Maritime Labour and Crew List Analysis:

Problems, Prospects, and Methodologies.

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THE MARITIME HISTORY ARCHIVE of the Memorial University of Newfoundland presents the labour historian with a rich source for the reconstruction of almost an entire work force. Its collection of crew lists gives age, nationality, and vital employment data for an internationally recruited working population hundreds of thousands strong, representing about 80 per cent of the surviving documents returned on a statutory basis to the British Board of Trade between 1863 and 1939.[1] Eric W. Sager reviewed some of the possibilities of the data source in the pages of this journal several years ago, but despite the continuing need for an understanding of the social and structural complexities of working-class life, the Archive remains almost completely ignored by labour historians.[2]

This review will present a systematic enquiry into the research possibilities and methodological problems confronting the scholar interested in studying a work force which remains as neglected as it is important. The approach is at once exploratory and didactic. Having established the historiographic context, I will underline the importance of studying labour structures in an industry experiencing a simultaneous process of technological transformation, capitalist organization, and integration into a developing international economy all at a time when the labour force itself was feeling its way towards collective identity and action. I will then explain the peculiarities of maritime labour and speculate as to how these affected employment and working processes. I will conclude by examining methodologies for using crew list material to study the working force itself, using my own preliminary research on the British tramp shipping industry to illustrate possible approaches. The overall purpose is to encourage labour historians to turn their research skills to a source which allows a potential level of understanding of

[1]David Alexander and Keith Matthews, *A Computer Index to the Crew Lists and Agreements of the British Empire* (St. John's 1974), 8 vols.; and Maritime History Archives, *A Guide to the Agreements and Crew Lists: Series II (B.T.99) 1913-1938* (St. John's 1987).

[2]E.W. Sager, "The Maritime History Group and the History of Seafaring Labour," *Labour/Le Travail*, 15 (Spring 1985), 165-72.

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a work force and the mechanics of its employment which a scarcity of data renders all but impossible in other sectors of the international labour scene in the late nineteenth and early twentieth centuries.

I

MOST OF THE PUBLISHED WORK based on crew list research originated with Memorial University's Atlantic Canada Shipping Project in the late 1970s and early 1980s.[3] Unfortunately, the members of the Maritime History Group were never able to capitalize on the possibilities uncovered by their wide-ranging and innovative research efforts. Dr. Sager's above-cited article renders a survey of the literature unnecessary in this piece, but two general comments are necessary to establish the historiographic context for what follows. In the first instance, the work was concentrated almost entirely on the sail shipping industry of Atlantic Canada during the time of its rapid growth and even more dramatic collapse in the middle decades of the nineteenth century. In the second instance, many of the specific aspects of maritime labour were analyzed only in article form, and tended to be subject only to preliminary and discrete treatment.[4] The Group's own efforts were concentrated mainly on a macro-economic study of regional industry. Only Judith Fingard's study of the Canadian sailor's life ashore and Sager's as yet unpublished study of labour productivity actually expose crew list data to extended and integrated analysis in book form.[5]

Both of these facts produce problems and possibilities. The shipping world of the Maritime History Group was in some senses a pre-industrial, or at the very most a semi-industrial one. Debate still continues as to the reasons for its failure to evolve, with the Group's own work pointing away from traditional technological change and entrepreneurial failure explanations towards a deep-seated change in the structure of the regional economy.[6] The basic point, however, is that the ephemeral shipping industry of Atlantic Canada differed profoundly from the

[3]Keith Matthews and Gerald Panting, eds., *Ships and Shipbuilding in the North Atlantic Region* (St. John's 1978); Lewis R. Fischer and Eric W. Sager, eds., *The Enterprising Canadians: Entrepreneurs and Economic Development in Eastern Canada, 1820-1914* (St. John's 1979); David Alexander and Rosemary Ommer, eds., *Volumes Not Values: Canadian Sailing Ships and World Trades* (St. John's 1979); Rosemary Ommer and Gerald Panting, eds., *Working Men Who Got Wet* (St. John's 1980); Lewis R. Fischer and Eric W. Sager, eds., *Merchant Shipping and Economic Development in Atlantic Canada* (St. John's 1982); Lewis R. Fischer and Gerald E. Panting, eds., *Change and Adaptation in Maritime History. The North Atlantic Fleets in the Nineteenth Century* (St. John's 1985).

[4]David Alexander, "Literacy Among Canadian and Foreign Seamen, 1863-1899;" Lewis R. Fischer, "A Dereliction of Duty: The Problem of Desertion on Nineteenth Century Sailing Vessels;" Keith Matthews, "Recruitment and Stability of Employment in the British Mercantile Marine: The Case of C.T. Bowring and Company;" Rosemary Ommer, "Composed of All Nationalities: The Crews of Windsor Vessels, 1862-1899;" Eric W. Sager, "Labour Productivity in the Shipping Fleets of Halifax and Yarmouth, Nova Scotia, 1863-1900," in Ommer and Panting, eds., *Working Men Who Got Wet.*

[5]Judith Fingard, *Jack in Port: Sailortowns of Eastern Canada* (Toronto 1982).

[6]Eric W. Sager and Lewis R. Fischer, *Shipping and Shipbuilding in Atlantic Canada, 1820-1914* (Ottawa 1986), 15-19.

steam-based, British-centred industry which replaced it as the dominant force in the ocean carrying trades. This difference was not just a matter of technology and geographical focus, although both were important determinants of structural change. The whole process of transformation was attended by a far higher level of capitalization and business organization which made the shipping firm a far stronger and more active participant in the labour process. At the same time, the intensification of shipping operations within the context of a growing international marketplace introduced greater fluidity into the labour market, providing employment opportunities on a more frequent and geographically diffuse basis. Finally, the change in the skill base of maritime labour associated with the introduction of the steam engine itself changed crew structure and impacted upon seafaring as a career.[7]

Overall, the result was to make maritime labour a less transient occupation and to consolidate the labour force into a more distinct occupational group. As will be argued later in this article, regional and sectoral differences remained profound, and make generalizations about either the industry or its work force highly dangerous. Nonetheless, structural change was producing something far closer to a permanent seafaring population -a population which was beginning to view itself as a collective entity, and to organize and to act as such in conflict with a more clearly defined group of capitalist employers. In Britain, at least, this produced two phenomena which are central to the historical understanding of maritime labour. In the first instance, the British government, through the agency of a revitalized Board of Trade, began to intervene directly and systematically in the shipping industry, producing a mass of statutory requirements governing both vessel safety and labour practice.[8] In the second instance, Havelock Wilson began his long struggle to unionize the seagoing work force on a national basis a process made particularly difficult by the mobile nature of the working population and established short-term employment practices, but one which led finally to successful action in the seamen's strike of 1911.[9] The historian is thus confronted with a situation in which labour was operating in a more tightly defined institutional context against a background of emerging class conflict.

The totality of the labour experience in this changing world requires the integrated study of a number of basic age, nationality, and employment questions, combined with the consideration of some of the industry-specific peculiarities of

[7]Despite the increase in scholarly interest in maritime history in the last three decades, there is as yet no steam age equivalent to Ralph Davis's magisterial work on the English shipping industry in the seventeenth and eighteenth centuries. The best brief overview can be found in Peter N. Davies, "British Shipping and World Trade: Rise and Decline, 1820-1939," in Tsunehiko Yui and Keiichiro Nakagawa, eds., *Business History of Shipping. Strategy and Structure* (Tokyo 1985), 39-85.

[8]Sandford D. Cole, *Shipmaster's Handbook to the Merchant Shipping Acts*, 3rd ed. (Glasgow 1927); and Adam W. Kirkaldy, *British Shipping: Its History Organization and Importance* (London 1914), 257-84.

[9]A full history of Wilson's Unionization campaign has yet to be written. For a brief summary see A.G. Course, *The Merchant Navy. A Social History* (London 1963), 240-67.

the seafaring life. The information provided in the crew lists allows the age and nationality structure of the work force to be related to the employment structure of the steam vessel. It also permits the correlation of this data with regional and sectoral differences in the industry, long-term and seasonal fluctuations in the labour market, and variations in practice on a firm by firm, vessel by vessel basis over time. More specifically, it gives the historian access to the wage, voyage length, and vessel routing differentials which determined the changing rhythms of the maritime working life. It is only through the simultaneous consideration of such factors as relative time ashore and afloat, desertion, and mobility between employers that the full complexities of the subject can be understood, but with all of the relevant data presented together in a single series of documents, the task is well within the realms of possibility. The difficulties that exist revolve not around the common problem of lack of data, but rather around the understanding of the business context within which the sailor functioned, and the development of a methodology which will provide a manageable but meaningful sample of the available material.

II

THE BASIC UNDERSTANDING of the shipping industry and its relationship with labour revolves around three factors: the profound differences in vessel employment and company structure within the industry; the continuing presence of regional variations in most aspects of the subject within the context of an industry whose function and range were becoming steadily more international; and the peculiarities of a system of hiring and discharging manpower which functioned in terms of a series of short-term contracts with no formal or compulsory connection with those signed either before or after.

In the most general sense, the shipping industry was divided into two distinct sectors: the liner trade and the tramp trade. Liners followed pre-determined and well established routes on a regular schedule. Tramps followed neither regular routes nor regular schedules, instead servicing whichever particular trade required their carrying capacity (and offered their owners the highest profits) on any particular voyage. While the liner steamed back and forth between the same series of destinations, frequently serving the same customers and carrying the same commodities, the tramp might easily spend successive voyages carrying American grain to Rotterdam and Burmese rice to the Mediterranean. The tramp as well did not really operate from an established home port, or make equal pairs of outward and inward voyages. It could hire and discharge its crew in different ports or even different countries, and, depending on the nature and complexity of the cross trades engaged upon between the first and final legs of the voyage, could retain its labour force for widely varying periods of time.[10]

[10]Peter N. Davies, "The Development of the Liner Trades;" Robin S. Craig, "Aspects of Tramp Shipping and Ownership," in Keith Matthews and Gerald Panting, eds., *Ships and Shipbuilding in the North Atlantic Region*, 173-228; and Hector Gripaios, *Tramp Shipping* (London 1959).

This basic divergence in function produced two distinct forms of business organization and patterns of labour use. By the end of the nineteenth century, liner concerns were evolving towards large, centrally controlled industrial units with extensive administrative systems and internally managed business mechanisms. The growth of liner conferences, and the wave of mergers and takeovers which characterized the period, accelerated this process, producing semi-cartelization. Because of direct government interest in their potential as auxiliary warships, regular mail carriers, and instruments of imperialist expansion and economic control, liners tended to attract official subsidization and function as national flag-carriers.[11] In terms of labour, they were at once more regular and more powerful employers. Liner crews were retained on a far more extensive basis within the context of long-term service with a single company, a company which offered something approaching a formal career structure. This tendency towards stability was underpinned by the regularity of liner sailings and their commencement and termination at a single port. To put it simply, liner crews could depend upon returning "home" at predictable and evenly spaced intervals. Finally, liners tended to exercise a preferential hiring policy biased heavily towards their own nationals. Evidence suggests that vessels in the prestigious North Atlantic passenger trade carried far higher percentages of British-born crewmen than the shipping industry as a whole, although this pattern was weaker in the Far East liner trade where vessels made heavy use of underpaid Lascar labour below decks.[12]

Tramp companies varied tremendously in size, with large numbers of one and two vessel concerns at one end of the spectrum and a handful of organizations managing between 20 and 40 vessels at the other. Some firms made tentative moves into the liner business, but most remained loose collections of individual vessels operating within a skeletal administrative framework. Owners functioned as shipbrokers and shareholders as much as they did directors of a single business entity, and their vessels moved freely from trade to trade with only the most flexible central control.[13] The dynamics of tramp labour were entirely different from those operating in the liner sector. Career structures were far less formal, and the varying nature of voyages and wide range of points of employment and discharge reinforced the tendency of deck and engine room hands to move more freely from vessel to vessel, and company to company, on a short-term basis. While outward voyages usually began in the great coal ports of South Wales and Northeast England, there

[11]Edwin Green and Michael Moss, *A Business of National Importance. The Royal Mail Shipping Group, 1902-1937* (London 1982); Peter N. Davies, *The Trade Makers. Elder Dempster in West Africa, 1852-1972* (London 1973); and Freda Harcourt, "The P & O Company: Flagships of Imperialism," in Sarah Palmer and Glyndwr Williams, eds., *Charted and Uncharted Waters* (London 1981), 6-28.

[12]Pat Hann, John Hatcher, William Ronald Knowling, and Clyde Johnson, "The Social Analysis of Crews of Large Transatlantic Passenger Liners," unpublished paper, Maritime History Archives (St. John's 1988); and Conrad Dixon, "Lascars: The Forgotten Seamen," in Ommer and Panting, eds., *Working Men Who Got Wet*, 263-82.

[13]Robin S. Craig, "Aspects of Tramp Shipping and Ownership," in Matthews and Panting, eds., *Ships and Shipbuilding in the North Atlantic Region*, 207-28.

was no real tendency to operate out of a single "home" port. This factor, combined with the need to find replacement personnel, and even occasionally whole crews, in non-British ports, produced a much more international work force which varied in vessel by vessel composition in accordance with voyage patterns.

Regionality continued to exercise a strong influence on most aspects of labour employment. Recent work by L.R. Fischer and H. Nordvik has demonstrated that a national wage market had yet to evolve in the rival Norwegian shipping industry.[14] Evidence advanced later in this article suggests that the same situation prevailed in Britain. In the tramp sector, for example, there was a significant difference in wage levels between South Wales and Northeast England. Wages in continental European ports were lower than those paid in Britain, while wages on the eastern seaboard of the United States were higher, occasionally producing situations in which individual crews were working on two or three separate pay scales. Such differentials could exercise some influence on labour mobility, one obvious possibility being desertion from a crew hired in Europe to gain a far higher wage on a different vessel homeward-bound from the United States. There also appear to have been regional differences in relative wages paid to various grades of labour: firemen and deck hands (ABs) being hired on for the same wage in some ports, but paid on different scales in some others.

Considerations such as ethnicity also seem to have affected labour practice on a regional basis. Shipping firms based in relatively closed communities with strong ethnic identities appear to have exercised preferential employment policies far more frequently than those based in open, more cosmopolitan port cities. Welsh vessels tended to be crewed by Welshmen and Cornish vessels by Cornishmen, even when the vessels in question had access to labour markets full of seamen from other regions. Tramps based in Northeast England appear to have hired crews without reference to ethnic origin, their labour force more closely approximating a cross-section of the pool available at the point of hiring. This factor seems to have contributed to the identification of career advancement with loyalty to an individual employer even in the tramp sector, seamen employed by firms of the first-mentioned regional origin displaying more long-term adherence to the firm that those in the latter.[15]

All of these sectoral and regional variations can only be understood in the context of general employment practice within the shipping industry. The central institution was the voyage agreement, the statutory document which forms the basis of the collection discussed herein. The vessel's entire labour force was hired at the commencement of a voyage on a contract covering that voyage only. At the

[14]Lewis R. Fischer and Helge W. Nordvik, "From Namsos to Halden: Myths and Realities in the History of Norwegian Seaman's Wages, 1850-1914," *Scandinavian Economic History Review*, 35 (1987), 41-64.

[15]Of the 45 masters employed by Ropner in 1899-1900, only 8 had been born in Northeast England, and 19 in England as a whole. Of 28 employed by the Cornish firm of Edward Hain & Co. over the same period, 26 came from Southwest England and 21 of these from Cornwall itself. While only 13 of the Ropner masters had entered company service by 1890, all of the Hain masters had done so.

termination of the voyage, the entire crew was paid the balance of wages due and discharged without residual obligation on either side. The voyage itself was an artificial construction which could incorporate a whole series of voyages defined in the more common sense of the word. The agreement defined the voyage only in the most general geographical and temporal terms. The methodological problems associated with handling voyage-related labour data will be discussed in the next section; for the present it is necessary only to make some general observations on the ramifications of such a form of employment for the work force.

The practice of hiring and discharging on a contractually limited basis offered advantages to both management and labour. Management, which in the context of hiring was usually represented solely by the ship's master (although he may have been subject to general constraints enforced by company policy), need only employ labour when it was actually needed. There was no legal requirement to retain it when the ship was inactive in port at the terminal point of a voyage. Labour, on the other hand, was not subject to long-term control and could exercise periodic discretion over choice of employer. Having been discharged, the sailor could decide how long he wished to remain ashore, and at least attempt to find his next post on the vessel, in the trade, or with the company of his choice. These generalizations, of course, must be set in the context of cyclical trends in shipping employment and regional fluctuations in the relationship between labour opportunities and labour availability. The worker's control over his own destiny would be substantially different in a busy port under boom conditions than in a smaller port in a time of recession. It would also be subject to his own financial needs, and he could easily be forced to accept employment under circumstances of relative disadvantage, but the potential for freedom of choice remained until he had actually signed on and left port.[16]

The dynamics of the labour relationship changed completely when the voyage had actually commenced. Physical constraints confined the sailor to what was simultaneously his home and place of employment. The voyage agreement itself bound him to his employer for a period of time on which the nature of the vessel's trade might not place predictable limits. Each of these phenomena requires careful consideration. In the first case, there is no question that the sailor was vulnerable to exploitation. By the same token, changes in the nature of maritime labour associated with the introduction of steam technology and the regulation/regularization of the employment process, make the "floating hell" generalizations of the age of sail inapplicable, or at the very least in need of substantial modification. Maritime labour was being employed in a safer environment on a more regular basis, and under circumstances which were far less likely to require the seaman to perform extraordinary duties under compulsion. These developments made cooperation between officers and crew far more likely, and there is every reason to suspect that masters who employed coercion rather than conciliation in control-

[16]E.S. Gregg, "Vicissitudes in the Shipping Trade, 1870-1920," *Quarterly Journal of Economics*, 35 (August 1921), 603-17.

ling their small work force, in an environment in which common problems of vessel safety made cooperative effort a matter of common interest, were the exception rather than the rule.[17]

As far as the contractual limitations of the voyage agreement system were concerned, the sailor was presented with an opportunity to extract himself from any potentially unfavourable situation every time the vessel entered an intermediate port of call. Whether his motivation was negative (dislike of vessel, incompatibility with any component of its crew, extension of voyage beyond his own desired sea time) or positive (exploitation of potentially superior wage opportunities ashore or afloat, preconceived plan to use the voyage as a means of emigration, desire for a shore "holiday"), he could either seek termination of the voyage contract by mutual consent or desert. The advantages of the former were that it required no illegal act and involved no loss of wages due; the disadvantage was that the master might not accede to the request should replacement labour costs exceed those of retaining the original crewman. The advantages of the latter were that the act itself was relatively easy and that neither apprehension nor denial of future employment on another vessel was particularly likely; the disadvantages were that the act itself was illegal and could involve loss of due remuneration for past service. Further thoughts on mid-voyage departure from the workplace will be offered in the final section; for the present it is sufficient to observe that the voyage agreement was not a watertight contractual prison for labour.

III

THE RESEARCHER intent on examining any of these features of maritime labour through crew list analysis is presented with a series of methodological problems. The most serious of these concerns sampling. As far as the collection itself is concerned, there are three particular difficulties: first, the data contained in each separate agreement is particularly rich, presenting a wide range of potentially interrelated variables; second, the collection of agreements is simply too large to allow the systematic extraction of even the most limited range of data; third, the collection does not represent either the entire range of surviving documents or a pure sample of all the documents originally completed. The collection contains hundreds of thousands of agreements, charts at least fragments of the seagoing careers of several million sailors, and contains hundreds of millions of individual pieces of information. It represents only about 80 per cent of all surviving crew agreements, and although some of the missing documents have been extracted on a systematic basis which would not affect the reliability of the residual sample,

[17]While the available evidence is only impressionistic, there is little in the scattered autobiographical literature to suggest that mutiny, willful damage to equipment, or mass desertion were common features of the steam age, nor that masters were perceived as particularly coercive or exploitative.

others quite clearly have not and have produced sectoral or regional under-representation.[18] Finally, the survival of documents depended in the first instance on their return to the relevant government department, and there are disturbing signs that the initial degree of compliance with this requirement was at least partially governed by such factors as geographical distance from officialdom and individual clerical aberrations which are impossible to correct for in an entirely satisfactory statistical fashion.

One valuable exercise in sampling has already been carried out, the original members of the Maritime History Group extracted a 1 per cent sample of the non-Canadian vessels represented in the collection and placed the contained crew and voyage data on computer tape. It is unclear at present just how easily this sample can be manipulated to meet individual research needs, but it possesses immense potential for deriving general conclusions about the shipping industry and its labour force. Subject to the uncertainties regarding the extent to which the collection reflects a true sample of the data, the historian can expect to generate wage, crew structure, and vessel employment series which will provide an invaluable overview of the evolution of British shipping from the sail to steam ages. In that so little material of this nature exists outside of general trade and tonnage statistics prepared at the time, our understanding of the total picture of maritime work can only be greatly enhanced.[19]

Sampling of this nature, however, is affected by two methodological problems: one which might tend to produce over homogenized conclusions, and one which would deny the historian full access to the individual realities of the labour experience. Sectoral and regional differences within the shipping industry have already been dealt with at some length. Such differences, or to be more precise, the maritime historian's failure to take account of them, have already skewed our view of the industry. Many of the generalizations on Britain's business performance in an increasingly competitive international trade situation, for example, have been based on a small series of case studies of individual firms in the Liverpool-based liner trade, firms whose long-term success and survival were by no means typical of the industry as a whole.[20] Without careful handling, and without particular care being paid to regional and sectoral representation, there is a danger that similar problems will arise. General wage series, for example, are of limited utility if no national labour market existed, while crew size and structure varied so much, even between tramps and liners of the same age and size, as to make generalizations on

[18]For comment on the records in general see Nicholas Cox, "The Records of the Registrar-General of Shipping and Seamen," *Maritime History*, 2 (September 1972), 168-88; and Keith Matthews, "Crew Lists, Agreements, and Official Logs of the British Empire 1863-1913 Now in the Possession of the Maritime History Group, Memorial University, St. John's, Newfoundland," *Business History*, 16 (January 1974), 78-80.

[19]Sager, "The Maritime History Group and the History of Seafaring Labour," 169-72.

[20]Davies, "The Development of the Liner Trades," 173-206; and Sarah Palmer, "The British Shipping Industry, 1850-1914," in Fischer and Panting, eds., *Change and Adaptation in Maritime History. The North Atlantic Fleets in the Nineteenth Century*, 87-114.

an industry-wide basis all but meaningless.[21] To put it crudely, the shipping industry functioned as a series of discrete sub-units and can only be understood on that basis.

In the second case, the random sampling of crew lists by year or vessel makes it functionally impossible to comprehend the labour experience in terms of individual careers. Unless the data provided in the agreements on the seaman's previous vessel is used to carry out an exercise in reverse reconstruction, in which employment histories are created by following subjects back to their first appearance in the maritime work force, the historian will have no chance to study the structures of working life. Time spent afloat and ashore, professional advancement, changes in income, points of entry to and exit from the labour market, and mobility, either in terms of employers or geographical focus, are just some of the aspects of the subject which would remain hidden if individuals only appeared on a short-term, random basis in the sampled material. Random sampling also makes it difficult to analyze relationships between employer and employee, a factor of peculiar interest given the nature of the hiring process. To understand the dynamics of this phenomenon, it would be necessary either to isolate the shipping firm or the individual vessel within a specific temporal, regional, or sectoral context. Without such supplementary procedures, the overall picture of the maritime labour force will be too impressionistic and too vulnerable to factor-specific distortion to give the historian the level of understanding of the labour process in action which the raw material could allow.

The remainder of this article is devoted to a summary of my preliminary efforts to overcome sampling problems and to develop a detailed understanding of the relationship between labour and business in a single firm over a short period of time. The exercise was undertaken very much as a pilot project, and while some of the results are potentially significant in terms of the employment history of the British shipping industry, the real thrust of what follows is to explore potential research methods and to air the questions they produce. It will be necessary to develop the methodology, to pursue the potential relationships between sets of data, and to undertake similar case studies before a useful picture of the work force will begin to emerge.

IV

THE DATA BASE for this particular project was generated by extracting the crew agreements for 31 vessels owned by the West Hartlepool tramp firm of Robert Ropner and Company for voyages spanning, or beginning/ending closest to the turn of the century on 31 December 1899/1 January 1900. Having entered ship ownership in 1874, Ropner had become one of Britain's largest tramp operators by 1900,

[21]For a general wage series see Sager, "The Maritime History Group and the History of Seafaring Labour," 170-1. Sager's assertion that steamship crews ranged between 40 and 60 men does not represent the situation aboard the typical tramp steamer, which usually shipped a crew of only 20 to 30 men.

and his business headquarters in West Hartlepool on the River Tees in northeast England was in the heart of one of the two geographical centres of that sector (the other being South Wales).[22] The period in question (1899-1900) was in the middle of one of the booms which characterized a highly cyclical industry. Tramp ships were enjoying intensive and profitable employment, and, by extension, the workforce that crewed them was not short of opportunities to sell its labour. Within its regional and sectoral setting, Ropner's was a typical business operation, the only obvious special characteristic being its size. Labour conditions, however, were typical only of periods of high employment, and generalizations on this subject must be treated with care, or set against similar data from periods of prolonged stagnation such as those which both preceded and succeeded the turn-of-the-century upswing.

A total of 885 names appear in the sampled Ropner agreements.[23] These were broken down into four occupational/rank categories and then analyzed in terms of age and national origin. Space does not permit the presentation of the results in tabular form, but a brief summary will suffice to suggest the presence of both long-term changes from the age of sail, and potential region, sector, and firm specific phenomena worthy of further study. The mean ages of three of the four occupational/rank groups (engineer officers, deck hands, and firemen), and of the crew as a whole, ranged only between 29.67 and 31.31 (the much higher mean of 36.37 for deck officers being a product of the long service required to achieve executive rank). This indicates a significantly older work force than that of the age of sail, during which mean ages were approximately four to six years lower.[24] Only in the case of deckhands was there a significant percentage of men under 20 (7.80 per cent), and even this figure is exaggerated, rough categorization having included teenage mess deck stewards and apprentices in the group, although in terms of labour performed and status their affiliation is largely artificial. Age distribution analysis, however, indicates significant divergence between groups. Firemen were concentrated far more closely in their late 20s and early 30s (48.69 per cent aged 25-34) than deckhands (37.23 per cent aged 25-34) while the latter broke down into a relatively large age cohort in the early 20s (26.97 per cent aged 20-24) and steadily decreasing five-year cohorts thereafter. The implications of this discrepancy are best discussed in the context of wages and skill bases later in the article, but one final age/occupation statistic is worthy of note here the relative youth of engineer officers.

Engineer officers were not only far younger on average than their deck equivalents, but they counted among their number a high proportion (25.74 per cent) who were aged less than 25. In this case, the wage data is sufficiently simple

[22]Ian Dear, *The Ropner Story* (London 1986), 1-38.

[23] Maritime History Archive, Board of Trade 98 series Crew Lists, 1899-1900.

[24]Age data for the age of sail is scattered through the publications of the Maritime History Group. See for example, David Alexander, "Literacy Among Canadian and Foreign Seamen, 1863-1899," in Ommer and Panting, eds., *Working Men Who Got Wet*, 1-34.

and relevant to merit immediate consideration. There is no record of masters' wages, but those of first mates ranged from £8.0.0. to £9.0.0, and those of second mates from £6.0.0 to £7.0.0. Despite the fact that these were older men held formally responsible for the safety of the ship, they were being paid little more than half as much as their engine room counterparts, first engineers receiving between £14.15.0 and £17.15.0, second engineers between £10.15.0 and £12.15.0, and third engineers between £7.5.0 and £8.10.0 (all wages are monthly). Two observations would seem relevant here: in the first instance, engineers received formal short-term training while deck officers depended more on long-term accumulation of practical experience; in the second instance, the safe and efficient running of the power-plant was far more important to the routine operation of the steamship as a profit-making concern than any other operational function if marine disaster occurred it was the lower paid deck officer who was most likely to lose his certificate of competence and thus his livelihood, but under normal business conditions it was his younger colleague in the engine room who held the key to success or failure.[25]

Analysis of the national origins of the Ropner work force in terms of the same occupational/rank categories revealed a heavy preponderance of British-born men in the officer classes (90.82 per cent of deck and 93.07 per cent of engineer officers) and a less pronounced preponderance of the same among the remainder of the crew (56.56 per cent of deck hands and 55.81 per cent of firemen). The overall proportion of Britons (64.29 per cent), however, was well below the industry-wide figure of 71.38 per cent and even further below the figure of 82.85 per cent produced by excluding the large Lascar component (which was largely restricted to the Far East liner trade and did not at this time feature in the Ropner agreements at all). This evidence, together with that already alluded to for the North Atlantic passenger liner trade (in which some vessels carried crews that were 95 per cent British), indicates a substantial divergence in ethnicity within the maritime work force which requires further analysis in terms of sectoral and regional factors.[26]

No systematic attempt has been made to correlate age, occupation, and nationality, but the fact that the two most important non-British sources of labour (northwest continental Europe with 13.67 per cent and Scandinavia with 13.45 per cent) contributed unequally to the deck hand and fireman groups would indicate that some significant correlations might exist. Northwest continental Europe contributed 13.60 per cent of deck hands and 23.60 per cent of firemen, while the proportions were reversed for Scandinavia, which contributed 19.09 per cent of deck hands but only 10.11 per cent of firemen.

Two related explanations can be advanced for the relative over-representation

[25]H.C. McMurray, "Technology and Social Change at Sea: The Status and Position on Board of the Ship's Engineer, Circa 1830-1860," in Ommer and Panting, eds., *Working Men Who Got Wet*, 35-50.
[26]Conrad Dixon, "Lascars: The Forgotten Seamen," in Ommer and Panting, eds., *Working Men Who Got Wet*, 263-82; and Pat Hann, John Hatcher, William Ronald Knowling and Clyde Johnson, "The Social Analysis of Crews of Large Transatlantic Liners."

of Europe in the Ropner labour force. Continental ports from Antwerp north to Bremerhaven were frequent points of departure for British tramp voyages and thus common points of hiring for crews signed on and discharged *in toto* on a voyage by voyage basis. In the case of our sample, two vessels signed their crews on in Rotterdam, and one of these, in the course of a four-round-trip shuttle back and forth across the Atlantic, signed on and discharged the equivalent of three additional crews on one agreement all told these vessels account for almost 15 per cent of the total sample population, a segment containing the vast majority of Dutch and German employees. The Scandinavians, on the other hand, were most commonly inhabitants of the Northeast English ports in which they were hired, ports which constituted the most obvious destination for men from their region emigrating in search of the higher wages and better employment opportunities to be found in the British merchant marine. In both cases, these men would appear to have made up significant parts of the regional labour markets from which a Tees-based tramp firm like Ropner's might be expected to draw more heavily than many other British shipping firms. It is doubtful if any preferential hiring policy was at work here, and it would be interesting to see how Ropner crews compared with those from other regions such as Cornwall and South Wales, where fragmentary evidence does suggest that ethnicity played a distinct role in crew selection.[27]

Attention was now turned to the dynamics of the employment process, the work force being broken down on a vessel by vessel, voyage by voyage basis in an effort to gauge the relationship between the company and a highly mobile workforce. As far as the labour background of the sample crew population is concerned, the lack of comparative data makes it difficult to assess the rate of retention of employees from preceding voyages. Given, however, the relative freedom of seamen to choose another vessel after discharge, and the absence of any evidence to suggest that Ropner's offered better pay and working conditions than their competitors, an employee retention rate of 35.81 per cent from the previous voyage by individual vessels, and 42.03 per cent for the fleet as a whole (taking into account transfers from one company vessel to another), would seem to indicate a relatively high level of adherence to the company's service. Overall, Ropner masters certainly displayed a strong propensity to engage men who had made their last voyage on a British-registered vessel (94.58 percent of the population meeting this requirement). Once again the lack of external evidence makes it difficult to measure the exact extent of preferential practice, but if figures for entrances and clearances of foreign-registered vessels into/from British ports provides any indication of the availability of ex-foreign crewmen in the labour market, then some degree of preference certainly did exist.[28] Finally, there were

[27]See for example, David Jenkins, *Jenkins Brothers of Cardiff: A Ceredigion Family's Shipping Ventures* (Cardiff 1985), 98-104.

[28]In 1900, British vessels accounted for 63.7 per cent and foreign vessels 36.3 per cent of all entrances and clearances in foreign trade at British ports. The relative figures for steam vessels alone (66.8 per cent/33.2 per cent) favoured British-registered vessels slightly more.

few first-time sailors hired, and in this case some element of policy must have been involved, it being impossible to believe that the maritime work force as a whole included only 0.16 per cent of neophytes.

As far as crew retention during voyages is concerned, the evidence strongly suggests that the steamship sailor of 1900 was far more likely to complete his contracted period of employment than his predecessor from the age of sail. The overall rate of crew retention was 82 per cent, and this figure rises to 85 per cent if those who signed the agreement but failed to join at time of sailing are excluded. The picture is skewed in this case by the multi-crossing voyage of one of the Rotterdam-based vessels, which effectively hired and discharged four separate crews, and if the agreement in question was dealt with as four separate contracts, the rate of retention would become even more impressive. Neither sickness and death, nor imprisonment at an intermediate port were significant causes of crew loss. If the mutual consent discharges of the above-mentioned voyage are excluded, then desertion emerges clearly as the most common drain on a ship's labour force, accounting for 34.45 per cent of all crew losses and 46.59 per cent of those which actually took place after the voyage began. As a proportion of the entire sample labour force of 885, however, deserters comprise only 4.63 per cent, and 17 of the 31 voyage agreements in question were concluded without any loss through desertion.

If these figures are representative of the industry and its age, then a significant change had taken place since the "golden age of sail," during which some sources suggest desertion reached rates as high as 25 per cent.[29] This trend would fit in well with the view of a more stable and regularized work environment put forward at the beginning of the paper. Desertion, as the ultimate form of expression of labour dissatisfaction with wages, working conditions, and terms of employment, might actually be the most valuable phenomenon to study in the search for an understanding of the mechanics of the maritime labour process, and for that reason it will be employed here as a device for pulling together data and conclusions on those aspects of the topic not yet covered in other contexts.

Two of the most obvious candidates for explaining desertion are the length of the voyage and the deserter's wage. In the population studied, the second factor was clearly far more important than the first. The sample voyages varied in length from three days (the vessel in question being wrecked while still in British coastal waters) to 288 days. Mean and median voyage lengths were grouped closely together (128 days in the first case, 125 in the second), but two separate modal voyage lengths (five each lasting between 117 and 125 days, and 172 and 179 days) indicate that we can only present the "normal" tramp voyage as representing a period of employment of between four and six months. In the wider context of labour behaviour, it would be interesting to discover if crewmen did perceive there to be a norm as far as voyage length was concerned, but whatever the case it would

[29]Sager and Fischer, *Shipping and Shipbuilding in Atlantic Canada, 1820-1914*, 14-15.

not seem to have exercised much influence over desertion, there being no significant correlation between final voyage length and crew loss due to illegal departure. While overall crew loss was a function of attrition over time, most desertions occurred after employment. Well over half the Ropner desertions (24 of 41) actually took place on only three of the sample voyages six men leaving one vessel at Capetown, another nine men at Baltimore, and a total of ten leaving the already-mentioned multi-crossing vessel during three separate calls at Philadelphia.

The most obvious explanation for this pattern of behaviour is group perception of superior economic opportunity away from the vessel. The first vessel had shipped a relatively well paid crew (monthly AB/fireman wage, £4.10.0) in Britain, but arrived in South Africa during the local wartime boom. The other two had shipped less well paid crews (monthly AB/fireman wages, £3.5.0 to £3.15.0 in Rotterdam, and were arriving in U.S. east coast ports in which their lost men had to be replaced at a cost of £6.0.0 per month. In the case of U.S. desertions, there is other evidence to suggest that if the phenomenon can be explained in terms of opportunity cost, then that cost was somewhere between the wage differentials of British and European-hired crews. The only two vessels to hire in Europe lost a total of 19 men in American east coast ports. By contrast, 14 of 29 British-hired crews were also presented with the opportunity to desert in the same ports, but only ten men took advantage of it, and five of these had actually been hired on as mid-voyage replacements outside the U.K. at lower rates of pay.

A deeper understanding of desertion can only be achieved by a study of the phenomenon over time. If the vessels in the Ropner fleet were studied over a series of voyages, for example, it might well emerge that certain masters or certain vessels were desertion prone regardless of wage differentials or geographical location. Working conditions afloat would clearly vary with the character of the master and the condition of the vessel, and in some cases the variation must have been pronounced enough to produce higher than average desertion. The study of masters and vessels over time would also seem to be necessary to come to a fuller understanding of wages. The wage data produced by the single voyage per vessel Ropner sample is fairly conclusive as regards the existence of regional wage markets, but it leaves open some questions to which master/vessel-specific behaviour might well hold the key.[30]

Leaving aside foreign labour markets, the Ropner vessels recruited in two entirely separate regions of the U.K.: the coal ports of Northeast England and coal ports of South Wales. With one exception, in which firemen were paid an extra £0.5.0, all of the vessels recruiting in the northeast paid ABs and firemen a flat monthly wage of £4.10.0 over the period from August 1899 to January 1900 in which the agreements were signed. In South Wales, over a period stretching from

[30]For a preliminary study of the problem of desertion see Lewis R. Fischer, "A Dereliction of Duty: The Problem of Desertion on Nineteenth Century Sailing Vessels," in Ommer and Panting, *Working Men Who Got Wet*, 51-70.

April 1899 to January 1900, most crews were hired at a flat rate of £4.0.0, but a minority were hired at the higher rate prevailing in Northeast England. There is no obvious temporal or seasonal pattern to Welsh wage differentials, and there are several instances of vessels clearing the same port almost simultaneously with different wage rates. Generally, it would appear that wages were both higher and more consistent in the northeast than in Wales. This might be the product of a relative scarcity of labour in the former area, which did not clear the same high volume of coal export cargoes as the latter, but some wage levels might have been master/vessel-specific and further work on the subject is clearly required.

Considering all of the wage data together, there is another question which required further study, both through the creation of a multi-employer population fixed in time and through the construction of a time series for the company and vessels considered herein. One instance of firemen receiving a higher wage than ABs has already been noted in the major British tramp labour markets, and the practice was far more widespread in other ports in which crews were recruited. In that firemen were generally older or to be more accurate, more frequently mature men in the peak years of physical strength and were being hired to perform a task that was both more strenuous and more vital to the running of the vessel under normal operating circumstances (the constant movement of coal in confined spaces as opposed to the routine maintenance of the vessel), there would not appear to be any difficulty in explaining the wage differential, except for the fact that it was usually present in labour markets away from the major centres of recruitment. There is no obvious reason why a German fireman should be paid more than a German AB by a firm which paid British firemen and ABs at a uniform rate, but there are clearly factors operating in regional maritime labour markets with which we are yet unfamiliar.

The fact that the preceding section raises more questions than it answers is the inevitable product of the exploratory nature of the piece. More generally, however, it can only underline the need for more research and the development of more sophisticated methodological techniques in the area of crew list analysis. It is hoped that the range of possibilities and problems laid out in the pages of this article will prove sufficiently stimulating to attract more scholars to the task. The potential for understanding the labour process, the structure of the labour force, and the nature of labour life is as large, if not larger, than the collection itself. Progress on any of these fronts would have ramifications far beyond the confines of maritime history, and Canadian scholars interested in the working man in the industrial age would be ill-advised to ignore the presence of a source such as the Maritime History Archive's crew agreement collection on their very doorstep.