TRANSATLANTIC SHIPPING CARTELS AND MIGRATION BETWEEN EUROPE AND AMERICA, 1880-1914

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Abstract:

The greatest intercontinental migration in human history was also the first large-scale international transportation business. One century ago, transnational shipping cartels helped make the oceanic transport of European migrants to America a widespread enterprise in which capacity management, not opportunistic exploitation, was the crucial element. The cartels' success underscores the overlapping interests of turn-of-the century shipping lines, governments, and transatlantic job-seekers in the facilitation and limited regulation of mass migration.

1. Mass migration, globalization, and transatlantic transportation

The greatest intercontinental migration in human history, the movement of people between Europe and the United States one hundred years ago, coincided with the rapid development of a global transportation industry. A majority of Americans today are descended from the massive polyglot flow of Europeans who, between the Civil War and World War I, left thousands of regions across the Old World for a myriad of new livelihoods in America. The central common characteristic of these heterogeneous transatlantic migrants was their travel on steamships as customers of a cartelized oceanic transportation oligopoly.

Between the 1870s and the 1910-14 period, annual European migration to the United States and the annual carrying capacity of transatlantic merchant ships both quadrupled,[i] however causal mechanisms between the contemporaneous "transportation revolution" and "Great Migration" have not been well-established in existing published literature. Continuing spotlights on the *Titanic* and the Irish famine exodus offer little illumination of the 98% of migratory crossings which were successfully completed and not prompted by immediate threats of starvation. However, considerable information exists in shipping archives and governmental migration reports -- complementary sources which prior research has not treated systematically.

2. The era of steamships and mass migration

Steamships were first deployed on the Atlantic because they provided a faster and more reliable schedule of mail delivery than did sailing vessels. By the 1870s, completion of the transatlantic telegraph diminished the relative importance of mail transport, improvements to propulsion and hulls enabled steamliners to also out-compete sailing ships as carriers of the mass migration which developed after the failed revolutions and failed potato crops of the late 1840s.

Four large German and British lines — Cunard, White Star, HAPAG, and NDL — transported over half of all migrants throughout the entire 1880-1914 period.[2] (Disrupted by the Civil War and at a disadvantage due to America's migrant-attracting high relative wages, U.S. steamlines remained small compared to their European counterparts.) The "Big 4" maintained their dominance even after the 1890s when Austria-Hungary, Russia, and Italy replaced Germany and the British Isles as principal sources of transatlantic migration. The outbreak of war between Germany and Britain in 1914, and the blockades, submarine attacks, and passport controls which followed, signaled the end of mass transatlantic migration.

Steamships retained the nomenclature of their sailing predecessors. Well-to-do passengers, usually tourists, businessmen, and diplomats, were accommodated in "cabins" on or above the main deck. Migrants travelled mostly below the main deck, in the " 'tweendeck", or "steerage", so-called because mechanisms for steering sailing vessels had been located there. Mail and occasional freight cargos were also stored on lower decks, next to or below the "steerage". [3]

A comparison of government data (distinguishing migrants from non-migrants) and shipping data (differentiating passengers by travel class) corroborates anecdotal observations that (1) nearly all migrants were steerage passengers and vice versa, but that (2) this association declined slightly after 1900 as migrants increasingly upgraded to increasingly prevalent "second cabin" accommodations. Between 1880 and 1914, steerage passengers were four times more numerous, but paid fares averaging about one third those in cabin. Thus, over the period as a whole, North Atlantic steamlines derived more revenue from steerage traffic than from cabin traffic (or from shipments of freight). However, on a year-to-year basis, the number of steerage passengers fluctuated much more than did the number of cabin class travellers. [4] Migration flows varied in tandem with North American business cycles, which proved difficult to predict far in advance, while it took several years to build and deploy large ocean-going steamships. The cyclical volatility of migration was the crucial strategic challenge faced by transatlantic steamlines. They could do little to directly smooth out annual fluctuations in migration but, between 1885 and 1908, a series of increasingly broad and successful cartels were developed in order to maintain shares of steerage traffic and to help keep fares from plunging during economic downturns.

3. The economic origins of oceanic passenger "pools"

As with modern-day airlines, transatlantic steamlines one century ago incurred costs which varied little in response to changes in revenue. Passengers became the primary revenue source in both instances, and because the incremental cost of filling an empty passenger space was small, maximizing the utilization of "on-board" passenger capacity was crucial. Analogously to the airline industry of today, steamship companies also sought to enhance revenues by dividing passengers into "classes" based on their ability to pay.[5]

Available figures fail to support notions that steamlines maintained a diversity of businesses - steerage, cabin, freight - as a cyclical hedge: these three principal activities waxed and waned in positive correlation more often than not.[6] The more crucial distinction was not ***when***, but ***where*** they were placed on board. More powerful engines and stronger hulls after 1880 meant that long and tall multi-layered ships became the most efficient means of moving large numbers of people rapidly across the ocean. On these massive steel "greyhounds", luxury passengers paid a premium for the better views and fresher air of the upper decks, freight was conveniently stored in the holds, and migrants were sandwiched in the middle.

The contrast between classes of accommodation on steamliners was more pronounced than on their airborne successors for three reasons. First and foremost, there was a great inherent difference in noise, ventilation, and view between the upper and lower decks. Secondly, ships increasingly provided augmented luxuries, such as opulent dining rooms and ballrooms, in the "cabin" class, which were not offered on the lower decks. Finally, these contrasting levels of travel comfort were enjoyed or endured for days, not hours. Charging different prices to a diverse clientele based on ability to pay and desirability of location was an effective means for steamlines to fill capacity and cover high fixed costs, provided that cutthroat competition could be curbed.

The problem of covering high fixed costs during cyclical downturns was exacerbated by the insensitivity of the overall market demand for travel to changes in fares.[7] The consequent importance of maintaining passage prices during migration slumps, explains both the shipping lines' preoccupation with negotiating cartel arrangements, and the paramountcy of steerage pools within those agreements. The increasing prevalence of cartels after 1900 and evidence of their effectiveness in maintaining prices[8] helps, in turn, to account for growing indications of non-price competition over the period. Shipping data provide evidence of these improvements to on-board conditions: increased space per passenger in all travel classes, and a steady replacement of "old steerage" (bunkrooms) by second class and "new steerage" or third class (private rooms).[9]

As in the case of 19th century American railroads, large start-up costs and powerful scale economies in steam shipping led to oligopoly, and high fixed costs (of both capital and operations) led to efforts at cartelization designed to reduce wasteful duplication and to curtail ruinous "cutthroat" competition. North Atlantic steamline cartels (or "conferences") became most concerned with their members' largest and most widespread business segment - migrant transport.[10] Because steamline passengers were less sensitive to price changes than were railroad passengers, the possibility of gaining revenues by slashing prices was less, and the incentives for cartelization stronger in Atlantic shipping as compared with American railroading. Despite the fact that the oceanic shipping oligopoly was spread over a number of sovereign jurisdictions, pre-World War I Atlantic shipping cartels were more successful than were similar entities attempted by U.S. railroads in the 1870 and '80s.[11]

The basic technique applied to steerage traffic paralleled that used in railroad "associations": the "pool". The purpose of the pool was to help stabilize prices. It functioned by allocating market shares and requiring compensation whenever quotas were exceeded or unfulfilled. Shipping cartels computed compensation by multiplying a floor price times the number of steerage passengers over/under the quota. Passenger volumes were more easily verified than were prices (migration authorities also counted passengers), and this made cheating relatively difficult. The compensation price set an effective floor on price-cutting because a firm selling passages at below the compensation rate would lose money on each passenger obtained beyond its percentage quota (unless it left the cartel, thereby risking the joint competitive wrath of the remaining members).

4. How the transatlantic passenger shipping conferences worked

Shipping represents a rare example of an industry in which cartels in restraint of trade have been long-lived and endorsed as non-deleterious to consumers. Cartels have a notorious tendency to break down due to cheating, bickering, and outside competition, unless they are actively backed up by a national government, which is politically improbable in an international industry such as transatlantic shipping.[12] Nevertheless, transnational cartel arrangements persisted in Atlantic shipping throughout 1892 to 1914, and "conferences" were found, by U.S. and British government investigations and the U.S. Supreme Court, to provide stability and regularity of service benefitting customers. The broadest conference, from 1908 to 1913, encompassed virtually the entire North Atlantic passenger market.[13]

Cartels are ubiquitous in liner shipping, says economist Stephen Pirrong, because they provide an "efficient response" to the "chaos" that would otherwise occur in a business marked by costs which are fixed, "avoidable" and "indivisible." In 1908, for example, it cost about £ 25,000 to send *Cunard's* *Lusitania* from Liverpool to New York, one way; a cost little affected by how many passengers were on board.[14] The voyage technically could be scheduled or cancelled on a few days' notice, and incurring or not incurring those voyage expenses was an all-or-nothing decision. Possibilities of incrementally adjusting costs to meet changes in demand were limited; there was no way, for instance, to send 1/2 of the *Lusitania*, 2/3 of the distance to New York. Five or six passenger liner arrivals per day, during seasonal peaks, generally sufficed to handle passenger traffic between Europe and the port of New York, through which two-thirds of passengers to America arrived. Shipping lines did not possess means of fine-tuning capacity comparable to railroads, which contemporaneously were sending hundreds of rail cars daily along principal U.S. "trunk lines" connecting New York with the Midwest.[15]

Ships, moreover, were mobile fixed assets. A competitor could potentially reroute a ship on short notice. Unlike railroads, steamlines wishing to invade competitors' routes were unencumbered by any comparable need to invest in fixed route infrastructure (rails, ties, track beds, bridges, tunnels). Costing up to six million (gold-standard era) dollars to build, but able to steam to and from any of the major Atlantic ports, the giant ocean steamliner, when rerouted, was a blunt, yet easily deployed competitive weapon.[16]

The relatively high fixed costs and mobility of assets in liner shipping have sufficed to convince most analysts that cartels governing freight have generally been advantageous to potential cartel members. However, the incentives for cartelization in migrant passenger travel proved even stronger, because underlying demand was both more sensitive to economic swings and less dependent on transport prices. Transatlantic freight movements varied in rough proportion to business cycles, whereas demand for marginal laborers, e.g. migrants, fluctuated disproportionately with economic booms and busts. For example, during the 1908 downturn , U.S. merchandise imports declined by about a quarter while immigration from Europe dropped by half.[17] Price changes had a converse relative impact. The long distance buyer and seller of wheat clearly focused more on transport prices than did potential migrants who were sensitive to a broader range of socioeconomic inertias. Compared with demand for freight shipping services, migrant travel demand (and hence steamlines' capacity utilization and profits) was more susceptible to cyclical disruption, and less easily countered by adjustments to transport prices.

Nevertheless, once a decision to migrate was made, changes in passage prices could have some effect on the choice of route, line, vessel, and travel class. For marketing reasons, passenger lines found it advisable to accommodate fluctuations in travel demand by maintaining a degree of excess carrying capacity.[18] However, the timing and magnitude of these variations were not easily predicted, and when demand fell, there was a considerable temptation to lower prices, in order to not suffer too much unused capacity. With most costs fixed, any additional passengers thereby lured would not add much to costs, and the revenue generated would be almost pure additional profit. But, since the overall market was not responsive to price,[19] the new passengers could only come from some competitor, which was likely to resist by matching the price cuts. The typical result was a price war in which all companies lost. Because migration was so volatile and unpredictable, a fall in passenger demand, with the greatly increased risk of a fare war, could occur suddenly. Since price-slashing jousts tended to break out during migration slumps (e.g. 1885, 1894, 1904, 1908), relatively few migrants would benefit from reduced travel expenses, and they would also face confusion as schedules and fares gyrated. The price-cutting usually ceased before the next migration wave came, and a possibly reduced number of surviving companies could then even jack prices up above pre-fare-war levels. Cartels were thus an appealing means by which shipping companies could inhibit cut-throat price competition, without acting against the interests of passengers.[20]

Under the "pool" approach, companies whose actual volume of steerage traffic exceeded their quotas periodically compensated those whose volumes fell short. Typically, the quotas were based on actual volumes in the recent past and participants were expected to make good faith efforts to meet but not exceed their quotas. The importance of protecting prices was underscored by a general practice whereby companies tending to exceed their quotas would raise prices, to direct passengers to other lines, rather than having those in deficit cut their fares. Several months notice was required to drop out of the pool, and as long as a company remained in, it could not to gain by slashing prices to below the compensation rate (which was typically set somewhat under the average market price, to discourage lazy undershooting of the quota). Only once after 1895 (in 1904) did the conferences fail to prevent the outbreak of a general price war.

With the potency of price-cutting diluted by conference agreement, companies sought other avenues to competitive advantage. Some obvious loopholes were explicitly plugged in the agreements, for instance, there were proscriptions against indirectly reducing prices by raising agents' commissions, or offering discounts for prepaid or round trip tickets. Routing restrictions also inhibited the poaching of passengers from a company's "home" ports. [21] The conferences' successful curtailment of potentially ruinous price wars and other forms of aggressive rivalry helped steer strategic emphasis towards a less hostile competition to improve on-board comforts, which also conferred benefits on passengers.[22]

Steerage pools made it difficult for one line to prosper from volume growth unless volume also expanded for the other conference lines. Similarly, if migrant volumes plunged, the effects of declining revenues were shared. Furthermore, the cartels typically coped with newly formed lines by offering them side agreements or full conference membership. With the rapid growth of migration after 1900, from a wide range of nationalistic countries eager to set up steamlines of their own, outside challenges were not unheard of.[23] However, only on one occasion was it necessary to resort to "fighting ships"[24] and only once after 1890 (during 1903-04) was there a prolonged competitive battle between major lines largely untempered by conference guidelines.[25]

5. Competitive rivalries and cartel cooperation

As early as the 1850s, steamlines occasionally cooperated in the market for transatlantic passengers. Nevertheless, formal and permanent associations remained limited in scope until the 1890s, when the dominant German and British lines reacted to declining emigration from their own countries by opening up new Mediterranean routes and competing for the transport of East European "transit" migrants. Long-lasting "conferences" were first organized in the early 1890s, and the most enduring exception to their gradual spread was the protracted rivalry between Cunard and the German lines.[26]

In the 1880s, more sophisticated management and more favorable regulations helped the German lines, HAPAG and NDL, successfully cut into the long-established traffic of German migrants "indirectly" travelling to America via England. During this time, the British lines formed a conference, and the Germans began to negotiate with the Belgian and Dutch lines (their "continental" conference, the *Nordatlantischer Dampfer Linien Verband* (NDLV) was finally set up in 1892). An uneasy series of arrangements were later made between the two conferences. Typically, the British limited their take of continental emigration in return for continental lines' eschewal of Scandinavian steerage passengers. [27]

Competitive ire between Cunard and the two German lines intensified in the 1890s, following the Hamburg cholera outbreak of 1891. The cholera was traced to Russian "transit" migrants on their way to America. The German lines suffered the brunt of ensuing quarantines and restrictions, which lasted for months. However, these shipping firms also seized the initiative by offering to help their governments set up health inspection stations on the Russian and Austrian borders, in order to monitor migrants on their way through Germany. By volunteering to administer those checkpoints, NDL and HAPAG then found ways to "encourage" a large share of in-transit migrants to book passage on, or change to, their steamships. Cunard resented this practice, however. Later, when J.P. Morgan formed a large shipping group by merging White Star with several smaller lines, and negotiated a dividend-sharing agreement with the NDLV[28] , Cunard's managers countered by obtaining a British government subsidy to build the *Lusitania* and *Mauretania* (the fastest pre-World War I merchant ships). Cunard then aggressively pursued continental migrants in 1904 by means of an exclusive contract with Austria-Hungary to take passengers from the Mediterranean port of Fiume (Rejeka). Previously, periodic skirmishes had flared over the British share of what Americans referred to as the "new immigration" (from South and East Europe), but on this occasion, an all-out rate war erupted. A truce was arranged by 1905, but only with the downturn following the financial "Panic of 1907" did Cunard and the continental lines finally manage to hammer out an Atlantic-wide agreement in 1908.[29]

Such a comprehensive arrangement had long been the goal of HAPAG's General Manager, Albert Ballin, a consummate negotiator who not only built his company into the world's largest steamship line, but who personally orchestrated most of the cartel negotiations and renegotiations throughout the period. German leadership in the cartels was also based on the rapid growth of German industry (including ship building), a geographical home base along the principal westward flow of "new immigrants", and German laws which gave cartels stronger legal sanction than in most other countries. [30]

The German-led cartels gained prominence at a time when migration was rapidly expanding and German lines had the largest shares of it. After 1897, migration to the U.S. roughly quintupled over the next decade, but not in response to reductions in passage prices (they rose slightly), shorter oceanic travel times (they dropped only slightly), or a sudden surge of persuasive propaganda by shipping agents (whose role probably diminished after 1900).[31] Prominent changes in migration after 1900 were, however, its increasingly two-way character[32] , its more stable fares (except in 1904) as a result of the growing cartel influence[33] , and a growing diversification of the travel classes offered by companies and used by migrants.

6. The rise of the second class

In the 1880s, steamlines began expanding their provision of the "intermediate" travel class , generally called "second cabin" or "second class". Second cabin was physically and financially situated in between steerage and "first cabin". Second cabin attracted not only budget-conscious tourists and business travellers, but also migrants able to afford more than a rock-bottom fare. The cost of a second cabin ticket averaged about $50, versus $25 for steerage, and $125 for a first cabin booking. Compared with steerage travel, a migrant in second cabin received not only a higher deck, more space, better ventilation, and better food, but, perhaps most importantly, a semi-private "closed berth" — accommodation in an enclosed room with two to eight bunks — instead of a slot in a large "open-berth" steerage bunkroom. After 1900, portions of the steerage accommodations on some newer vessels also offered closed berths, sometimes designated as a new "third class", and often praised as a more humane "new steerage".[34]

The introduction of second cabin, and later the "new steerage", led to criticism of steamlines both by contemporaries and later historians, and from two different perspectives. Both sets of criticism are deficient as explanations for the improvements in travel conditions and the diversification of travel classes between 1880 and 1914.

Those concerned mainly with migrants' well-being decried the ongoing exploitation of migrants in the old steerage, pointing out that passengers in the second class and the new steerage obtained a much better bargain. However, most of the changes in onboard accommodation between 1880 and 1914 were not mandated by regulation but were undertaken voluntarily, and critics of steamlines have not explained why profit-seeking transporters steadily reduced their offering of the more "exploitative" old steerage during this period.[35]

Migration restrictionists, on the other hand, regarded the new classes of travel as new attempts by steamlines to continue "artificially stimulating" an influx of "undesirables". Critics often noted that, while the U.S. Congress, between 1875 and 1914, gradually extended the grounds for barring immigration, the new criteria — disease, labor contracting, pauperism, etc. — were rarely applied in practice to any but those arriving in steerage. Second cabin was thus seen as a loophole by which steamlines evaded rules against the importation of unwanted Europeans.[36]

However, individual cases of migrants travelling in second cabin in order to avoid debarment are not representative of aggregate patterns. Migrants were overwhelmingly healthy, employable, non-criminal males with little risk of exclusion. Although the categories of debarment grew steadily after 1880, the rate at which arriving would-be immigrants were turned back rose from .4% in 1882 to only 2.7% in 1914, and averaged less than 1% for the period as a whole.[37] Meanwhile, the portion of migrants crossing in second cabin, and the portion of passenger capacity devoted to it, rose from about 10% before 1900 to about 15% by 1910.[38] The "intermediate" class was not developed as a tool for evading inspection or as a begrudging reduction in exploitation, but because more second cabin capacity was an efficient means of improving capacity utilization. More efficient use of capacity resulted from using the same space for both migrant and non-migrant travellers, from offsetting seasonal movements, and from the differential, but complementary, cartel rules applied to steerage and cabin business segments.[39]

Compared with migrants, luxury travellers were more concerned with speed and travel amenities, less sensitive to price, and less apt to make or revise travel plans in response to changes in the U.S. economic conditions. Cabin conditions also varied more from one steamline to another (e.g. British lines were fastest, French had the best wine, Germans the most opulent ballrooms). As a result, market share quotas for the first and second class traffic were both less necessary and harder to agree upon than was the case for steerage. Therefore, instead of pooling volumes á la steerage, cartels established minimum prices for cabin class tickets.

Price floors, instead of volume quotas, were also applied to second cabin because this procedure helped protect the integrity of steerage pools. The conferences needed a price wedge between second cabin fares and steerage[40]; otherwise companies could book migrants in second cabin without regard to agreed-upon steerage shares. However, even with cartel rules fostering an average $25 price difference between steerage and second cabin, the more than correspondingly better service of the latter[41] attracted a growing percentage of transatlantic migrants after 1900.

Thus, cartels helped to spread around the pain of business downturns and to ward off a worsening of that pain due to cutthroat competition. The growth of the second cabin (as a way to increase migrant volumes without violating steerage quotas) not only did not weaken the cartels, but actually helped improve capacity utilization in good times and bad.

7. The business logic of expanding the intermediate travel classes

Shipping data for 1906-13 illustrate how increasing the allocation of ship space to second cabin, on each succeeding generation of new ships, enabled steamlines to achieve a higher overall capacity utilization. The three largest lines, Cunard, HAPAG, and NDL carried just under half the total passenger traffic between Europe and America during that seven year period. In 1906, 13% of their passenger slots were in second cabin; in 1913, 16%. (In 1890, the second class had been only 6%). In each of the seven years, from 1906 to 1913, including the 1907 and 1913 booms and the 1908 and 1911 busts, the utilization of second cabin was higher than either first cabin or steerage. Averages for the period as a whole (actual passengers divided by carrying capacity) were: Second cabin - 53%, First cabin - 44%, steerage -39%. Given that most costs were fixed, the financial advantage of this much higher "load factor" almost certainly outweighed the lower per passenger profit *rate* in second cabin.[42]

Capacity utilization of second cabin exceeded that of other travel classes because it appealed to both migrants and non-migrants. Migrants, mostly in steerage, usually travelled westward in the spring when weather for travel was amenable and work easiest to find. Those who later returned to Europe (and in increasing numbers after 1900) tended to do so in the fall, in advance of the Christmas holidays and the winter slack period in the U.S. labor market. Tourists, mostly Americans and in the first class, moved oppositely: east in the spring and west in the fall. Since the in-between second cabin attracted both an "upper tier" of migrants and a "lower tier" of luxury class passengers, it could garner sizable volumes in both directions during both seasons, while first class and steerage went mostly empty in one direction or the other. Thus, building and deploying ships with more space devoted to the multi-purpose second cabin helped improve the lines' overall utilization of on-board passenger capacity. [43]

8. Conclusions and implications

Steam-powered shipping and mass migration within the Atlantic Basin reinforced each other. Passenger conferences facilitated this feedback loop by helping to stabilize rates, routes, and procedures, and to improve safety, capacity utilization, and on-board conditions. Non-price competition, and relative stability benefitted both shipping lines and their migrant customers.

The passenger agreements in turn-of-the-century transatlantic shipping succeeded, to a degree atypical for cartels, because they proved to be an efficient and widely accepted solution to the competitive challenge of using high-fixed-cost, mobile assets to service volatile, price-insensitive demand. A general long term rise in conference members' profits was due to a sustained (albeit uneven) growth of migration flows over the period, not because the cartels promulgated any significant increase in average fares. The cartels were designed to mitigate the volatility of revenues, not to promote a sustained raising of prices by lines searching for the "elastic portion of the demand curve." (Price-gouging was infeasible, because barriers to entry were limited.)[44]

The shipping conferences' efficacy partly reflected the lack of feasible alternatives in a volatile international travel business. The longevity of these cartels was also enhanced by the continuing dominance of the "Big Four"[45] in passenger transport, and by the relative brevity of cyclical declines after 1897. Most critically, however, the conferences on the North Atlantic succeeded because of their promulgation of specific mechanisms designed to protect capacity utilization from the fluctuations of migration flows. Price floors and passenger pools protected steamlines from the worst effects of ***cyclical*** declines, while non-price competition measures, particularly ongoing growth of and improvement to "closed berth" classes of travel, softened the bite of ***seasonal*** variations, but, thanks to a cartel-enforced price wedge between second cabin and steerage fares, without jeopardizing the passenger pools.

Previous literature on the "Great Migration" of 1880-1914 poses a paradox. Stress has been placed on the rise of nativism, the proliferation of restrictions on immigration, and the increasing scrutiny and rejection of arriving aliens.[46] It has also been frequently pointed out that the gauntlet at Ellis Island was preceded by the neglect, deprivation, and abuse suffered during the oceanic crossing at the hands of self-serving and seemingly exploitative steamship lines.[47] And yet, the migrants kept coming in unprecedented numbers up until 1914.

No doubt, falling grain prices and rising ethnic intolerance in Europe, and long term economic growth in the U.S. after 1896 outweighed the various barriers of distance. Certainly, as railroads and telegraphs increasingly linked remote European villages with American metropolises, such barriers declined and the advantages of intercontinental movement were made more apparent. However, the barriers have often been overstated and the role of transport intermediaries left obscure, in previous accounts of turn-of-the-century transatlantic migration.

It is inaccurate to conflate America's source-country quotas of 1925-65 with pre-1914 policies, practices, and sentiments. Before World War I, the thrust of American public opinion, legislation, and regulation was directed more at the "quality" of immigrants than at their quantities. Paupers, criminals, and the diseased became the targets of a series of exclusionary laws between 1880 and 1910, but the overwhelming majority of pre-1914 immigrants were young, healthy job-seeking European males welcomed by a resource-rich, labor-scarce country built by immigrants and the descendants of immigrants. Less than one-percent of would-be immigrants were sent back to Europe over the 1880-1914 period as a whole. Ellis Island inspections were not intended to, and did not, deter great masses of newcomers.[48]

It is also misleading to view the brutality of 18th century slave traders, the horrors of 19th century "coffin" sailing ships, or the exploitation perpetrated by late 20th century "coyotes" as symptomatic of the business practices of the giant multinational travel intermediaries of the turn-of-the-century Atlantic labor market. Migration historians have noted, but not explained, improvements in travel conditions for transatlantic migrants after 1900. Public complaints, ameliorating efforts of humanitarian organizations, and tinkering regulatory reforms, have been stressed, but inferences that ships were redesigned and crews retrained primarily as a result of such outside influences have been tentative and unconvincing. Commentators [49] have previously alluded to the positive effects of "competition", but have not explained why profit-seeking steamlines should have worked harder to make on-board conditions more attractive during the post-1900 boom years than they did when demand was depressed in the mid-1890s.

Understanding the travel business which undergirded the Great Migration helps explain why it was in the self-interest of shipping lines to improve on-board conditions for migratory passengers, even in the face of already burgeoning demand. An industry faced with high fixed costs, mobile assets, and cyclically-volatile yet price-insensitive demand relied on cartels to stabilize prices and market shares, and thereby fostered increased non-price competition and service diversification. Among the consequences were better transit conditions for migratory travellers, and a more predictable process of human movement for the governments which needed to regulate, protect, and track those migrants. As space, privacy, and comfort improved, migration became less of a one-time ordeal, and more of a repetitive, back-and-forth activity.[50] There is little question that crossing the Atlantic remained a momentous, if not traumatic, experience for migrants, but the success of the transporters depended more on the efficient deployment of carrying capacity, than on the extraction of maximum per-passenger profit.

Anecdotal, episodic, and polemical accounts, which figure prominently in histories of the North Atlantic crossing, obscure the fundamentally overlapping interests of the protagonists in that "Great Migration". Potential migrants wanted a smooth, convenient, and reliable way to get to and from America. Transatlantic lines wanted dependable and flexible ways to accommodate fluctuating travel flows: procedures and strategies which could profitably service both large, uneven streams of migrants and smaller, steadier movements of wealthier tourists and businessmen, and do so with a minimum of costly unused capacity, cutthroat competition, and hassles with governments whose ports they used and whose mail they carried. Governmental entities, such as the Ellis Island facility, needed stable, reliable mechanisms for processing the migrant flows in a politically acceptable way.

Thus, stronger cartels, improved transit conditions, more efficient use of carrying capacity, a greater diversification of travel classes, increasingly capable in-port processing of travellers by public authorities, and growing flows of increasingly mobile and knowledgeable voluntary migrants, became reinforcing trends. Ruling on an anti-trust suit brought in 1912, the U.S. Supreme Court agreed with steamlines' argument that the transatlantic cartels were designed to reduce destructive price wars, not to gouge passengers. It was the "Great War" of 1914-18, and the migration restrictions made permanent thereafter, which brought the "Great Migration", and hence the business of conveying that migration, to an end.[51]

At the heart of this confluence of transport technology, demographic change, and capitalistic development, stood the great fleets of Atlantic "greyhounds" whose most appropriate modern parallel are not smugglers but passenger airlines. Transatlantic flights today hark back to the ocean voyages they replaced when their "captains" and "cabin crews" welcome "on-board" passengers paying widely varying prices. Only recently have computerized reservation systems taken over from cartels the management of capacity utilization, which is as critical to modern business and leisure travel as it was to the unfettered labor migration of a century ago.

TABLE 1: NEW YORK INBOUND STEERAGE PASSENGERS, 1881-1913 ('000s)

	Cunard	White Star	HAPAG	NDL	"Big 4" %	French, Dutch, Belgian	Medit.	Other	TOTAL ALL LINES	Immigrants (June 30 fiscal years)	Sources (steeragé)
1881	17	30	66	72	**42%**	69	3	185	**441**	401	CoEm
1882	13	29	65	73	**39%**	71	3	202	**455**	502	CoEm
1883	12	28	53	67	**41%**	66	4	159	**388**	407	CoEm
1884			56						**321**	355	CoEm, Bons
1885	17	24	39	68	**53%**	39	6	87	**281**	287	CoEm
1886	16	26	30	46	**39%**	36	15	132	**301**	266	NYT
1887	18	37	27	52	**36%**	64	21	152	**372**	376	NYT
1888	28		40	53					**384**	418	CoEm, Gibbs, Cu
1889	27	25	35	61	**47%**	62	10	95	**314**	339	CoEm
1890	20	34	56	68	**48%**	70	23	99	**372**	364	Kludas
1891	27	36	76	68	**46%**	36			**445**	445	NYT, Aldcroft
1892									**359**	490	NYT
1893									**360●**	404	
1894									**180●**	254	
1895	23	31	34	56	**55%**	43	8	64	**259**	220	NYT
1896	20	21	36	54	**52%**	43			**252**	264	NYT
1897	17	19	17	40	**49%**	34	13	50	**192**	181	Himer
1898	19			53					**220**	179	Murk, Bons, Cu
1899	21	25	45	75	**55%**	61	40	32	**300**	243	Tr-A
1900	23	29	73	92	**54%**	88	53	45	**403**	342	Tr-A
1901	20	30	78	101	**52%**	95	69	45	**439**	389	Tr-A
1902	24	61	99	112	**53%**	129	97	37	**559**	493	Tr-A
1903	34	61	116	118	**51%**	143	105	66	**643**	632	Tr-A
1904	63	86	95	98	**60%**	99	73	57	**573**	606	Tr-A
1905	77	90	117	135	**54%**	157	147	52	**776**	788	Tr-A
1906	113	102	153	149	**55%**	170	178	75	**941**	880	Tr-A
1907	116	101	164	171	**53%**	183	203	97	**1,036**	1,005	Tr-A
1908	46	36	42	47	**55%**	57	49	33	**310**	586	Tr-A
1909	82	73	107	122	**50%**	126	189	71	**771**	581	Tr-A
1910	94	65	114	112	**50%**	137	168	81	**771**	786	Tr-A
1911	56	51	62	74	**47%**	95	110	63	**511**	637	Tr-A
1912	93	48	98	119	**50%**	136	174	53	**721**	605	Tr-A
1913	117	77	138	165	**52%**	185	216	58	**955**	893	Tr-A
						1881-1913		*Totals:*	15,065	15,618	
Average Market Shares:	**9%**	**9%**	**15%**	**17%**	**50%**						

Total passenger arrivals to the U.S., 1881-1913: 27,089

(computed over years for which data is available for all "Big Four")

Sources for immigration, total passengers: U.S. Statistical Abstracts

Sources for steerage: **Aldcroft**, 1968, p. 357, **Bonsor**, pp. 526, 1072, **CoEm** = New York Commissioners of Emigration, annual reports, **Cu** = Cunard Archives, **Gibbs**, p. 155, **Himer**, p. 81, **Kludas**, p. 223, **Murk** = Murken, Grundlagen, p. 40, **NYT** = New York Times: 7 Jan. 1887 p. 2, 6 Jan 1888, p. 3, 1 Jan 1893 p. 8, 7 Jan 1896 p. 10, 10 Jan 1897, p. 12, **TR-A** = Transatlantic Passenger Conferences reports, 1899-1913.

Other notes: Medit = various Mediterranean-based lines,
● = estimate, no entry = not available

Steerage figures reflect the acquisition of Anchor by Cunard in 1912, and White Star's alliance with American Line, through IMM, in 1902.

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NOTES

1. Calculations based on NY State and federal migration records, shipping records.

2. For shares of passengers, see Table 1. ("HAPAG" = Hamburg-Amerika Paketfahrt AG, "NDL" = Norddeutscher Lloyd).

3. For business segments and deck usage, Cf C.R.V. Gibbs, *Passenger Liners of the Western Ocean: A Record of the North Atlantic Steam and Motor Passenger Vessels from 1838 to the Present Day.* London: Staples Press, 1957.

4. Passenger volumes calculated from government statistics, shipping records. For fares: J.D. Gould, "European Inter-Continental Emigration, 1815-1914: Patterns and Causes." *Journal of European Economic History* 8 (Winter 1979), p. 611. "Tramp" ships dominated bulk freight transport because, unlike liners, they did not follow regular schedules, and could alter departure times and routes to accommodate the most lucrative freight movements and thereby more closely manage capacity utilization. Specializing in bulk freight, tramps handled larger shipments at lower loading costs, incurred lower crew costs, and travelled more slowly, thus using less fuel. See U.K. Royal Commission on Shipping Rings, 1909 (hereafter: "Rings"), pp. 11,19; Paul Lenz, *Die Konzentration im Seeschiffahrtsgewerbe* (Jena: Gustav Fischer, 1913), p. 6; T. Navin, "A study in merger: Formation of the International Mercantile Marine Company." *Business History Review* 28, no. 4 (December 1954), p. 320. Note: as used in this paper, "steamliner" is short for steamship liner and "steamline" means steamship line.

5. C. Knick Harley, "Aspects of the Economics of Shipping, 1850-1913" (in Fischer and Panting, ed., *Change and Adaptation in Maritime History; the North Atlantic fleets in the nineteenth century.* St. John's: University of Newfoundland, 1985), p. 172; Gibbs, *Passenger liners,* p. 25; Pat Hanlon, *Global Airlines: Competition in a Transnational Industry* (Oxford: Butterworth-Heinemann, 1996), Chapter 6.

6. Brinley Thomas, *Migration and Economic Growth: A study of Great Britain and the Atlantic Economy* (Cambridge, UK: Cambridge University Press, 1956), pp. 101-02.

7. Re the minimal stimulus to migration generated by cyclical declines in fares, see Arthur Salz, "Auswanderung und Schiffahrt mit besonderer Berücksichtigung der österreichischen Verhältnisse." *Archiv für Sozialwissenschaften und Sozialpolitik* 42 (1916): 842-84, p. 849; J.D. Gould, "European Inter-Continental Emigration, 1815-1914: Patterns and Causes." *Journal of European Economic History* 8 (Winter 1979): 593-679, p. 611; Harald Norman and Hans Runblom, *Transatlantic Connections: Nordic Migration to the New World after 1800,* (Oslo: Norwegian University Press, 1988), pp. 120-21.

8. Derek Aldcroft, *The Development of British Industry and Foreign Competition, 1875-1914,* (London: George Allen, 1968), p. 351.

9. For prices, capacities, space per passenger: Keeling, "Classes o f Travel: European Migrants crossing to and from New York, 1880-1914" (research paper, U.C. Berkeley, 1996, pp. 14-24, 34-42.

10. U.S. House of Representatives Report on Steamship Agreements and Affiliations, 63rd Congress, 1914 ("Alexander Report"), pp. 21-52.

11. Alfred Chandler, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge,

MA: Belknap Press, 1977), pp. 134-44; Ron Chernow, *The House of Morgan: An American Banking Dynasty and the Rise of Modern Finance* (New York: Simon and Schuster, 1990), pp. 42-58.

12. F.M. Scherer, *Industrial Market Structure and Economic Performance* (Chicago: Rand McNally, 1970), p. 161. Another instructive (counter) example of cartel success is that of the contemporaneous German coal industry described by Lon Peters , "Managing Competition in German Coal, 1893-1913", *Journal of Economic History* 56, no. 2 (June 1989) : 419-32. Like their counterparts in shipping, the organizers of the German coal syndicate set modest, achievable goals. Their cartel membership was not spread as widely across national borders as the shipping cartel participants were; on the other hand, they had to coordinate the actions of a larger number of firms with a more heterogeneous output.

13. R.H. Thornton, *British Shipping* (London: Cambridge University Press, 1939), p. 282; Francis Hyde, *Cunard and the North Atlantic, 1840-1973: A History of Shipping and Financial Management* (London: Macmillan, 1975), pp.116-17; Erich Murken, *Die großen transatlantischen Linienreederei-Verbände, Pools und Interessengemeinschaften bis zum Ausbruch des Weltkrieges: Ihre Entstehung, Organisation, und Wirksamkeit* (Jena: Gustav Fischer, 1922), pp. vi-vii.. The benign character of the passenger cartels is further evidenced by their nearly total absence from the long litany of complaints lodged by immigrants, and immigrant-friendly organizations, against shipping lines and immigration officials during the turn-of-the-century era. Contemporary governmental investigations of the shipping conferences (and subsequent economic analyses) have focused on conference actions in the freight markets. See B.M. Deakin and T. Seward, *Shipping Conferences: A study of their origins, developments and economic practices* (London: Cambridge University Press, 1973); Fiona Morton, "Entry and Predation: British Shipping Cartels, 1879-1929" (NBER working paper, no. 5663, 1996); Richard Sicotte, George Deltas, and Konstantinos Serfes. "The Influence of Multi-market Contact on the Organization of Early Twentieth Century Steamship Conferences, " (Cliometrics Conference, St. Louis, May, 1998. Cartel practices in cargo transport did occasionally incite grumbling by smaller shippers (e.g. exporters) claiming that they were being discriminated against. Cf "Alexander Report"; "Rings". Generally, the rationale supporting freight cartels applies to passenger cartels as well. See later in this section of this paper.

14. Murken, *Verbände*, p. 238; Stephen Pirrong, "Ocean Shipping Markets," pp. 125, 128.

15. Daily arrivals calculated from Morton Allan Directory of European passenger steamship arrivals. (Baltimore: Genealogical Publishing, 1980), and Albo Martin, *Railroads Triumphant: The Growth, Rejection, and Rebirth of a Vital American Force* (New York: Oxford University Press, 1992), pp. 68-72.

16. $6,250, 000 was the reported construction cost for HAPAG's *Vaterland*, the largest commercial vessel placed into service prior to World War I. *Vaterland* became the US-owned *Leviathan* in 1917. See N.R.P. Bonsor, *North Atlantic Seaway.* (London: David and Charles, 1955-80), pp. 415, 1821; Frank Braynard, *The World's Greatest Ship: The Story of the Leviathan, volume 1* (New York: South Street Seaport Museum, 1972), p. 20.

17. U.S. Statistical Abstracts

18. Pirrong, "Ocean Shipping Markets,", p. 94; Thornton, *British Shipping*, pp. 199-203.

19. See Note 7. However, fare changes could affect passengers' choice of line. See next paragraph.

20. Because price cuts generally applied to all steerage passengers, they might very well actually reduce revenues to the price-cutter, in which case his only benefit from slashing fares would derive from driving a weak competitor out of business. Even this might not be desirable, however, since a "survival of the fittest" could intensify competition later. Hence the attraction of cartels designed to deter price wars.

21. For details re the conferences of 1892-1911, see Murken, *Verbände*, pp. 26-50, 633-89; Salz, *Auswanderung und Schiffahrt*, p. 852; Aldcroft, *British Industry.*, pp. 347-58. Because "conferences" included regular face-to-face meetings where shipping industry leaders "conferred", these cartels also facilitated inter-firm cooperation on safety regulatory, and other issues.

22. Aldcroft, *British Industry*, p. 355; Lenz, *Konzentration*, p. 110.

23. Lamar Cecil, *Albert Ballin: Business and Politics in Imperial Germany, 1888-1918*, (Princeton: Princeton University Press, 1967), pp. 58-59.

24. A "fighting ship" was one sent by a conference on a route- and date-specific voyage expressly designed to undercut a challenger. Cf Murken, *Verbände*, pp. 359, 428.

25. The generally effective functioning of the transatlantic passenger agreements is congruent with

those and other conferences' mostly successful implementation of freight agreements (on which scholarship has focused; see note 13 above). Passenger agreements were easier to maintain than freight arrangements because price schedules were simpler and there were no "pool"-threatening *passenger* "tramps" to speak of on the North Atlantic. On the other hand, conference agreements on freight movement could gain the support of and offer rebates to large "loyal" repeat customers, which had no counterpart on the passenger side of the business (except during wars when governments needed to ship large numbers of soldiers overseas).

26. Hyde, *Cunard and the North Atlantic*, pp. 94-118; Cecil, *Albert Ballin*, pp 55-62.

27. Lenz, *Konzentration*, pp. 95-96; Aldcroft, *British Industry*, p. 348; Murken *Verbände*, pp. 66,644-48.

28. Cf Navin, *Merger*, pp. 300-319.

29. Technically, there were two cartels: one for northern Europe and a separate entity governing the Mediterranean, where the British, German and Italian lines had previously loosely carved up the market. However, Ballin was the force behind both groups, the terms were quite congruent, and the same set of administrators kept the books for both conferences. Cf Murken, *Verbände*, pp. 636-8; Cecil, *Albert Ballin*, pp. 44-55, 58-62; Hyde, *Cunard and the North Atlantic*, pp. 110-15.

30. Cecil, *Albert Ballin*, Chapter 2, Aldcroft, *British Industry*, pp. 348, 358-59.

31. For quotas: Murken, *Verbände*, pp. 90-106, re migration: Bureau of Immigration annual reports, re prices and transit times: various shipping sources, re agents: Cf Michael Just, "Schiffahrtsgesellschaften und Amerika-Auswanderung im 19. und frühen 20. Jahrhundert" (in Moltmann, G. ed., Von Deutschland nach Amerika, Band 5. Stuttgart: Franz Steiner, 1992), and Berit Brattne, "Importance of the Transport Sector for Mass Emigration" (in Runblom, Harald and Norman, Hans, ed. *From Sweden to America: A History of the Migration.* Minneapolis: University of Minnesota Press,1976).

32. J.D. Gould, "European Inter-Continental Emigration, The Road Home: Return Migration from the U.S.A." *Journal of European Economic History* 9 (Spring 1980): 41-112, pp. 51-69; Mark Wyman, *Round-Trip to America: The Immigrants Return to Europe, 1880-1930* (Ithica: Cornell University Press, 1993), pp. 8-14.

33. The success of conference agreements in preventing price wars is illustrated by their general ability to maintain fares during the 1908 downturn, Cf Aldcroft, *British Industry*, p. 354.

34. U.S. Senate Committee on Immigration, 1911 (Dillingham Report), Vol 37, pp. 6-18; Thomas Pitkin, *The Keepers of the Gate: A history of Ellis Island* (New York: New York University Press, 1975), p. 153; Edward Steiner, *On the trail of the Immigrant* (New York: Revell, 1906), pp 31-37; 76-77; Gibbs, *Passenger Liners*, p. 25; Bonsor, *Seaway*, p. 1851.

35. Pamela Nadell, "The Journey to America by Steam: The Jews of Eastern Europe in Transition, *American Jewish History* 71 (December 1981): 269-84, pp. 281-84; Terry Coleman, *The Liners: A History of the North Atlantic Crossing* (New York: G. P. Putnam's Sons, 1977), p. 25

36. New York Times: 4 July, 1984, p.3, 6 April, 1901, p.6, 12 April 1910, p. 10; Pitkin, *Keepers of the Gate*, pp. 92-115; Kraut, Alan, *Silent Travellers: Germs, Genes, and the "Immigrant Menace"* (New York: Basic Books, 1994), p.61.

37. Calculated from U.S. Bureau of Immigration, New York Commission of Emigration annual reports.

38. Keeling, "Classes", pp. 23-28, 60-63.

39. The following section describes more fully these effects of the growing provision of intermediate classes.

40. This was made explicit in most conference agreements. Typically, any passenger paying less than a specified premium over "normal" steerage rates, was deemed to be a steerager for quota-fulfillment purposes. Cf Murken, *Verbände*, pp. 636-89.

41. Steiner, *On the trail*, pp. 35-41, 347-48; Nadell, "Journey by Steam", p. 274;

42. For (actual) steerage shares per company see Table 1. Capacity utilization rates are computed based on the per-vessel passenger capacity data in Bonsor, *Seaway.* The resulting capacity utilization rates are not precise measures because Bonsor's figures do not reflect some of the occasional post-launch adjustments to vessel carrying capacities. Re the profit rate in steerage vs. 2nd class, see Steiner *On the trail*; Nadell, "Journey

by Steam".

43. Capacity calculations based on Bonsor, Morton Allan, migration records. On a more limited scale, the "closed berths" of "new steerage" or "third class" also served to reduce seasonal variation in capacity utilization, by attracting both migrant and non-migrant passengers. "New steerage" was offered after 1900 on some of the faster ships plying routes to and from northern Europe: vessels which generally commanded a slight price premium over others on those same routes. See Murken, *Verbände*; Dillingham, vol 37; Arnold Kludas, *Die Geschichte der deutschen Passagierschiffahrt*, (Berlin: Ernst Kabel, 1986), vol. 3.

44. For migration trends, see Table 1 below. For barriers, Cf Murken, *Verbände*.

45. Cunard, White Star, HAPAG, NDL. See section 2 above (p.2), and Table 1.

46. Cf Kraut, *Silent Travellers*; Roger Daniels, *Coming to America: A History of Immigration and Ethnicity in American Life* (Princeton: Harper Collins, 1990), pp. 271-76.

47. Nadell, "Journey by Steam", pp. 274-81; Maldwyn Jones, "Transatlantic Steerage Conditions From Sail to Steam, 1819-1920" (in Larsen, B. ed., *On Distant Shores*. Aalborg, Denmark: Danes Worldwide Archives, 1993).

48. Maldwyn Jones, *American Immigration* (Chicago: University of Chicago Press, 1992), p. 231, U.S. Consular Reports: "Studies in Europe of Emigration moving out of Europe, especially that flowing to the United States, by F.L. Dingley (Dept of State, Washington: Government Printing Office, 1890), pp. 220, 310-13; Edward Hutchinson, *Legislative History of American Immigration Policy, 1798-1965* (Philadelphia: University of Pennsylvania Press, 1981), pp . 85-158; John Higham, *Strangers in the Land: Patterns of American Nativism, 1860-1925* (New Brunswick: Rutgers University Press, 1955) pp. 97-100,130,190. Immigration restrictions based on nationality, such as the Chinese Exclusion Act of 1882 or the Japanese "Gentleman's Agreement" of 1907 had no North Atlantic counterpart before the 1920s.

49. e.g. Jones "Steerage Conditions", Nadell, "Journey by Steam"; Günther Moltmann, "Steam Transport of Emigrants from Europe to the U.S.,1850-1914" (in Friedland, ed. *Maritime Aspects of Migration*, Cologne: Bohlau, 1989).

50. Dudley Baines, *Emigration from Europe, 1815-1930*, (London: Macmillan, 1991), p. 39.

51. Moltmann, "Steam Transport", p. 320; Hyde, *Cunard and the North Atlantic*, pp. 116-17; Murken, *Verbände*, pp. vi, vii