SEIJA-RIITTA LAAKSO

Across the Oceans

Development of Overseas Business Information Transmission 1815–1875

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Preface

The origins of this work go back to *Italia '98*, an international philatelic exhibition in Milan, where a well-known French dealer happened to have a box of old letters on his desk. Two of these letters appeared to be especially interesting. They were business correspondence, sent from New York to August Martell in Cognac, France, in the late 1820s, by the ships *France* and *Charlemagne*.

At that time, all overseas mail was carried across the oceans by sailing ships. A further examination of these two letters opened up a new world to me. The *France* and the *Charlemagne* were American sailing packets on regular line service between New York and Havre. As will be noticed in this study, the idea of 'sailing on schedule' instead of general merchant shipping was one of the most important conditions for the development of business information transmission, whether conducted by sail or by steam.

A few years later, when I started this study, Professor Yrjö Kaukiainen's article on the Shrinking World gave my thesis a firm direction at the point when the idea was still more or less open. Without that article, my work on this theme would probably never have been started. I would like to thank Professor Kaukiainen for his patient guidance, which continued even after his retirement from his university post.

I would also like to thank Professors Riitta Hjerppe and Markku Kuisma for their support and many useful conversations in their research seminars, and Professor Päiviö Tommila for his earlier counsel on the history of communications. I am also indebted to Professor Laura Kolbe, who took the time to read my thesis in an early stage, thank you for your support.

My warmest thanks also go to Professor Robert Lee, School of History at the University of Liverpool, and Dr Adrian Jarvis, Centre for Port and Maritime History, for facilitating and supporting my studies in Liverpool.

The pre-examiners of my thesis, Professor Jari Ojala and Docent Mika Kallioinen gave many insightful comments on the work. Especially the detailed observations and recommendations by Jari Ojala were extremely valuable in the final phase of the study. The international group of researchers led by him and Leos Müller also shared ideas of good value during the congresses under the title 'Information Flows 1600-2000' in Jyväskylä (2005) and in Helsinki (2006), and many e-mails and articles have been

sent across the oceans between the participants later on. Thank you for your contribution, all of you.

Graeme J. Milne, Sari Mäenpää and Tage Lindfors, thank you very much to you, too, for reading my texts and giving your useful comments, and thanks for all our good conversations. And without Tim Voelcker's help in London, some of my East India records would never have been finalized – thanks a lot.

I would also like to add my grateful thanks to my opponent at the defence of my doctor's dissertation in Helsinki in December 2006, Professor John J. McCusker from Trinity University, San Antonio, Texas, USA, who still keeps 'nudging' me to continue studies on this topic.

Thank you, Heikki Hongisto, Johan Snellman and Seppo Talvio for kindly providing me with copies of relevant correspondence from your philatelic collections. And thanks for the whole philatelic society – collectors, dealers, writers, and colleagues in different countries – for all the discussions, articles and useful tips over the years. It has really been fun.

After publishing the web version of my thesis, I have had the pleasure of receiving encouraging comments as well as updates and unpublished information on their own studies from the well-known maritime postal historians Colin Tabeart and Richard Winter. Thank you very much for your kind help and observations.

Many thanks to Derek Stewart and his team for the final language checking of my work and to Professor Lewis R. Fischer and Maggie Hennessey, Managing Editor of the IJMH, for their useful advice concerning academic writing.

Research work could hardly be successful without the help of skilled personnel in the libraries and archives. I would like to direct my grateful thanks to the directors and personnel of the Merseyside Maritime Museum Library & Archives; the University of Liverpool's Sydney Jones Library & Archives; the Liverpool Public Record Office Library & Archives; the India Record Office and the Philatelic Collections of the British Library in London; the Library of the Royal Philatelic Society London; and the Library of the Post Museum in Helsinki.

For financial support, I wish to express my warm thanks to the Helsingin Sanomat Centennial Foundation, which enabled my studies in the Liverpool archives, and to the University of Helsinki.

Finally, of course, my greatest gratitude goes to my family and to all my friends, whether mentioned above or not. Without you my thesis would probably have been completed much earlier, but I would definitely have lost something else of personal importance in my life. Thank you all.

I dedicate this book to my parents: to my late father, who always encouraged me to study further, and to my mother, whose warm support helped me through many difficulties during the years when I was involved in this research.

Helsinki, June 2007
Seija-Riitta Laakso

I Introduction

Earlier studies have shown that the speed of information transmission increased markedly in all parts of the world during the 19th century. Before that period, the development in duration and frequency of sailings had been very much slower.[1] The fast progress was primarily based on the change from sailing ships and horse-driven coaches to steamers and railways. The telegraph, introduced by the mid-19th century and taken into intercontinental use twenty years later, finally revolutionized the speed of information transmission over long distances. This development has generally been described as a chain of technical improvements. In the real world, things were of course more complicated.

The title of this study, *Across the Oceans – Development of Overseas Business Information Transmission 1815–1875*, has been chosen to indicate that shipping and overseas information transmission were unquestionably linked in the 19th century, before the time of aircraft or electric communications. Maritime history is usually seen as the history of shipping, while the development of the speed of information transmission is often included in the history of communications. In particular, Yrjö Kaukiainen, Ian K. Steele and Allan R. Pred have carried out important research by combining these aspects.

The starting point for this particular study was Yrjö Kaukiainen's article, in which he showed that the general duration of information transmission had continuously decreased several decades before the breakthrough of the electric telegraph. Kaukiainen based his arguments on maritime intelligence published by *Lloyd's List*, calculating how many days it took for the information on ship arrivals in different ports around the world to reach London and be published.

Interestingly, the shortest time lag e.g. between Barbados and London was 38 days in 1820, but only 20 days in 1860. Similarly, the time lag decreased on the route between Buenos Aires and London from 72 to 40 days; between Valparaiso and London from 109 to 49 days; and between New York and London from 23

1 See Yrjö Kaukiainen, 'Shrinking the world: Improvements in the speed of information transmission, c. 1820–1870'. *European Review of Economic History, 5* (Cambridge, 2001), 1–28; Ian K. Steele, *The English Atlantic 1675–1740. An Exploration of Communication and Community* (Oxford, 1986); and Allan R. Pred, *Urban Growth and the Circulation of Information: The United States System of Cities, 1790–1840* (Harvard, 1973).

to ten days during the same period. The most remarkable changes were seen on the East India route, where the time lag between Bombay and London decreased from 121 to 25 days; and between Calcutta and London, where it decreased from 128 to 35 days between 1820 and 1860.[2] All this happened before the long distance telegraph was brought into use. The Atlantic cable was laid successfully in 1866, and a direct connection from London to India was opened in 1870. A direct telegraph line to Buenos Aires was available in 1875.

A great part of the development can naturally be explained by the overall change from sail to steam and the opening of railways over the isthmuses of Suez and Panama. But it is also evident that such changes took time. The networks – shipping routes and regular sailings, railways, canals, and telegraph lines – had to be established, financed and built, as well as coordinated to serve the mail system. Everything could not be done immediately when a new innovation was made. Sometimes a new innovation had to be technologically improved for years before becoming commercially successful, as with the different steam engine solutions for ocean transport.

Earlier research has already shown that the shift from sailing ships to steamers in bulk transport was mainly based on reducing fuel costs, extending from short trade voyages to longer distances over several decades, instead of just being one technological event.[3] Also the cost development of shipping during the shift period, particularly the freight rates as well as capital, fuel and labour costs, have been thoroughly examined by maritime historians.[4] However, most of these studies cover primarily cargo shipping. Mail and passenger services were a rather different business, where speed and regularity were highly valued and the (bulk) freight rates only played a minor role.[5]

New technology was always more expensive to build and use than the old, and included more risks. Financing depended on the expected benefits of

2 Kaukiainen (2001), 1–28. – Westbound, the difference on the New York route would obviously have been much greater due to the prevailing winds and currents.

3 Charles K. Harley, 'The shift from sailing ships to steamships, 1850–1890: a study in technological change and its diffusion' in Donald N. McCloskey (ed.), *Essays on a Mature Economy: Britain after 1840* (London, 1971), 215–237. Harley's study does not cover the mail and passenger steamship services, which competed in a very different market. In accordance with Harley's paper, it has also been argued that the huge increase in cargo carrying capacity was the end result of a century of evolution, starting from the 1860s and ending in the 1960s. The process was basically a matter of successive relatively small increments in size and speed, in carrying capacity and fuel efficiency. The two major 'revolutions' in technology were the interaction of metal construction and steam propulsion to produce ships capable of operating economically over long distances on regular schedules, and the introduction of containerization. See Malcolm Cooper, 'From *Agamemnon* to *Priam*: British liner shipping in the China Seas, 1865–1965' in Richard Harding, Adrian Jarvis & Alston Kennerley, *British Ships in China Seas: 1700 to the Present Day* (Liverpool, 2004), 225.

4 In addition to the above, see for example Yrjö Kaukiainen, 'Coal and Canvas: Aspects of the Competition between Steam and Sail, c. 1870–1914' in Lars U. Scholl and Merja-Liisa Hinkkanen (eds), *Sail and Steam. Selected Maritime Writings of Yrjö Kaukiainen. Research in Maritime History No. 27* (St. John's, 2004), 113–128. For the investment cycles and development of capital and labour costs, see also Yrjö Kaukiainen, *Sailing into Twilight. Finnish Shipping in an Age of Transport Revolution, 1860–1914.* (Helsinki, 1991), 73–128.

5 A good overview to the financial management of a government-sponsored joint-stock company can be found in Francis E. Hyde, *Cunard and the North Atlantic, 1840–1973. A history of shipping and financial management* (London, 1975).

the business. To find entrepreneurs or investors for such experiments, there had to be a clear demand for the service. Distant places far from the world's business centres, such as California or Australia, had to wait for a gold rush to become interesting enough for regular communications services.

To date, no attention has been paid in discussion on the speed of information transmission to the somewhat varying needs of the heavy users of long distance mail services, especially newspapers and business enterprises. For newspapers, it was extremely important to receive urgent news as quickly as possible, and special arrangements were frequently made to beat the competitors. While fast one-way information transmission was clearly also important from the merchants' point of view, they needed a system which would work efficiently in both directions. This is the reason why the name of this study includes the term 'business information transmission' instead of just 'information transmission' or 'market information transmission'. Although the business enterprises certainly took all the advantage they could of, for example, the telegraph, there was always the need of physical mail transmission as well. This study is about the business information transmission: how new systems were introduced and developed during the period, and how the merchant houses and their trade partners used the growing network of world communications for their different needs.

TABLE 1. *Differences between the nature of information transmission for newspapers and for business enterprises.*

	General information transmission	*Market information transmission*	*Business information transmission*
Main target groups	Newspapers	Newspapers & business enterprises	Business enterprises
Special needs	Asap. The first one receiving the news was the winner.	Asap. The first one receiving the news was the winner.	Asap. Also the possibility to react rapidly was important.
Contents	Any news of general interest.	News of market situation, changes in prices, etc.	Market information, business documents, personal letters between business partners, agents, etc.
Means of communications	The fastest possible means of communications, including pigeons, telegraph, etc.	The fastest possible means of communications, including pigeons, telegraph, etc.	The fastest possible means of communications suitable for carrying physical documents.

In addition to newspapers and business enterprises, there was also a third major group of interests, i.e. the governmental and military needs for rapid information transmission. As administrative letters could also be carried by naval ships, it has not been possible to include them in this study, except in the cases where the naval vessels also carried ordinary mail, e.g. in the Mediterranean as part of the East India mail route in 1830–1857, or when they were replacing the Admiralty-governed Falmouth packets for one reason or another. Private letters were carried in the same way as the commercial ones, and they are implicitly included in this research without further remarks.

As this is a study of the logistical development of mail transmission, it will not discuss the networks of the specific merchant houses or the contents of the letters carried. These will be described only by way of example in a few cases.

In the business world, information flows often consisted of multiple transactions. Although fast one-way information could be crucial in the trade – for example the news of changes in the market situation – it was at least equally important that there was a possibility to react rapidly. Overseas business consisted of numerous letters sent back and forth across the oceans. It was not only important to know the market situation and the prices before making an order, it also had to be known when and by which vessel the freight would be shipped, a bill of lading should be sent to confirm the shipping and a bill of exchange should be sent for the payment.

Regular correspondence with different companies and agents was often necessary throughout the year. The role of agents has been recently covered by e.g. Jari Ojala, according to whom the constant flow of information was needed not only for the business itself or for vital market information, but also as an important way to achieve trust between the parties undertaking transactions.[6]

Improvements in the speed of communications were crucial for many commercial, financial and shipping business activities. Speedier information made capital move faster, directly affecting world trade. Or, as it was seen in Victorian England: 'Increased postal communications… implies increased relations with that country, increased commerce, increased investment of English capital, increased settlement of energetic middle-class Englishmen; and from all these sources, the wealth and prosperity of England… are greatly increased.'[7]

To what extent economic growth was based on improving communications is difficult to show. There was clearly a connection between them and it seems that the growth in exports correlated positively with the need to create and improve systems for long distance mail transmission.

In Britain and the United States, the value of merchandise exports grew tenfold between 1820 and 1870, and many other countries followed closely.

6 Jari Ojala, 'The Principal Agent Problem Revisited: Entrepreneurial networks between Finland and 'world markets' during the eighteenth and nineteenth centuries' in Margrit Schulte Beerbühl and Jörg Vögele (eds.) *Spinning the Commercial Web. International Trade, Merchants, and Commercial Cities, c. 1640–1939* (Frankfurt-am-Main, 2004).

7 A quote from Sir Charles Wood by Michael Pearson in *The Indian Ocean* (London, 2003), 203.

As Britain in the early 19th century was so much ahead of any other country in economic performance due to the early industrial revolution, its real figures show an even more impressive increase during the period in question. In 1870, the value of British merchandise exports equalled the corresponding figures of the United States, France and Germany combined, even though colonies such as India were not included.[8]

TABLE 2. *Value of merchandise exports at constant prices 1820–1870 (million 1990 USD).*

	1820	*1870*
Britain	1,125	12,237
France	486	3,512
USA	251	2,495
Germany	–	6,761

Source: Maddison, 236–237.

In 1820, employment between major economic sectors in Britain differed markedly from any other country. While agriculture, forestry and fisheries employed 37.6% and mining, manufacturing, construction and utilities 32.9%, services already employed 29.5%.[9] The service sector included financing activities and shipping, both of which were strongly dependent on fast information transmission. 19th century Britain was the world's main source of foreign capital, investing mainly in Europe and Latin America until 1830, but thereafter increasingly in canal and railway construction in the United States and India.[10]

In 1870, less than a quarter (22.6%) of British employment came from agricultural activities, more than 42% came from industry and 35% from the service sector. At the same time, agriculture still accounted for almost half of employment in France and Germany, and for as much as 70% of employment in the United States, where business activities were concentrated in the large cities of the north eastern coast.[11]

In the light of these figures, it is no wonder that the development of faster business information transmission was especially in British interests. The economic structure of other comparable countries did not require it to the same extent. And in terms of potential, the British had coal, iron and the

8 Angus Maddison, *Monitoring the World Economy 1820–1992. OECD Development Centre Studies,* (Paris, 1995), 236–237.

9 Maddison, 39. See also James Foreman-Peck, *A History of the World Economy. International Economic relations since 1850* (Sussex, 1983), 18–21.

10 See A.G. Kenwood and A.L. Lougheed, *The Growth of the International Economy 1820–1980* (London, 1985), 40–45.

11 Maddison, 39.

technological knowledge to develop steamship services; a manufacturing industry that created new capital to the market; and tolerable labour costs on board the ships.[12] Additionally, there was the long tradition of overseas mail services by the British Post Office sailing packets, starting on the route between Falmouth and Lisbon in 1689.

The aim of this study, methods, structure and sources in brief

This study aims to find out how efficiently the information transmission systems used on the world's most important mail routes served business during the period 1815–1875. Several concrete cases have also been examined to see how efficiently these services were used in practice.

We can of course not judge the effectiveness of the 19th century mail systems by any modern criteria. What could be extremely slow in our view, might have been acceptable and even good performance in those circumstances. Thus the development of mail services can only be measured by comparable criteria such as speed, frequency, regularity and reliability. Of these criteria, reliability is the most intangible. It is viewed here from the perspective of information transmission, observing the regularity of sailings as well as the safety of shipping measured by the number of wrecks, both of which varied greatly between the different companies.

As the study covers a period of six decades, as well as several of the world's most important trade routes and different mail-carrying systems operated by merchant ships, sailing packets and several nations' mail steamship services, a specific method has been developed to measure the duration of business information transmission in a systematic and commensurable way.

The method of calculating consecutive information circles enabled by different means of communications gives a clear picture of the best options available for business information transmission during the year. The development of communications can easily be seen from the comparative figures of different time periods. To complete the picture, the business correspondence of several merchant houses has been used for postal historical research to illustrate how the system worked in practice.[13] Much emphasis has also been put on the research of the historical context, which is essential for understanding why and how things changed.

As world trade was so much in British hands during the time period in question, and the most important long distance mail routes were mainly

12 E.g. in the 1860s, the average wages of able-bodied seamen were 3.1 pounds sterling per month in England, compared with 6.0 in British North America. The average in Europe was 2.8. but for example in Finland and Norway less than 2.0. See Yrjö Kaukiainen, 'Finnish sailors, 1750–1870' in Lars U. Scholl and Merja-Liisa Hinkkanen (eds), *Sail and Steam. Selected Maritime Writings of Yrjö Kaukiainen. Research in Maritime History No. 27* (St. John's, 2004), 19.

13 Postal historical research focuses on the postal markings and handstamps of the letters instead of their contents. In a few cases, some attention has also been paid to the contents to shed more light on the circumstances in which the information was transmitted. As will be explained in Chapter II, this study is not about mercantile networks but about how the systems of business information transmission developed during the chosen period.

those connecting Britain and its (former) colonies or other important trade partners, the approach of this study is unavoidably British in orientation. Yet the overseas mail services of American, French and German steamship companies have been included where the sailing data has been available. It should be noticed that these services started much later than the British and many of them were active only for a short period.

Before 1840, the British Post Office sailing packets carried mails from England to North America, the West Indies and South America, while the route to India was covered by the British East India Company until the end of its monopoly. In the 1820s and 1830s, most of the North Atlantic mails were carried by the commercial American sailing packets. At the end of the 1830s, the British Post Office made three important mail contracts: one for the route from England to Halifax (Nova Scotia) and Boston with the Cunard Line, starting in 1840, another for the service to the West Indies with the Royal Mail Line, starting in 1841, and a third for the service via the Mediterranean and Suez to India with the P&O, starting gradually in 1840. The mail steamship service to South America by the Royal Mail Line started in 1851, and the P&O also extended their Asian network markedly during the years thereafter.

American competition on the North Atlantic route was extremely hard in the 1850s but declined sharply after 1857, when the U.S. Congress made a decision to terminate the government subsidies for mail steamship companies. After the Civil War, the government's interest was mainly in developing internal structures such as canals and railways, and foreign trade did not expand to the same extent.

Excluding the short experiment on providing government subsidies for a French steamship company in 1847, the French did not organize corresponding mail services on long-distance routes before the 1860s. The German steamship companies Hamburg-Amerika Linie and Norddeutscher Lloyd were established in the 1850s but they gained greater importance only later, when the emigration to North America expanded after the Civil War and the frequency of the sailings increased. For these obvious reasons, the space given to the different mail services and companies in this study depends very much on the length of the time the services existed. The electric telegraph entered the picture rather late from this study's point of view. The importance of telegrams as business communication tools increased notably later, towards the end of the century, when the prices of the service were reduced to a more reasonable level.

John J. McCusker has compressed the overall development of business press and the 'Information Revolution' during the last five centuries in three words: 'better, faster and cheaper'.[14] However, the question of information costs could not easily be covered here. There would not only be the angle of the users of different mail services, but also the viewpoints of mail-carrying shipping companies as well as the governments that paid for the services by awarding mail contracts.

14 John J. McCusker, 'The Demise of Distance: The Business Press and the Origins of the Information Revolution in the Early Modern Atlantic World' In *The American Historical Review*, Vol. 110, Number 2, April 2005, 295–321.

During the period in question – the time before the Universal Postal Union, or the UPU – there was no uniformed system for overseas mail, but only bilateral postal treaties between the countries. The contents of the treaties varied and they were renegotiated several times over the decades in question. The postage rates varied in each case depending on the ship by which the letter was carried (private or official mail-carrier), on the route and the mail contract under which the letter was carried, as well as the length of the inland voyage at both ends of the journey. Even during the same period there were alternatives for sending mail with different costs.[15] And furthermore, in the first half of the 19th century it was mostly the recipient who paid for the letters when receiving them, not the sender who chose the means of communication.

From the operator's – the mail-carrying shipping company's – perspective, faster communication increased costs. The expenses of building and operating steamships were manifold compared with sailing vessels. And newer and faster steamers were needed all the time to keep up with the competitors. Also the laying of submarine cables was conducted by huge expenses. Many companies failed, and only a few succeeded. For the governments, the mail contracts were usually a fiscal burden and a subject for continuous political debate.

Due to the wide spread of the subject, the costs of information transmission are touched here only as examples of different aspects. The intention of this study is mainly to try to find an answer to the question: was there a 'revolution' in the way of organizing the global business information transmission in the 19th century. And if there was, when was it and what happened really?

Earlier research on business communications will be discussed in Chapter II and the use of different methods and sources in measuring the speed of information transmission in Chapter III. A short introduction to the overseas mail systems and the development of the speed of communications before 1815 will be presented in Chapter IV.

The study covers the time period from the end of the Napoleonic Wars in 1815 to the formation of the UPU in 1875, which finally uniformed the regulations of the world's mail systems and rates. Two important shift periods are thus included: the transition from sail to steam in overseas mail transport, and the introduction of the intercontinental telegraph.

There would have been at least two different ways of organizing the main contents (chapters V–VII) of the study. The first would have been a chronological approach:

- Sail vs. sail
- Sail vs. steam
- Steam vs. steam
- Steam vs. telegraph

15 There are several distinguished postal historical studies of the postage rates of the period. See George E. Hargest, *History of Letter Post Communication Between the United States and Europe 1845–1875* (Massachusetts, 1975); Jane Moubray & Michael Moubray, *British Letter Mail to Overseas Destinations 1840–1875* (London, 1992); Richard Winter, *Understanding Transatlantic Mail, Vol. 1.* (Bellefonte, PA, 2006).

In the early 19th century, the only way to transmit information was to send letters across the oceans by sailing ships or across land by horse and coach. Growing world trade created a need and technological development introduced options to improve general information transmission. Starting in the 1830s, a network of steamships, railways, canals and telegraphs was gradually built to connect different parts of the world.

The book explains how the rate of information circulation increased many times over as mail systems were developed. Nevertheless, regional differences were huge. While improvements on the most significant trade routes between Europe, the Americas and East India were considered crucial, distant places such as California or Australia had to wait for gold fever to become important enough for regular communications. The growth of passenger services, especially for emigrants, was a major factor increasing the number of mail sailings. The study covers the period from the Napoleonic wars to the foundation of the Universal Postal Union (UPU) and includes the development of overseas business information transmission from the days of sailing ships to steamers and the telegraph.

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