as a good opportunity to establish new container routes to Brazil and South Africa, areas with which Boston is developing increased trade. Meanwhile, Massport's second container terminal is now in the planning stages and has stirred up an unexpected controversy. Originally, the \$30 million, 35 acre facility was to be located in East Boston, then considered the last and only deep water

stretch of waterfront left in the Port suitable for such future plans. Predictably hailed by labor as "the salvation of the Port" it was labeled by the news media as "almost a certainty."¹² Massport, however, had to turn to its old sparring partner the BRA to request a delay in their plans for a \$3.1 million housing project for the elderly and a new zoo. Soon however, opponents of the terminal's proposed location gained powerful editorial support repelled by the Massport plan: "East Boston has been battered enough already by its huge neighbor. To impose a container terminal, for whatever practical reasons, on this piece of waterfront would be humanly shameful and aesthetically destructive."¹³ Protest arose from the East Boston Community which feared, among other things, increased truck traffic and further encroachment by the Port Authority.

Massport strategically retreated and soon produced a controversial supplemental study which now recommended the South Boston Naval Annex as a better site than the East Boston location originally suggested by the primary study. By an overwhelming vote, the Port Authority authorized its Executive Director to seek the 220 acre South Boston site for a container facility. Negotiations with city, state and federal officials are necessary since the Annex is soon to be disposed of as military surplus. Massport, with its cherished independence of action, is neither familiar nor comfortable with such an approach. Although Massport has become more than willing to trade the city its East Boston property for the South Boston location, a proposed shipyard in South Boston promises the greater

inducement of increased employment and property taxes. Furthermore, a Special Legislative Commission on Boston Harbor, headed by the same state senator who instinctively opposes Massport at every turn, will soon be moving into the area of development control modeled after the San Francisco Bay Commission. All in all, despite the commercial attractions, it does not appear a very opportune time for Massport to push its policy of total containerization.

Nonetheless, Massport will stubbornly persevere irregardless of local friction, increasingly concentrated competition from New York, and the problematic future of the over-capitalized and over-capacitized container trade. It has made its decision over the development of the Port of Boston and has publicly committed itself to it. Given the Port Authority's past history, its structure and its character it will require more concerted effort, more immediate rivalry and more concrete evidence to dissuade it from its course.

FOOTNOTES

CHAPTER III, PART 7: CONTAINERIZATION

- ¹"Containers Crucial to Boston Shipping," Boston Globe, July 9, 1972, p. 25.
- ²Lawrence, p. 65.
- ³James Hammond, "Soundings at the Port - High Tides Ahead," Boston, Vol. 62, No. 2, Feb. 1970, p. 65.
- ⁴Hartman, Sec. II, p. 10.
- ⁵Ibid., Sec. II, p. 6.
- ⁶"Will New Container Crane Revitalize Boston's Port," Christian Science Monitor, June 21, 1971, p. 4.
- ⁷"Containers Crucial to Boston Shipping," Boston Globe, July 9, 1972, p. 25.
- ⁸Ibid.
- ⁹Corps of Engineers, Waterborne Commerce, 1972, 1973.
- ¹⁰Charles F. Davis, "Ship Industry Reports Inland Export Cargoes Backed Up," Journal of Commerce, March 6, 1974, p. 1.
- ¹¹Edward Francis, "Steamship Lines May End Land Bridge," Boston Sunday Herald Advertiser, March 31, 1974, Sec. 3, p. 58.
- ¹²"Hub to Get \$30m Terminal," Boston Sunday Herald Traveler and Advertiser, July 2, 1972, Sec. 2, p. 24.
- ¹³"Containing a port facility," Boston Globe, Feb. 28, 1974, p. 18.

Part 8 Massport

Boston is one of the most fragmented ports in the U.S. with a proliferation of associations, agencies and trade organizations. Amid this crowded community however, the Massachusetts Port Authority has maintained the highest profile and been the center of Port activity since its inception in 1959. It has been and will continue to be embroiled in controversies, both petty and significant. Moreover, Massport, in and of itself, has become a controversy, periodically evoking proposals for its replacement by a Waterfront Commission, a Metropolitan Port Commission, a New England Port Authority or some such renovated body. This section shall briefly survey some of the Port Authority's more consequential actions or inactions and suggest rationales by which to justify approval or disapproval. It will be assumed that Massport will weather the storm of criticism fairly intact, though probably modified in response to external pressures, and will continue to guide the Port into the foreseeable future.

For a proper perspective, one should appreciate the veritable credibility chasm between Massport's self-image and its public image among its steadfast opponents, both in relief against a general background of indifference shared by the greater part of the populace. Massport's staff sees itself as a small, dedicated group of honest, hardworking, professionals expertly carrying out the responsibilities charged them. In contrast, the impression of the Port Authority among many local citizens is that it is powerful, arrogant and self-serving, does not care about people or communities, cannot be trusted and seldom, if ever, acts in the public interest.

To properly assess this contradiction, it will be useful to approach it within the framework of a rough categorization of the three major channels of criticism. These are really only the more obvious facets of a complex web and are almost always interrelated, but they do offer a semblance of simplified delineation. The three channels are:

- 1) The Authority's administration of the Port.
- 2) Its structural character.
- 3) The concepts underlying its establishment and operations.

Administration.

Massport's administrative record elicits two general opinions prevalent among Boston's shipping community. One view is that the Port Authority's administrative excellence has generated substantial economic growth and made it the most efficient and profitable public agency in the state. A differing estimation is that Massport's neglectful management has been inefficient and ineffective and has endangered the Port's very existence.

Along this line of criticism is the valid accusation that Massport has never attempted to design and implement a comprehensive long-range plan for the Port's revival and development. "The port management's piecemeal, haphazard approach to operations has encouraged inefficient work practices by the longshoremen, induced pessimism in the shippers and operators, and endangered long term profits."¹ Massport has certainly been deficient in this respect, not just with the Seaport, but with Logan Airport as well. It may be that the Authority is more comfortable with this approach so it can keep its

opponents off-balance not knowing what, when, or where the next project to do battle over will be. Unfortunately, Massport, with its present leadership and disposition, cannot be expected to change its character and devise and publicize a concrete, coherent plan for the Port's future.

Containerization, which has recently been so vigorously introduced in the Port, does not necessarily denote a meaningful implementation of a long-term developmental scheme, as seen in the miscalculated undercapacity of the Moran Terminal and the bumbling efforts to locate a new terminal. While containers may not indicate a master-plan for the Port, they do, however, represent a constructive and consistent direction to which Massport has committed the Port and may bode well for the future. Meanwhile, barring any unforeseen political, financial or legal rearrangements, Massport will continue in its piecemeal fashion to the detriment of the Port and its factions, the local communities and their residents, and the state and its transportation system.

Another administrative target of criticism has been the persistent conviction that Massport has neglected the Seaport in its concentration on the development of Logan Airport. This early neglect cannot be denied, but in perspective it was predictable and probably inevitable given the Authority's fiscal structure and objectives. As explained in Chapter II on Port Administrations, the absence of supplementary funding, the statutory requirements for the diversion of profits in Massport's enabling legislation and the nature of revenue bond financing made capital investments for Port development

difficult and unattractive. Massport's interim program of rehabilitating obsolete, decrepit, redundant facilities, however, was an inexcusable waste of money and an obviously ill-conceived makeshift exercise.

In recent years, however, there have been increasing investments in the Port, culminating with the \$25 million Moran Terminal and future continuance and even acceleration indicated with Massport's plan for a larger second public container facility and an offshore oil terminal. This constructive change may be based on a new attitude on the part of Massport towards its revenue bond system. The general premise has been that Massport felt its primary responsibility to be towards its bondholders and consequently avoided any investment project, especially in the Port, that entailed risk. This new approach to hitherto unacceptably insecure Port investments may reflect a new realization by the Authority: "Concern for bondholders in itself is not a bad thing; in fact, it is salutary insofar as it motivates careful planning and sober judgement. However, since bondholders receive fixed returns on their investment, it is improbable that they would strenuously oppose any coherent plan for development which assures sufficient revenue to meet interest and principal obligations. Satisfying bondholders or investors is an integral part of any development program and need not necessitate conservatism."²

General criticism has also been levelled at Massport's program of Port modernization. Successful management in this and other areas is dependent upon making the correct decisions at appropriate times and following them with vigorous implementation. Until recently,

Massport has demonstrated consummate skill in evading making any Port decision at anytime, thus eliminating any need for implementation. More progress would certainly have been made with a more aggressive program for Port development. The belated adoption of containerization was long indicative of the Port Authority's damaging passivity. While it did make a small investment in the crane for Sea Land's Castle Island operation, this was not until 1966, by which time other North Atlantic ports were well along with dynamic and extensive containerization programs. It then sat back for three years, while the Sea Land operation showed no indication of materializing, making no apparent effort to investigate the interests of other container firms in the facility. The BSA and other Port interests clamored for Massport to initiate facilities as they saw rival ports consolidating most of the container trade. Even Massport's Executive Director, as late as 1967, was voicing the necessity to get in on the container movement before the steamship companies established their routes, but doing little about it. All the Authority was prepared to do at that late date was to "stand ready to supply operational talents if needed or financial means where circumstances and a responsible leasee so warrant."³ It was not until 1969 that Massport was convinced to take action. The "resolution" of two longstanding problems prompted the Authority to praise the year as "one of the most significant in the long history of the Port of Boston and certainly the most important year in the last two decades."⁴ Not only was a new labor contract signed, but "the decision was made to proceed with the planning and development of a major public container and general cargo complex to be located on the Mystic River."⁵

Whether Boston jumped on the container band wagon in time to realize the full complement of potential benefits the intermodal revolution could provide, it is still too early to say. If nothing else, however, the first container terminal, admittedly belated, may in retrospect mark a watershed. Massport seems to have taken on a more aggressive stance since then. Plans for a larger public terminal and an off-shore oil complex, while not tactfully presented and pursued, may hopefully signify the assumption of a more consistent and aggressive Port development program.

The final two points of management criticism involve labor and solicitation. One of the most glaring weaknesses in the Port's structure is the inability to genuinely resolve for an extended period of time the labor difficulties arising from the discomposure accompanying Port modernization. Though Massport has been scored for this situation, in fact it has no statutory authority under its enabling act to negotiate with labor, even though many feel it would be the more appropriate agency for this because of the BSA's close ties with New York. Massport justifiably claims, however, that officially its hands are tied.

Until the last few years, Massport's solicitation efforts have been validly assessed as insufficient and ineffective. Though this partly resulted from conditions over which Massport had no control, other incidents, such as the perfunctory solicitation of Midwest grain after the rate differential was lifted, illustrated the Authority's deficiency in this respect. Efforts were inadequate, fragmented, uncoordinated and did little to present a consistent,

positive image. This too, however, has greatly improved since Massport has acquired a saleable product in containerization. It has launched a full-scale, integrated and sustained Port promotion program. Branch offices have been improved or newly opened in Washington D.C., New York, Chicago, Brussels and Tokyo, and solicitation for cargo has been especially productive in New England and even New York State. Again, containerization may be ushering in a new era for Massport.

Structure.

The administrative, financial and political structure of Massport has probably been more controversial than its Port operations and has certainly been more imposing and, in some cases, even threatening. More often than not it elicits a strong reaction such as intimidation, admiration or acrimony from those that confront it. It has been appropriately likened to a fiefdom with a "closed system" style of internal operation with little or no external interference or direction. The Board of Directors of the Authority are part-time and unpaid, and none is a professional port administrator. This arrangement has allowed effective power to devolve to the staff, with a high degree of centralization of that power around the Executive Director. The present director, appointed in 1963, is the highest paid public official in the Commonwealth at \$54,500 per year, besting even the governor and the U.S. senators. He is revered by the business community and depicted as "power-hungry" by his critics. Massport is indeed a self-contained entity often justly accused of a narrow, self-serving perspective.

Massport's broad power base is firmly rooted in Boston's commercial establishment. The Authority is important to financial and business leaders, for it was they who were responsible for Massport's creation when a crumbling transportation system endangered their profits. Massport's revenue structure and its accountability to bondholders give it much in common with private enterprise. The composition of its seven-man board, always consisting primarily of leading businessmen, serves to further strengthen this affinity.

Along with striving for business-like efficiency, Massport also respects the motivation for political reform that was crucial to its establishment. It was hoped that such a quasi-independent body, devoted to the public interest, would be thus removed from the possibility of political corruption and petty local interests. Massport has taken this responsibility seriously and values its untainted reputation in this respect. One writer has described it as such: "The Authority has developed and maintained this 'good government' image in a state alleged to have widespread municipal corruption, where scandals are almost a way of life. Nothing in our research has led us to dispute the prevailing belief that the MPA is remarkably free from the crasser forms of venality that seems to plague so many other public bodies."⁶ The writer later enunciates the other side of the coin. It is an unsettling exercise to speculate on the power and influence Massport could wield, for better or worse, if it were so inclined. It could draw on such impressive resources as its multi-million dollar finance system, its official and unofficial ties with commercial potentates, and the control it exerts over numerous employment opportunities and lucrative construction contracts.

This potential may be unavoidable with any large public authority which is fiscally autonomous and functions much like a private enterprise. Massachusetts, as with any other state, cannot have the best of both worlds. It has gotten to a fair extent the improved transportation facilities it had originally wanted, but now finds a behemoth in its backyard that makes it very uncomfortable. Massport has not yet abused its status but has rather policed itself much more effectively than most public agencies. While this is a situation the public should expect rather than applaud, realistically the Commonwealth has little complaint with Massport's conscious incorruptibility.

While Massport has chosen not to unethically flex its muscles, it has had no reservations, despite the naive hopes of many of its initial advocates, to amassing socially acceptable, legitimate political power. It is considered by many as the most powerful public organization and most effective political force in the Commonwealth. Massport has learned to play politics like a pro with three paid lobbyists, an extensive patronage list and the judicial dispensation of jobs, Christmas gifts, harbor cruises and airplane accommodations. There is often political motivation behind its board appointees and it has been observed that "a combination of business savvy and politics has never proved to be an obstacle to appointment."⁷ Massport has more than enough political clout to take the offensive for a good cause.

The Authority's defensive ability has proven equally potent, and has earned it the reputation of being politically untouchable. Several hundred bills have been introduced to the state legislature

to change Massport or make it more responsive to local communities, only to die from lack of support. Most of these measures originate in the immediate Boston area, provoked by airport expansion, noise, air and water pollution, waterfront decay and traffic congestion. Massport dismisses these as "special interest" bills that don't merit general support, as it also dismisses a legislator's intemperate remarks as a political gesture necessitated by an election campaign in an embittered neighborhood. Massport feels no great threat from these sources; it sagaciously realizes that the vast majority of the populace is perfectly content with or indifferent to its operations as long as taxes are not affected. Consequently it is fairly well immune from outside interference: "In some, the main channel that the MPA's enabling legislation leaves open for reforming the Authority is blocked by the majority of the General Court that is not concerned with the MPA unless it affects their constituency directly."⁸

Many people, with little confidence in the legislature, feel that Massport should be more responsive to the governor. The governor himself has stated, "...when the actions of the Port (Authority) have major impact beyond the boundaries of the airport and affect many other interests of our people, then the public must be involved in those decisions, and I as governor will insist that the people have a say in those decisions."⁹ The governor, however, has failed to acquire a significant voice in shaping the policies and direction of Massport. Several attempts to give his office veto power over major Massport projects have suffered defeat in the

legislature. After the latest defeat, the bill's sponsor, a senator from East Boston, conceded: "The only explanation is that the bondholders (banks) just had too much clout with the Republicans and Ed King (of the P.A.) and the lobbyists with many of the Democrats."¹⁰ The governor has also looked to board appointments as a means of controlling Massport and integrating it into a state-wide, balanced transportation program. Despite the fact that five of the present seven man board are his appointees, the governor has yet to gain a handle on the Port Authority. He can only muse: "It seems that any person appointed to that board is mesmerized by its power and strength...once they get into the clutches of that power, they forget about this office."¹¹

The governor is not alone in feeling isolated from the Port Authority, which has appeared to deliberately minimize its contacts with all other state agencies. Massport's structural independence has also meant an inconsistent relationship with the City of Boston, the level and sincerity of communications frequently dependent on the attitudes and policies of whoever is mayor at a given time. Massport has also neglected to coordinate its land development plans and activities with those of other agencies, especially the Boston Redevelopment Authority, with which the Authority has had consistently strained relations.

If Massport's studied and cherished autonomy resulted only in bureaucratic frustrations, it could be dismissed as simply an instigation to typical political infighting. Regrettably, it has much more serious consequences. Massport's abstention from the

development of a comprehensive and coordinated transportation package for the entire state has a damaging effect beyond its own dominion. The Authority's indirect refusal to cooperate with other agencies severely hampers the planning and implementation of this much needed program. The intense passenger car and truck traffic generated by the airport and seaport would make attempts at even a revised metropolitan transportation system futile without the collaboration of the Port Authority. Massport claims it will study any "realistic plan" coming from the state Department of Transportation, but success would necessitate a more active participation. Massport's parochial reluctance to consider any framework other than its own sphere of influence was also demonstrated in its proposal for an off-shore oil terminal. The recent fuel shortage, if nothing else, has pointed out New England's unique dilemma when it comes to energy production, distribution and consumption. In this perspective, anything but a regional plan entailing massive capital investments for terminal, refinery and distribution complexes and considerable environmental dangers to the entire coastline would be unwise and self-defeating. Nonetheless, Massport stubbornly retains its singular planning and operational philosophy.

Unexpectedly, in the spring of 1973, Massport's obstinacy precipitated a confrontation that snow-balled into the first real infringement on the Authority's autonomy. Massport's Board had held a midnight session to authorize a final bond issue to finance a \$13.5 million, 2700 car parking garage at Logan Airport. In April, 1973, Dr. William J. Bicknell, Commissioner of the Massachusetts

Department of Public Health, advised Massport that its plans and specifications for the South Terminal project were required to be submitted to the Department's Bureau of Air Quality Control for review and approval under the state's Air Pollution Control Law. The Port Authority held it was exempt from such regulations by the exclusionary provision in its enabling act. When asked his opinion, the Attorney General agreed with Massport's contention. The City of Boston ended up taking Massport to Superior Court which held that the legislative intent was that such bodies would not be subject to such regulations.

Soon thereafter, the Commonwealth was notified by the federal Environmental Protection Agency that "...it appears that Massachusetts does not have the legal authority...to prevent the construction, modification or operation of State entities which will permit attainment or maintenance of a national standard" and that if this "legal deficiency" was not corrected by September 1, 1973, over \$1 million in federal grants will be cancelled.¹² The case was appealed to the Supreme Judicial Court, and in March, 1974, the Court rejected Massport's argument: "The consequence of the defendant's (Massport's) interpretation...of the (Port) Authority's enabling act would be that a small group of state authorities would have a unique exemption from the regulatory power of the state, an exemption available to no person or legal entity, public or private."¹³

This landmark decision not only makes Massport accountable to the Department of Public Health, but also under the state's little NEPA, the Authority must now join the ranks of all other state agencies

in assessing the environmental impact of any project it plans to undertake. Under this statute adopted in 1972, Massport will be required to submit an impact report to "all reviewing agencies, and any state agency, department, board, commission, division or authority which has jurisdiction by law or special expertise with respect to any environmental impact involved" for their written comments, including the secretary of environmental affairs, who will indicate if the report adequately and properly complies with the law.¹⁴

So Massport's first line of structural defense has been breached and its privileged independence is no longer absolute. It will now be accountable to both its bondholders and the environment. It's far too early to tell what effect this will have on the structure, policies, and operations of the Authority. Hopefully, instead of begrudgingly cooperating with other state bodies, Massport will finally realize that it has to be integrated into the broader governmental framework. The ruling will not so much affect the Authority's efficiency and effectiveness as it will its self-image and philosophy as a body more corporate than public. Massport may even discover that there are valuable contributions to make and receive through interaction and collaboration with other public organizations.

Concepts.

(Much of the following is based on the public opposition to the Port Authority aroused by its operations at Logan Airport and not necessarily at the Seaport. It is instructive nonetheless, as it reveals Massport's basic approach and the reaction of many of its critics.)

The final area of controversy revolves around the basic concepts

underlying Massport's establishment and subsequent performance. There is widespread agreement and documentation that Massport's legacy has been a commercial orientation and its philosophy the business ethic. In different perspectives, the Authority's either main asset or liability is its "...overriding emphasis on efficiency and profit-making with respect to the facilities it was given to operate, which leads MPA management to function more like a private corporation than a public-regarding agency of government."¹⁵ There is a certain mystique about Massport which justifies anything it does because of its past record of commercial success, but it is this same image that elicits protests that the Authority has little regard for community interests and is primarily interested in commercial prosperity. It is this contrary distinction between Massport's evident interest and the conception of the public interest that lies at the root of most conflicts.

The Port Authority has to a large extent ignored the burden it has imposed on citizens, especially in the form of airport noise and the truck traffic and scenic degradation that would accompany its proposed port developments. It has been accused by even its partner in maritime commerce, the BSA, of having more allegiance to its bondholders than to the public.¹⁶ A public relations study prepared for Massport cautioned that it "...cannot be immune from a constructive response to growing public insistence that it be more concerned with the quality of life at its doorstep...while continuing to improve the performance of its basic economic functions."¹⁷

It is believed by many that Massport takes no account of the

wider range of public needs and must be forced to adopt a more "holistic concept" of the public interest. Admitting to an inherent bias against "the nature of independent public authorities," one perceptive critic has noted: "By the nature of its financial operations and political structure, the MPA is employing valuable public power - eminent domain (albeit restricted), the ability to sell tax-free bonds, exemption from local property taxes for most of its properties, appropriation of money collected from the public - in a way that might not be consistent with the public interest nor with a more rational and just ordering of social priorities."¹⁸ The primary aspects of the public interest obscured by Massport's structural independence are the general distribution of costs and benefits - financial and social - of Port Authority operations, the effects of these operations on nearby users of land, and the role of these operations within the framework of an integrated metropolitan transportation strategy.

Massport finds itself in an enviable position. As a quasi-public body it does enjoy many of the advantages of a public agency. Moreover, not subject to periodic elections, it is not directly accountable to the general citizenry; further, its autonomous structure allows it to be equally unaccountable to any other sector of the state government, legislative or executive and hence strengthens its immunity to most of the various restraints of democratic processes. On the other hand, the advantages it possesses at a quasi-private

body have to be differentiated between the Bridge and Airport, and the Seaport. Massport operates the Bridge and Airport as monopolies with no competition and a guaranteed market due to the absence of any feasible alternative services. The Seaport, however, is the only transport unit that, with stiff New York competition, needs to be marketed and, as such, the development and promotion of its marketability must be predicated upon the requirements, preferences and decisions of its users.

The ethic behind the Bridge and Airport seems to more accurately reflect the Port authorities predilection for monopolized services. With the Seaport, however, Massport must not only be responsive to its bond holders, as it must with all its facilities but also to the Port's present and potential "consumers" - shippers and consignees. This not only makes good, basic business sense, but was also a focus of the original legislative intent. As manifested in Port activities, this approach seems to be at the basis of Massport's consistent interpretation of the "public interest" as the interest of its facility users. It is at this point that a judgement may be appropriate as to whether the ideal of a "body politic and corporate" is revealed as a naive contradictory concept or as a pragmatic complementary mechanism. The criteria might be original intent and ultimate achievements on the one hand, and on the other, the Authority's alleged insufficient sensitivity to a broader and equally deserving "public" and its inadequate consideration of the direct and indirect effects of its programs.

Another deficiency is that Massport's business orientation has allowed and even encouraged it to ignore both the social and environmental costs of its activities, such as water, noise and air pollution, the removal of recreational land, and the effect on nearby property taxes. Again, it may be the City of Boston's suit that may at least partially rectify this. If Massport is forced to recognize, assess and justify the impact of its activities on both the communal and ecological environment it may eventually lead to the incorporation of these considerations in its overall orientation and end the predictably defensive reaction to protests on a piecemeal basis that has so far prevailed.

In fairness, the public must also appreciate the mandate Massport was given, to take deteriorating transportation facilities and develop them into a system capable of meeting the demands of a dynamic commercial, industrial and urban sector. It was both blessed and cursed with the only major international airport located in such close proximity to a large metropolitan center, and from this predicament have sprung many controversies. All in all, Massport cannot be condemned for what it was established to do and what to a good extent it has done, but rather for the way it has done it. The individual bias of critic or advocate will determine the relative evaluation.

As for the Port, public interest may have called for earlier capital investments and more aggressive programs, or,

if one is inclined, to a complete abandonment of the harbor to residential and recreational usage. But at present, there is nothing really obnoxious about the Port's operation. Massport, of course, must be more tactful in its public relations, more strategic in its site locations, and more environmentally conscious in any plans, especially those involving the waterborne transport of petroleum. It is ironic that only after Massport partially shed its low profile in regards to the Port, that it became a target of criticism from outside the shipping community. It may be that Massport will eventually be much improved by the judicial imposition of integration and cooperation and the unwelcome dictate of systematic environmental consciousness. It may yet be that in the end, as was planned in the beginning, all will benefit.

FOOTNOTES

CHAPTER III, PART 8: MASSPORT

- ¹Bosporus, pp. 171-172.
- ²Ibid., p. 257.
- ³James Hammond, "Perspective on the Port," Boston, Vol. 59, No. 2, Feb., 1967, p. 54.
- ⁴Massachusetts Port Authority 1969 Annual Report, p. 29.
- ⁵Ibid., p. 29.
- ⁶Hartman, Sec. I, pp. 4-5.
- ⁷Alan Lupo, "The Monarch of Massport," Boston, Vol. 62, No. 7, July, 1973, p. 70.
- ⁸Hartman, Sec. V, p. 14.
- ⁹"Monarch," p. 33.
- ¹⁰"House kills bill giving Sargent control over Massport spending," Boston Globe, March 27, 1974, p. 3.
- ¹¹Andy Merton, "Why Slow-and-Steady Can't Lose in '74," Boston, Vol. 66, No. 3, March, 1974, p. 41.
- ¹²John A.S. McGlennon, Regional Administrator, Environmental Protection Agency, Letter to Honorable Robert H. Overin, Attorney General, Commonwealth of Massachusetts, August 2, 1973.
- ¹³"Massport curb won by White," Boston Globe, March 14, 1974, p. 12.
- ¹⁴"An Act Establishing a Division of Environmental Protection within the Department of the Attorney General and directing the Preparation of Environmental Impact Reports," Massachusetts Acts and Resolves of 1972, Chapter 781, p. 740.
- ¹⁵Hartman, Sec. VI, p. 2.
- ¹⁶"Boston Port Decline Faces Quiz," Christian Science Monitor, March 28, 1967, p. 7.
- ¹⁷Newsome and Co., Inc., Public Relations Study and Recommendations Prepared for the Massachusetts Port Authority (Boston: 1972), Sec. II, p. 3.
- ¹⁸Hartman, Sec. IV, p. 5.

Progress has not followed
a straight ascending line,
but a spiral with
rhythms of progress
and retrogression, of evolution
and dissolution.

Goethe

CHAPTER IV

FUTURE OF THE PORT

Introduction

As a conclusion to this survey, it would seem appropriate to conjecture upon the more conspicuous ingredients of Boston's maritime prospects. The future of the Seaport is predictable only within broad parameters which are defined by two major directions and influenced by a number of elements. The two primary directions are the modernization of the Port's petroleum reception facilities and the further containerization of its general cargo handling facilities. The components of these potential developments are so numerous, varied and interrelated as to pose contingencies that probably preclude any reasonable analysis at this time, although the more obvious, such as Massport's future role, subsequent labor agreements and the need for the integration and cooperation of all port factions, are easily recognized. Both these directions and contributory factors, however, present more of the dilemmas with which the Port has long been accustomed to wrestle. Certain of these issues are deserving of final note or reiteration as fundamental determinants of the future of the Seaport.

The development of an off-shore oil terminal and refinery-- industrial complex poses a serious quandary in a locale acutely sensitive to the preservation and protection of its natural environment. It might prove a thankless task to replace a traditional supply system which was responsible for only a few oil spills beyond the inner harbor with one that would introduce carriers of such dimensions as to arouse anxieties of potential disasters of awesome magnitude and extent. Yet in perspective, this fear may be illusory, as intensive research has shown that the use of VLCC's and off-shore facilities is superior, both economically and environmentally, to the present mode of operation. In this light, Massport exhibited poor judgement in delaying for two years, while awaiting a more opportune moment, the presentation of its original off-shore terminal study. It should have assumed the responsibility of immediately publicizing the proposal as a high-priority issue for all of New England and undertaken an energetic campaign to recruit as much public, government and industry support as possible. With a construction time of four years, the project could have been completed by 1975. Now, with the added requirement of Massport's preparing a state Environmental Impact Report and coordinating its actions with those of other state agencies, Boston may once again hold up the rear of technological adoption while the initiative will fall to any one of several plans for similar developments in Maine. Also, the Harris report was only preliminary, with such flaws as locating both product and crude terminal much too close to shore to minimize pollution of coastal waters as recent studies have indicated.

As such, the more intensive scrutiny now being given the proposal was necessary, but now there is the additional danger of the concept's being studied to death.

Realistically, economic and environmental efficiencies and costs allow no acceptable alternative to such a development somewhere in the New England region. Continued reliance upon Caribbean, and to a lesser degree, Canadian petroleum products is not only expensive, but also necessitates using the smaller and obsolete tanker fleet that poses the greater environmental danger, and is in any case shortsighted as the dwindling resources of the Caribbean basin will be no longer available in the near future and Canadian generosity can not be counted on forever. Foreign imports refined and transshipped from the Gulf of Mexico also entail the same high costs both economic and environmental. The use of feeder systems off-shore, either stationary or moving, as the Navy has customarily done, could only be an interim measure and involves a high pollution risk with multiple transfers and/or inclement weather. The anticipation of the development of a fleet of "pudgy" tankers with shallower drafts is unrealistic since they are really still in the planning stage, and even if practicable, would not be available for some years. To locate a complex elsewhere in New England, probably in Maine, is also unsatisfactory for Massachusetts since such a development would primarily supply northern New England and would otherwise necessitate a high cost distribution system utilizing environmentally unsuitable small tankers and ocean-going barges.

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Within this restricted range of choice, Massport's terminal proposal appears the most favorable for Massachusetts. The Port of Boston, strategically located as the sea access of the Eastern Massachusetts population concentration, is the logical and viable site for the terminus and distribution center of a modernized fuel transport system. This is substantiated by the \$25 million Liquefied Natural Gas terminal in Everett, the only reception facility of its kind in the U. S., operated by the Distrigas Corporation since 1971. Because of this development, LNG ships are becoming a part of the Massachusetts fuel picture. At present, 14 arrivals a year are scheduled from Algeria, each carrying 23,000 tons of liquid, the equivalent of one billion cubic feet of gas. This supplies 5 - 7% of the New England gas demand and plans call for increasing traffic.

The major deficiency in Massport's proposal is its failure to consider a comprehensive, well integrated energy plan for the entire New England region. Regional planning must be an absolute prerequisite for any project of such moment, magnitude and impact. Massport must swallow the bitter pill of externalizing its plans and operations and must be required to cooperate and coordinate not just with local interests, but with any related project in the entire region, such as those contemplated for Maine. Massport's proposal would also be enhanced if it advocated that the facility, operated by the Authority, would be owned by a public corporation with a regional pipeline distribution system constructed, owned and controlled by all the participating New England states. The High Seas Oil Port Act now pending in Congress provides for the

application of states or public corporations for construction and operational licenses for off-shore terminals. The public interest could be even further served if any agreement with an oil company to establish a refinery provided for the public having a voice in determining what types of petroleum products would be produced. Massport may resent this direct intrusion of the public interest into its dealings with private enterprise, but if it is to successfully and faithfully serve its mandate and if a rational and efficient energy supply and distribution system is to be achieved, new approaches are indicated.

The second direction in which the Port of Boston is being led is that of containerization. This mode of fast and convenient cargo transportation, along with the jet plane, improved overseas communications services and expanding multi-national commercial interests are rapidly forging a global economy. Viewed with maximum optimism, containerization may offer Boston its first opportunity in decades to assume the role of an important world port. On the other hand a more realistic assessment would have to recognize that the Port's belated and faltering introduction to containerization along with its legacy of stagnation might prove its recent investments futile in the face of earlier and more concentrated developments elsewhere. It is generally accepted that the North Atlantic container routes will be saturated by 1975 and that by 1980 all additional major container trade routes will have been established. Within this time frame, expeditious execution may be the decisive factor in determining Boston's future; time has been lost in adopting the new

technology and short time is left to secure a significant participation for the Port in the global web of the intermodal transportation system.

In addition Boston's shipping business, even more so than in other ports, is facing increasing and serious competition from air carriers and land bridge systems. The trend towards air freight, despite its expense, is based on its attraction when sea borne transportation gets mired in high handling costs, pilferage and damage problems, or en route delays. The recent introduction of Lower Deck Containers carried in the bellies of new wide-body passenger jets and the widespread use by 1975 of all cargo jumbo jets, will siphon even more business away from steamships and, in particular, container ships. It has been projected that by 1975-6 to 7% of all liner cargo will be carried by air and that by 1980, this figure could reach 15%.¹ These developments are especially ominous for the Boston Seaport because of the convenient location and excellent services of Logan International Airport and the availability of many local high-value low bulk manufactures that are ideally suited to air transport, which generally calculates freight rates from volume rather than weight. Indicative of this situation is that in 1973, Logan handled over 330 million pounds of cargo.

The land-bridge concept, however, has recently lost its edge as the serious threat to traffic in the Port that it was once predicted to be. Although it is estimated that a "mini-land-bridge" from the Far East cost Boston 72,000 tons of cargo last year, it is unlikely to repeat this damage.² For various reasons, many of the

some two dozen steamship lines engaged in the mini-land-bridge route are abandoning it and three Japanese lines have already notified their customers that they are ending the service.

Despite this relief, Boston's greatest obstacle to containerized regeneration continues to be the increased concentration of the container trade in other North Atlantic ports. This concentration is following the familiar pattern in New York, which many lines are attempting to establish as the one regional port serving their entire North Atlantic traffic. Little attention, however, has been paid to the fact that an equally important antagonist for the Port in the arena of containerization is Baltimore, a dynamic port that rapidly adopted the new technology, has willingly made huge capital investments in the most advanced facilities available, and has pursued an extensive and effective solicitation campaign. Not handicapped by the congestion already experienced in New York, Baltimore has made great progress in establishing itself as a major service port for the voluminous trade of the Midwest hinterland, to which it enjoys proximity. As this trade becomes more and more containerized, Baltimore will more and more consolidate its position as a major container port. Furthermore, recent Middle East oil shenanigans have affected an increase in bunker prices that in some areas is four to five times the previous levels. This in turn is forcing steamship lines, through basic fuel economics, to slow their transit speed to reduce fuel consumption and call on only one, if possible, or at least a minimum number of ports in each region. Thus another impulse towards concentration seems to be working against Boston.

Against this background, Massport's proposed \$40 million second public container terminal offers another dilemma. It may be a risky, foredoomed investment which will not realize any appreciable expansion of Boston's container trade, and if the concentration in New York and Baltimore continues, it may loom as a much unneeded white elephant. On the other hand if containerization is truly a rare opportunity for Boston to better itself, a heavy financial commitment may be well-advised to better prepare the Port for its renaissance. Other considerations enter the picture, however. While there has been a loud cry of extreme congestion at the Moran Terminal, the cited need is usually for additional truck marshalling and storage areas. There has also been criticism that the facility is actually operating at only about one-half its equipment handling capacity. This would obviate the need for an entirely new terminal and focus attention solely on expanded landspace, a problem which might have been avoided with more provident planning. Furthermore, why hasn't Massport investigated the innovative system of vertical container storage proposed for the Port of Galveston?³ Containers stored ten high using this method would result in increased storage capacity and a considerable savings in land space. Moreover, the number of people required to operate such a facility is much smaller than for a marshalling area, thus therefore allowing part of the labor force to be channeled into other port operations. A final question is why the Port Authority has not exploited the advantages railroads have over trucks for long haul container carriage? The Moran Terminal has sorely inadequate rail facilities, requiring a switch at a private crossing to reach the two wrong-sized tracks

under the existing cranes, a result of not even inquiring from the local lines prior to construction as to what would be the appropriate rail facilities for such an operation.

In 1973 the Boston & Maine handled over 6500 containers, of which less than a thousand were shipped through Boston and only then when the primary ports of Halifax and St. John suffered emergency conditions, such as an overflow or a work stoppage. In the future, when the Canadian ports reach their capacity of containers from the Midwest, the railroad plans to absorb the cost of a regular ocean "feeder line" to carry the excess containers to Boston for overseas departure.⁴ Boston should be availing itself more directly of the greater carrying capacity and lower costs of rail service from the Midwest, as Baltimore has so efficiently done. While railroads have their greatest advantage over trucks for long hauls, the Boston & Maine feel that Boston could even compete with New York for short hauls despite the \$25 to \$30 rate differential, because of the long waiting time and delays that beset the larger port. Railroad carriage also has the potential to turn the land-bridge concept into a benefit for the Port of Boston by forming the land link for the transport of Far Eastern products to Boston for final transshipment to Europe or even Africa and South America. While the intermodal system has been working small wonders in the long stagnant Port of Boston, all these elements indicate that, if nothing else, there is more than meets the eye in the Port's current, imperceptive romance with the container.

In regards the contributory factors to these two general directions of the Port, they share the quality of not having straightforward prospects and have each incorporated some sort of quandary. The most obvious of these is the Massachusetts Port Authority. Preliminary to its legislative enactment, it was recognized that

"Without bold, even radical steps Boston never can expect to assume its proper place as a thriving metropolitan center."⁵

This self-evident truth was expected to be rectified and the public interest served by the establishment of a dynamic, independent Port Authority. But the newly created agency was endowed with a fiscal structure that required its initial interest and investment be in a more promising airport rather than a risk-laden seaport. Concurrently, its quasi-corporate identity led it to develop an inherent conservatism that, as with any newly launched private enterprise, discouraged capital expenditures in precarious projects, such as the losing cause the Port of Boston represented.

Massport may just be getting over this hide-bound approach and in fact might possibly be bordering on intemperance with its planned implementation of further containerization. Though this intrinsic contradiction between its original purpose and its structural character may be less marked in the future, the resolution of its more fundamental dilemma, insistently stimulating animosity over the issue and interpretation of the public interest, remains uncertain. Though its existence seems fairly secure, barring any catastrophic political or ethical blunder, its future policies,

investments, operations and orientation remain in doubt. Subsequent to recent developments, Massport may surprise many observers by becoming more reasonably receptive to cooperation and collaboration within a broader perspective, and to meritorious external influences and considerations. Undoubtedly, the Port's development will be acutely affected by the Port Authority's attitude, whether intransigent or enlightened, and only time will tell.

One of Massport's present weaknesses is its inability or unwillingness to more actively participate in labor negotiations. While it's true that it doesn't have such statutory authority, its not insignificant influence with the BSA, the representative management organization, does not seem to be exercised to the maximum possible extent. Though labor-management relationships are not one of Massport's official responsibilities, a more vigorous interest on the Port Authority's part could possibly inject an equitable and dispassionate element into what are certainly going to be continue to be delicate yet tempestuous negotiations. Labor itself faces a dilemma unsettling to the customary pursuit of its own self-interest. It has been forced to recognize that the Port's survival requires its cooperation with attempts at modernization, the very process which ironically dictates the decimation of its own ranks. Labor has had to accept a demoralizing reduction in the man-hours of its efforts needed in the Port from 1.7 million in 1968-69 to an estimated 900,000 in 1973-74. Management, too, however has had to make a difficult adjustment in recognizing that in return for modernization, labor has an intrinsic right to either a guaranteed employment

level or commensurate compensation. There is one peculiar mechanism of unplanned self-adjustment in Boston's labor picture to be grateful for, however. The Port is fortunate that the intractable "closed shop" union practice is allowing a natural attrition of the labor rolls without a comparable or even greater enrollment of dockworkers. Boston thus escapes to an extent the volatile labor problems being experienced by other North Atlantic ports as an increasing work force accustomed to labor-intensive practices confronts capital-intensive technology founded on the premise of decreasing labor needs.

The Port's labor-management prospects, however, are not deserving of unqualified thanksgiving. Some observers uneasily predict a damaging general strike when the present labor contract runs out at the end of September, 1974. In an effort to develop a more unified Port structure which might possibly prevent or at least minimize such self-defeating tactics, a proposal has recently been presented for a new Port organization.⁶ The new agency would be a three tier arrangement with a board of directors made up of top executives, a working level group of representatives of all Port factions and an independent staff. Eight major Port interests would constitute the organization, including Massport, the BSA, the ILA and Teamsters Union, the Freight Forwarders Association and U. S. Customs Brokers Association, the truck carriers, the railroads, the banks, and shippers and consignees. The research findings and policies emanating from the organization would be the official voice of the entire shipping industry in the Port. Such a coordinated effort has never before been attempted and is long overdue. It would

not only serve as a vehicle to facilitate a planned and integrated development of the Port as agreed upon by all Port interests, but would also serve to breakdown some of the traditional barriers long presumed to exist between conflicting Port segments. Energies previously consumed by often petty and debilitating differences could more readily be focused into constructive channels. Consequently, these improvements would allow Boston to present the much more saleable posture of a dynamic, consolidated Port with a promising future before it.

Another invaluable service such an organization could perform would be to ameliorate the almost total absence of public information and education. The public relations study cited earlier discovered through polls that among the total Massachusetts population, the bulk of criticism of the Port Authority was concerned with the alleged decline of the Boston Seaport. Unfortunately, the majority of the populace is sadly ill-informed about Port activities and the significant achievements realized in recent years that truly do serve the public interest. Those critics who propose radical changes in the Authority's structure after it has so obviously improved airport and port operations, have been described as ". . . those who are willing to risk the goose in order to grab the golden egg."⁷ Not just the politically attuned Port Authority, but all Boston shipping interests would decidedly benefit from a comprehensively and accurately informed general public that could appreciate the Seaport's long struggle and the admirable efforts being expended for its much hoped for revival. In this perspective, unfounded criticism may be

minimized and a civic pride may materialize that would sympathize with and support the labors of all factions involved for the future of the Port of Boston.

In final conclusion, the Port of Boston has been almost tragically beset by a confluence of dilemmas that most ports only experience partially at any one time. There has been no miracle, not even that of containerization, that has yet been able to lift this persistent burden. Such technological developments, however, offer the Port a range of choices not previously available. The Port, as any functional unit, may abandon the new technology, endure it without exploitation, or apply ingenuity and effort to advance on its crest. Consequent decisions will be crucial. Nevertheless, the Port has exhibited a stubborn courage that in the end, gaining valuable time, may allow the evolution of answers to some of its compounded problems. If not, its demise would be felt only in the Commonwealth, or at most in New England, with little impact on the national oceanborne trade. Yet if only as a regional outport, its history would demand its survival. Be that as it may, the Port has recently made progress, though its management, labor force, and shipping concerns are not free of justified criticism, and may truly be better prepared to resolve its dilemmas and regain its stature as a respected center of maritime commerce.

FOOTNOTES

CHAPTER IV: THE FUTURE OF THE PORT

¹Lawrence, p. 142.

²Francis, "Land Bridge."

³Mike Willingham, "Planning and Development of Port Facilities," Ocean Industry, August, 1972, pp. 30, 31.

⁴John J. Geary, Assistant Director, Piggyback and Containers Services, Boston and Maine Corporation, interview held during Seminar on Surface Transportation, Containerization, and the Port of Boston, sponsored by the International Center of New England, March 14, 1974.

⁵Report of Advisory Committee, 1955, p. 40.

⁶John H. Wylde, President, Patterson Wylde and Co., Inc., Seminar Chairman and Dinner Speaker.

⁷"Massport's Golden Egg," Boston Herald American, April 20, 1974, p. 8.

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