Modern Asian Studies **40,** 3 (2006) pp. 605–629. © 2006 Cambridge University Press
doi:10.1017/S0026749X06002101 Printed in the United Kingdom

Robert Hart and China's Statistical Revolution

ANDREA EBERHARD-BRÉARD

CNRS

Introduction

In 1890 Robert Hart was elected Honorary Fellow of the Royal Statistical Society.[1] Hart had sent copies of the statistical publications of the Maritime Customs Service regularly to the Society,[2] but he himself was no statistician. He did publish one piece in the *Journal of the Statistical Society of London*, but this was no more than an extract of a conclusion Hart wrote to reports written by the Commissioners at China's Treaty Ports on local opium consumption.[3] But Hart, as Inspector General of the Maritime Customs Service, bore general responsibility for its publications and involved himself deeply in its statistical projects. H. B. Morse, who would serve as Statistical Secretary, wrote: 'while weak in the fiscal and economic field, he was a marvel in organisation and the direction of the work of others'.[4] Within the Customs Service, it was the Statistical Secretary who had immediate responsibility for the statistical publications of the Customs. He was stationed in Shanghai, China's busiest port, rather than Beijing, where the Inspectorate had its offices close to the Zongli Yamen, the Qing agency overseeing China's relations with Western countries.

[1] Fifth Ordinary Meeting, Tuesday, 18th March, 1890. *Journal of the Royal Statistical Society*, Vol. 53, No. 3 (Sep. 1890), 364.

[2] *Medical Reports*, *Reports on Trade at the Treaty Ports*, *Special Series*, etc. See 'Additions to the Library' in *Miscellanea of the Journal of the Royal Statistical Society* (1878 and later issues).

[3] Robert Hart, 'Opium in China: How Many Smokers does the Foreign Drug Supply?' *Journal of the Statistical Society of London*, Vol. 44, No.4 (Dec., 1881), pp. 743–50.

[4] Hosea Ballou Morse, *The International Relations of the Chinese Empire* (London, New York: Longmans, Green, and Co., 1910–18) [Reprint: Taipei: Book World Co., 1966], vol. III, 399.

0026–749X/06/$7.50+$0.10

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

The decision of the Royal Statistical Society to make Hart an Honorary Fellow is not difficult to defend. The statistical publications of the Customs Service turned information about the flow of commodities and revenue into public knowledge, available to all within and outside China as both English and Chinese versions were issued. The Qing too had collected numerical information on trade and revenue, but had not published it. China's Treaty Ports became not only an administrative but also a cognitive space, observed and described through coherent matrices. Reflecting the British background, trade and revenue were presented as knowledge properly belonging to the public and in the process defining it.

In this essay, I first discuss Qing statistical institutions as well as late Qing innovations. I then describe the Statistical Department of the Customs. I will also explore why the Statistical Department would initially have little impact on other Chinese government bureaucracies. It was only following the great crisis of the Boxer Rebellion in 1900 and the subsequent New Policy reform movement during which the Qing attempted to Westernize its bureaucracies that the Qing state began to broaden its statistical efforts. However, it then turned toward Japanese models and not to what it had at home.

Statistics in Late Qing China

The *Returns of Trade* of the Customs Service were published since the 1860s, but no other Chinese government organization adopted the modern Western methods of presenting statistical information until 1907.[5] This does not mean that the Qing state did not collect numerical information. But, as shown in an inventory of the central archives of 1905, reporting to Beijing from the provinces had fallen seriously behind schedule.[6] According to the statutes, higher

[5] The first statistical tables were published by Statistical Offices of the government in 1907 and were on education: Xuebu Zongwusi (Board of Education, Department of General Affairs), *Di yi ci jiaoyu tongji tubiao: Guangxu sanshisan nian fen* (First Statistical Tables on Education of 1907) [Reprint: Taipei: Zhongguo chubanshe (China Press), 1973]. A year later followed statistics on agriculture, industry and commerce: *Nong gong shang bu tongji chu* (Statistical Office of the Board of Agriculture, Industry and Commerce), *Nong gong shang bu tongji biao di yi ci* (First Statistical Tables of the Board of Agriculture, Industry and Commerce), 6 vols. (Beijing, 1908).

[6] See 'List enumerating the documents not reported from the provinces during cumulative years' (*ge zhi sheng jinian wei bao ge an kai lie qingdan*), attached to a memorial received 9 February 1907. Archives of the *Office of Military Archives*, Printed Materials 41 (*Fanglüeguan, shuji*). Beijing, N° 1 Historical Archives.

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

provincial authorities had to present periodically information on the prices and harvest of grain, rainfall, revenue collection, population numbers, transfers or revenue to and from other provinces and other data in the form of Clear Lists (*qingdan*).

These enumerated lists, submitted to the Emperor and transferred to the metropolitan office concerned, were supposed to provide accurate and detailed information in a comprehensive format. Generally appended to memorials they presented in columns numerically what the text they were associated with described verbally and in more general terms.

Based on heterogeneous local conditions, with substantial differences in measures of weight and value[7] and with an unstandardized nomenclature, this reporting system which had a long tradition in the political administration of the Qing state, was suited to its fiscal habits. The Qing for example allocated revenue quotas to its collection agencies. These reported monthly on the remittances they made to Beijing and to other government agencies as well as on the funds they transferred to or received from neighbouring governments. The Clear Lists therefore did not have to reflect actual collections, as the quotas were historically determined. It was in fact customary for actual collection to exceed, often significantly, official quotas because the salaries of local officials were low while other customary obligations locally and within the bureaucracy also had to be defrayed. According to the treaties concluded by China and various Western countries after the Opium War (1839–1842), taxes on foreign trade were based on a tariff that stipulated what duties were to be paid on imports. Goods not enumerated on the tariff list were to pay duty at five percent of local market values. Moreover, the taxes paid on foreign trade were to be made available to Beijing. Thus, the Returns of Trade compiled by the Maritime Customs Service served a different function than the traditional Clear Lists.

It was only after the shock of China's defeat in 1895 by Japan with the consequent loss of Taiwan as well as the Boxer Rebellion of 1900 and the invasion of the Allied Expedition that Chinese interests in German theories of social statistics grew in China.[8] A Constitutional

[7] On the early efforts at standardizing measures, see Wu Chengluo, *Zhongguo duliang heng shi* (History of Chinese Weights and Measures) (Shanghai: Shangwu yinshuguan, 1937, 2nd ed., Taibei, 1957), 252–81.

[8] Shen Linyi, Director of the Statistical Bureau (1907–1910) was a severe critic of the movement. See Shen Linyi, *Ziqiang chuyi* (A Preliminary Opinion on Self-Strengthening) (China: 1901) (Lian qing xuan lei gao, 6).

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

Commission reported on foreign government institutions, including their statistical activities,[9] while Chinese students of law, politics and economy in Japan translated manuals on social statistics. In 1907, the Statistical Bureau (*Tongji ju*) was established following the Japanese model, which again was based on Prussian administration. Statistics there served the state and were provided for by public servants. In contrast, in Britain the compilation of statistics was originally a private undertaking and in France a clerical one.

The Commission to Draw up Regulations for Constitutional Government (*Xianzheng biancha guan*) had advocated the establishment of the Bureau in a memorial to the throne as follows:

> As to statistics, they are a method with which to examine the state of affairs of our fiscal administration and fathom our national strength so that comparisons can be made and appropriate policies developed. Therefore, the state of the Empire has to be analysed internally, and the competition of the world has to be observed externally. From now on, the Boards and Ministries at the Capital and the provinces shall establish detailed tables on their domain of activity and submit these regularly for consultation to our office. Our office will synthesize all the tables for the purpose of estimation of the actual state of the Empire. Examination of all the states, which publish statistical annals, showed that statistics are compiled in each domain in order to be informed about its population at a single stroke.[10]

China's recent wartime losses and the search for strength and efficiency were important to the Qing's new interest in statistical affairs. The fact that the huge indemnities, discussed by Frank King in this volume, imposed by Japan in 1895 and the Allies in 1901 had beggared the Chinese state was probably also important. Until the 1890s, the Maritime Customs had delivered to the Qing a highly significant new stream of revenue that had allowed it to recover from the Taiping Rebellion, reconquer Xinjiang, acquire a navy, and build up industries and railroads. With Customs revenue dedicated to servicing China's debts, the Qing state needed rapidly to develop a better understanding of and greater control over its revenue streams.

[9] See for example the anonymous report: *Riben tongji shili* (*Explanation of Statistics in Japan*) (Beijing: Government Gazette Bureau (*Guanbao ju*), 1904 or 1905).

[10] Gugong bowuyuan Ming Qing dang'an bu (Ming-Qing Archives of the First Historical Archives), eds, *Qingmo choubei lixian dang'an shiliao* (Archival Materials on the Preparation for Constitutional Government at the End of Qing Dynasty) (Beijing: Zhonghua shuju, 1979, 2 vols). I have used the Taibei reprint in *Jindai zhongguo shiliao congkan xubian* (Supplements to the Collection of Sources for Modern Chinese History, 81) i.e. *Yubei lixian de xuanbu he cehua* (The Announcement and Design of Preparations to Establish A Constitution) (Taibei: Wenhai, 1981), vol. 1, 47–51.

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

Reform-oriented officials began to view statistics in a modern sense, as a field largely autonomous in nature. In provincial investigations they emphasized 'seeking truth through facts' (*shi shi qiu shi*) to produce numbers as indicators in relation to other indicators, thus enabling numerical comparisons between different branches of government activity.[11] Allowing a numerical description of the state of the Empire, they used statistics to validate political choices on a supposedly scientific basis. The adoption of international statistical standards would allow precise evaluations and make possible comparisons with data relating to other countries:

> Eastern and Western States publish statistics not only to revise accounts or for paper exercises with mathematical formulas. What they want is to research the strength of the nation and the condition of the population to examine the reasons for their rise or decline. They regard statistics as a tool to make comparisons and develop programmes. It is this importance that has made statistics a branch of the sciences. Chinese frontier walls are broad and long, and our people and products are abundant. Government administration is so vast that coordination is hard. Communication is so difficult that centre and periphery become alienated. Viceroys and Governor-Generals cannot exhaustively know the affairs of their provinces; the Boards and Departments at the capital cannot exhaustively understand the affairs of the Viceroys and Governor-Generals . . . In civil administration the most difficult task is to examine accurately the population; in financial administration the most important task is to manage expenses effectively. Today long standing practices remain unchanged. Even if audits provide against confusion, our accounting practices are the result of flexible accommodations. When we investigate households, we find that many have persons omitted from our registers. When we investigate the Treasury's accounts, we find that in many places there are irregular numbers. They would not be accepted in court. With so many omissions and irregularities, we simply cannot have a good understanding of the complex multiplicity of the whole system?[12]

The rise of statistics as a mode of representation of society in the service of a modern state is not an isolated phenomenon in China. It can be widely observed in Europe in the early nineteenth century. After the French Revolution, for instance, the French state turned to statistics in its efforts to assess and rationalise its administration.

[11] See for example Duan Fang's memorial on the establishment of Investigation Bureaus in Liangjiang (Zhejiang, Jiangsu and Jiangxi Provinces), received by the Grand Council on 16 October 1908. Grand Council Archives 166675 (*Junjichu dang'an)*. (Taipei: National Palace Museum Archives, Taiwan).

[12] Memorial of the Commission for Constitutional Government for settling table patterns for civil and financial administration received on 11 March 1909. Reprinted in: *Zhengzhi Guanbao* 493 on 15 March 1909. (Beijing: Guanbaoju), 3–5.

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

The beginning of the nineteenth century saw large-scale statistical surveys of local government administrations, the creation of statistical bureaux, and, in the case of France, the first population census.[13]

In China, it was during the New Policies movement after the Boxer Rebellion that the Qing state turned to statistics to guide political, educational and economic reform.[14] The state needed statistical knowledge to deal with the new financial crises. With a growing sense of fragility as a result of the Sino-Japanese War and the Allied Invasion and trying to mobilise the scarce resources of a complex and divided polity, statistics became useful as offering a standard model for comparisons and as a base to make choices, rather than simply as an inventory of national resources (as partly provided by the Customs statistics). Statistics would also serve as a historical record and as a measure to judge the achievements of constitutional reform and the New Policies movement.

In 1905, Robert Hart commented on the growing interest in statistics by, for instance, the Ministry of Agriculture, Industry and Commerce. He wrote to H. B. Morse, then the Statistical Secretary:

> Chinese are clamouring for quicker information and the Ministry of Commerce and Industry wants statistics: they are also growing accustomed to tabular statements. Try and draw up a compact, intelligible, and easily filled set of tables, and get a Chinese version of Gazette April–June 1905 issued (3 copies to come here) to ports for guidance. Your people are so well up in tables &c. that you can provide this better than headquarters. Also see that the size of them is the right thing: I want every port to use the same arrangements—the same titles and the same paper.[15]

[13] For a survey of such developments and further literature on the history of statistics and its relation to state and nation-building, see Stuart Wolf, 'Statistics and the Modern State', *Comparative Studies in Society and History* 31–3 (Jul., 1989), 588–604; Alain Desrosières, *La politique des grands nombres: Histoire de la raison statistique* (Paris: La Découverte, 1993); Theodore Porter, *The Rise of Statistical Thinking 1820-1900* (Princeton: Princeton University Press, 1986); Silvana Patriarca, *Numbers and Nationhood: Writing statistics in nineteenth-century Italy* (Cambridge: Cambridge University Press, 1996).

[14] There is unfortunately no specialized literature on the history of statistics in late Imperial China. A very general survey of statistical work, institutions and theories can be found in Li Huicun and Mo Yueda, *Zhongguo tongji shi* (A History of Statistics in China) (Beijing: Zhongguo tongji chubanshe, 1993).

[15] Hart to Morse, 13 September 1905. *Robert Hart Letters*. Houghton Library, Harvard University, Cambridge, MA (MS Chinese 4). Earlier, Hirth pointed out that publications of Customs statistics in Chinese were meant to make the Chinese merchants acquainted with the statistical method. See Friedrich Hirth, 'Die Verwaltung der chinesischen Seezölle', *Österreichische Monatsschrift für den Orient* VII (1881), 98.

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

From the first quarter of 1906 on, the Commissioners at the Ports were then to hand the Daotai, in a red letter, for transmission to the Ministry of Agriculture, Industry and Commerce, a complete Chinese version of the quarter's Returns, and after April 1906 the Customs did no longer provide the Ministry's Journal Bureau (*Shangwu guanbao*) with an English version.[16]

Being in close contact with Qing officials, Hart was no doubt aware of an indigenous Chinese statistical tradition—one of counting by complete enumeration—when the expanding economic interests of the foreign powers and merchants after the opening of the Treaty Ports in 1854 created the need for statistical information on trade and revenue. Hart used the traditional term 'Clear List' for statistics submitted to the Zongli Yamen and the Customs' *Returns of Trade* at least until 1919.[17] The collection of duties in the hands of the Imperial Maritime Customs service imposed a different degree of standardization and the enforcement of uniform rules of bookkeeping.[18] These had to comply not only with the regulations of the Chinese administration and the rules of the Sino-foreign treaties[19] but also meet with Chinese and foreign commercial and governmental demands. The *Returns of Trade* were partly designed 'for the guidance of the Authorities in the revision of the Tariff.' Hart asked for information from the Commissioners at each port about problems of classification, discrepancies in nomenclature, or the variety of goods. Suggestions for the revision of the Tariff, which should take place

[16] See *Circular* Nos 1280, 1334. *Circular* No. 1252 mentions the suppression of the Journal's Translation Department in Shanghai in May 1905 due to the difficulties to replace the deceased chief translator.

[17] Bilingual editions combining the Returns and Reports of Trade appeared from 1913 to 1919. See the *Returns of Trade (55th Issue) and Trade Reports (49th Issue) for the Year 1913* (Shanghai: Statistical Department of the Inspectorate General of Customs, 1914).

[18] 'I have mentioned the thoroughness—reaching to all details—with which his early organizing work was done. One aim was to create *uniformity* at all the offices.' Edward Drew, *Sir Robert Hart and his Life Work in China* (Worcester, Mass: Clark University, 1913) [reprinted from *The Journal of Race Development* 4:1 (1913):1–33], here p. 13.

[19] Equivalences between Customs and different foreign standards for measures and weights for example were stipulated by Rule 4 of the Rules of Trade to the Sino-British Treaty of Tientsin of 1858. See Imperial Maritime Customs, *Treaties, Conventions, etc., China and Foreign States* (Shanghai: Kelly & Walsh, 1908, 2 vols), here vol. I, p. 424), but inner Chinese unification was not enforced until the beginning of the early Republican Period. The unification of currency was stipulated by Commercial Treaty between China and Japan, 1903, Article VI.

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

according to the treaties every decade, should 'benefit commercial interests, or render more easy of performance the duties'.[20]

Statistical quantification of China's foreign trade thus was a result of foreign and domestic financial and commercial imperatives. For Hart personally it also served to overcome distrust in the Zongli Yamen by demonstrating that the Customs provided accurate data efficiently and timely. One Statistical Secretary, E. B. Drew, wrote in a biography of Robert Hart:

> The head manager, known as the Statistical Secretary, not merely printed and distributed the regular returns and reports to the mercantile and official public; it was one of his tasks to receive and inspect the ports' quarterly official statements of revenue collected, and of expenditures. These documents had to be drawn up four-fold in both English and Chinese—a set from each port—and were passed on to the Chinese Treasury and to the Foreign Office. They were elaborate and detailed; and Hart would not tolerate the least flaw, or error, untidiness or carelessness of form in the preparation of a single one of them. These documents if not correct and perfect in form were invariably returned swiftly to the office of issue, to be replaced by fresh ones. Hart never accepted less by a hair than what had been required. The result was that the Chinese Foreign Office received from him nothing that was ill-done; and the Chinese principle is—in theory at least—that a careless report made to a superior office is a breach of propriety, a want of respect.[21]

In setting up an efficient statistical department in the service, where 'the columns of figures should be as much as possible of an uniform length',[22] Hart's meticulous style of management helped rationalise the production of numerical data on China. He instructed Commissioners 'that no delay occurs in preparing and forwarding the different Returns, Reports, etc., [...] and more particularly those required for transmission to the Tsungli Yamên [Zongli Yamen]; and you will take pains to satisfy yourself of their correctness before they are allowed to leave your port.'[23] Punctuality of reporting to the Chinese Foreign Office was meant to convince the central government of the reliability of Hart's management at a time when many local officials habitually failed to meet statutory regulations about the submission of Clear Lists and reports to Beijing.[24]

[20] See *Circular* No. 8 of 1867. Reprinted in: *Reports of the Commissioners of Customs on Questions Connected with Tariff Revision, 1865–72* (Shanghai: Customs Press, 1872).

[21] Drew, *Sir Robert Hart,* p. 17.

[22] Imperial Maritime Customs, *Provisional Instructions for the Guidance of the In-Door Staff. Second Issue* (Shanghai: Statistical Dept. of the Inspectorate General, 1883), 30.

[23] *Idem,* 11.

[24] See 'List enumerating the Documents not reported from the provinces' during cumulative years.

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

The Creation of the Statistical Department

It was the 'increasing calls that are annually made on the Printing Office and the Returns' Department' and 'the development and growing importance' of statistics generally that motivated Robert Hart to disconnect the Printing Office and Return's Department from the Shanghai Customs House.[25] The Statistical Department (*Zaoce chu*)[26] was established in October 1873. As a Shanghai branch of the Inspectorate, rather than part of just one Customs House, the Statistical Secretary was a key national level official in the Customs and communicated directly to Robert Hart through Despatches and Semi-official letters, while he also could issue instructions in Printed Notes to all Commissioners. Because Hart controlled appointments in the Customs, he chose the Statistical Secretaries to lead the office. A list containing the names of the Statistical Secretaries and their Assistants under Hart is attached at the end of this article.

The first Statistical Secretary, Edward C. Taintor (1842–1878),[27] although left deaf from a disease, which he contracted earlier while on duty in Taiwan and ultimately led him to commit suicide,[28] is said to have had precisely the talents required for statistical work:

his wide range of information and accuracy in detail combined to fit him for just this work. He had now found his congenial place, and entered into its

[25] See Circular No. 17 of 1873 (First Series) in *Documents Illustrative*, Vol, 1, 308–9.

[26] Literally: Office for the Compilation of Records. No technical term for modern statistics existed in Chinese at that time. The earliest appearance of the contemporary expression for statistics (*tongji*) was as a loan word from the Japanese based on the classical Chinese expression meaning 'total amount'. It can be found in a passage on British government institutions in the section Explaining Governance (*Shi zheng*) in Wang Rongbao and Ye Lan. *Xin Erya* (*The New Erya*) (Shanghai: Minquanshe, 1903), 13. The term consequently spread in China during the the New Politicies reform movement of the last decade of the Qing. The Customs did not use it in its publications until 1920.

[27] Taintor also pursued research for the Royal Geographical Society of England and published 'The Island of Hainan' and other works. He was elected Fellow of the Society on 26 November 1866. See *Proceedings of the Royal Geographical Society*, Vol. 11, No. 1 (1866–7), 14–15. He was also a corresponding member of the *American Geographical Society of New York*. See *Journal of the American Geographical Society of New York*Vol. 6 (1874), p. 18; Vol. 8 (1876), p. 16; Vol. 9 (1877), p. 10.

[28] The stress, isolation and depression produced by Taintor's deafness forced him to return to the U.S. on sick leave in 1875. He committed suicide in Shanghai in May 1878.

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

development with all his powers of mind. He had great taste for astronomical and mathematical studies.[29]

Only one other Statistical Secretary appears to have had a strong talent in mathematics. H. B. Morse was the top graduate in mathematics and languages at Harvard College in 1874. Hart appreciated his ability to collect data and his sound knowledge of the Chinese economy.[30] All Secretaries had a long career in the Service, but little else seems to have connected the Customs' statisticians, although a number would become significant academics, something for which the Statistical Secretary-ship prepared them well. Together with Edward B. Drew (1843–1924), Taintor was recommended by his university to the American Secretary of State William Henry Seward as a good candidate for a position in the Chinese Customs Service in 1865.[31] Drew entered the Service after his graduation in law from Harvard,[32] and began his career as a fourth-class clerk at the Chefoo Customs House. He was promoted to Commissioner after only three years, and would remain in the Customs for 43 years. Others, like the German F. Hirth (1845–1927), who was interested in historical and philological studies, left the Service for an academic post. After twenty years in the Customs, Hirth first taught in Germany and in 1902

[29] S. Wells Williams to The Editor of the NY Times: 'The Late Edward C. Taintor of Shanghai', New Haven, July 6th, 1879. Edward C. Taintor Papers, NYPL Mss. & Archives Division.

[30] See Richard Smith, 'Die Karriere eines Außenseiters: H. B. Morse in China, 1874–1909. *Comparativ* IV (1999), 48 and 60. One of Morse's often cited analysis of China's trade deficit is *An Inquiry into the Commercial Liabilities and Assets of China in International Trade* (Shanghai: Statistical Department of the Inspectorate General of Customs, 1904). It was reprinted in *Documents Illustrative*, vol. VII, pp. 184–200.

[31] See the Codex, Box 1, *Edward Bangs Drew (1843–1924) Papers (1882–1906)*. Massachusetts Historical Society, Boston, Ms. N-49.10.

[32] S. Wells Williams to The Editor of the NY Times, *The Late Edward C. Taintor of Shanghai*, New Haven, July 6th, 1879. In: *Edward C. Taintor (1842–1879) Papers (1865–1870)*. NYPL Manuscripts & Archives Division:

'In 1864, the Chinese Inspector General of Customs applied to our Minister at Peking to lend him aid in obtaining three well educated Americans from home for the service of the Chinese Government. Mr. Burlingame proposed the plan to Secretary Seward to obtain three good men for this purpose by requesting the Presidents of Harvard, Yale & Union College to pick out one each from their graduating classes, whom they could confidently recommend. Mr. Taintor was selected from Union College, & with his associates Mr. Woodruff from Yale, & Mr. Drew from Harvard, reached China in 1865.'

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

became the first Professor in Chinese at Columbia University.[33] He was elected extraordinary member in 1897 of the Bavarian Academy of Sciences and ordinary member in 1901 in recognition of his studies on the ancient history of China.[34] W. Hancock was a Prizeman in Chemistry from Queen's University, Belfast, to which the Customs had a strong connection, as Richard O'Leary's article makes clear.[35] F. E. Taylor claimed to know nothing of statistics.[36] A. E. Hippisley and H. Kopsch wrote extensive studies of China's monetary and financial crisis towards the end of Qing dynasty and drafted proposals for solutions.[37]

Morse, who served as Statistical Secretary from January 1904 until December 1907, instigated a major reform of the Statistical Department. C. A. V. Bowra, himself a major figure in the Customs Service, wrote in an obituary for the *Journal of the Royal Asiatic Society*:

> In that department of the Inspectorate-General where the trade statistics of China are laboriously collated and published in great volumes full of valuable information little regarded even in China and hardly known at all outside of it, Morse found his appropriate place. Here was got together all that was to be known of the trade, with much matter bearing on the political and economic condition of the Chinese people and their commercial dealings with foreign countries. The study of these vast subjects offered a field entirely congenial to Morse's genius, and shaken in health as he was, he threw himself into work with his accustomed ardour. During the four years in which he had charge of the department he not only reformed the whole system of the arrangement and presentation of the statistics of trade, but began a whole series of special

[33] He occupied the Dean Lung Chair until 1917. See Friedrich Hirth Papers, Columbia University Archives.

[34] See 'Abschrift. Wahl . . . ', Archiv der Bayerischen Akademie der Wissenschaften, München, which refers to Hirth's *Notes on the Chinese Documentary Style, Text . . .*,& *Vocabulary, Ancient Porcelain: a Study in Chinese Mediaeval Industry and Trade, Über fremde Einflüsse in der chinesischen Kunst, Chinesische Studien, Tschau Ju-kua* [*Chau Ju-Kua: his work on the Chinese and Arab trade in the twelfth and thirteenth centuries, entitled Chu-fan-chï*], etc. He is mentioned as 'K. preuß. Professor' which implies that he held a professorial position in Prussia at that time.

[35] See *Service List* 29 (1903), 309.

[36] Fairbank *et al.*, *The I.G. in Peking*, Hart to Campbell, 4 July 1897, Vol.II, 1124–5.

[37] See for example Alfred Hippisley, *Proposal to Develop Trade and Improve Commercial Relations by Securing an Increase in Treaty Tariff in Return for Abolition of Internal Taxation* (Shanghai, Shanghai Merchury, 1902); Henry Kopsch, *Brevities on Eastern bimetallism.* (Shanghai: (North China Herald Office, 1896); and The Eastern Bimetallic League, *The appreciation of gold: notes illustrative of the disastrous effect upon foreign commercial interests in the far east, and upon the industries and wage-earners of the west* (Shanghai, 1894).

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

studies which resulted ultimately in the production of those great books which form almost an encyclopaedia upon Chinese trade and government.[38]

Upon his appointment, Morse was critical of Hancock, his predecessor, and the state of the Department, in which he had first served as Assistant Secretary, leaving in March 1889: 'I have taken hold here and find the work much what it used to be, some changes there are, not for the better, but I shall alter little until the Annual Returns are out.'[39] Hart reinforced the Department with a statistically proficient Assistant,[40] and Morse began to push for reform.[41] As Drew, Statistical Secretary in the 1880s, pointed out, Hart's personal involvement in the Statistical Department's work helped motivate his employees.[42] Although Hart himself recognized that 'the work in the Statistical Department is dry and unceasing',[43] he reminded the Statistical Secretaries of the importance of the work and urged them to make statistical information attractive, although he also refused to countenance criticism of Chinese or foreign officials, governments, individuals, or companies. The *Returns of Trade* were accompanied by discursive *Reports on Trade*, drafted in the first instance by Commissioners in charge of Customs Houses. He advised them 'to introduce tabular statements very sparingly' in the *Reports* to make them 'interesting reading, rather than a mere compilation of dry statistics.'[44]

[38] Obituary of Morse, by C. A. V. Bowra, *Journal of the Royal Asiatic Society*, reprinted in: John K. Fairbank, Martha Henderson Coolidge, and Richard J. Smith, *H. B. Morse: Customs Commissioner and Historian of China* (Lexington, Kentucky: The University Press of Kentucky, 1995), 241–5.

[39] Morse Letter Books, Morse to Hart, S/O No.1, 24 January 1904. *Idem.*

[40] 'I am giving you Alabaster as Asst. Stat. Sec. He has done excellent work at Wuchow, and his statistical tables (local) and forms for reports etc. show he is the sort of man you will find very useful.' (Hart to Morse, 17April 1904).

[41] 'I am getting interested in my work . . . ' Morse Letter Books, Morse to Hart S/O No. 3, 21 February 1904. *Morse Hosea Ballou Letters*.

[42] 'Under a chief possessing Hart's imagination and incapable of finding any kind of work dreary or uninviting, the statistical department was a most interesting field—by no means what our American name "Government Printing Office" somehow signifies to me. Drew, *Sir Robert Hart*, p. 17.

[43] Fairbank *et al*., eds, *The I.G. in Peking*, Hart to Campbell, 5 April 1876, Vol.I, 217–8.

[44] Circular No. 126 (Second Series), 22nd December 1880. Reprinted in: *Documents Illustrative*, vol. 1, 416–17. When Hart calls for the preparation of Decennial Reports in Circular No. 524 (Second Series), 9th December 1890, he equally underlines that these shall 'be made as interesting as possible'. Reprinted in: China. *Documents Illustrative*, I, 639–42. See also *Provisional Instructions*, 14.

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

The Statistical Department, composed of two chief offices—the Secretariat and the Printing Office—fulfilled various functions: it collected and collated the returns on trade sent in by Customs Houses, it served as a research institution, printed forms used by the Customs as well as the *Trade Returns* and *Trade Reports*, and it served as an archive. The Statistical Secretary's library collected publications on the social, economic, geographic, and financial history of China and archived Customs publications and foreign statistical publications presented to the office. Many Statistical Secretaries published research monographs on questions related to China's public finance, geography, or history. The rules for the working of the Statistical Department, drafted by Robert Hart, were based on advice of a foreign expert, probably James Duncan Campbell, the head of the London Office of the Customs Service, a professional accountant 'engaged from the Treasury in London, who came to China, studied the conditions, drafted a complete system of accounts-keeping rules, and made a tour of all the ports instructing the commissioners and clerks in detail, and opening the books.'[45]

In 1891, Robert Hart, in his organized spirit, asked the Statistical Secretary E. McKean, to write a paper on the duties of the Department that 'have now taken form and shape to such a degree that they admit of description and classification.'[46] By then, Hart's close surveillance of trade statistics and reports provided the basis for strict hierarchical control of those who prepared the trade figures. He developed elaborate mechanisms to limit discrepancies and errors. McKean mentioned the requirement that the Statistical Secretary, the Assistant Statistical Secretary, and the two clerks (one Chinese one European) keep detailed registers and account books,[47] dated and eventually countersigned on every page and filled with raw information on in- and outgoing correspondence and parcels, orders, issue sheets, office stationery or publications. The detailed regimentation of bureaucratic procedures relating to the internal financial management and audit of the Statistical Department are rather evocative for the working patterns in the Service. After collection of trade data in each Customs House, for example, Revenue

[45] Drew, *Sir Robert Hart*, p. 12.

[46] IG's Despatch No. 1,101 of 23 March 1891. Reprinted in *The Working of the Statistical Department* (Shanghai: Statistical Department of the Inspectorate General of Customs, 1891), iii.

[47] Later more Chinese Clerks were added to the Statistical Department. See Annexe.

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

Returns from the ports were sent to Shanghai, where the Assistant Statistical Secretary compared Part I and II and applied to each the checks required by the Service Instructions. He then reported to the Statistical Secretary that the Revenue Returns from the ports 'are in order and fit to be sent to Peking, he [the Statistical Secretary] signs the English versions and delivers his small Chinese seal to the Assistant Secretary to have the Chinese versions sealed with it by the Writer [who has read all Chinese Revenue Returns to guarantee that the right Chinese character is used everywhere], who impresses it on the outside on the last fold of the Return, in the place marked for it, taking care that while the seal covers and takes all of the character *he* [to check] it does not touch the character *dui* [correct] at all.'[48]

Detailed and standardized mechanisms controlled the production of Customs statistics. Numbers and calculations were double checked with different techniques by the Western Assistant and the Chinese 'Calculator' who used the Abacus.[49] Hart banned uncommented emendations and erasures. The Assistant Statistical Secretary 'receives from the Statistical Secretary all the Revenue Returns, English and Chinese versions, and with the Writer's help, checks and compares them, to make absolutely sure that each and all the versions are in order, by being correct, by being intact and undisfigured in any way, and by being faultless as viewed in the light of the Service Instructions. If he discovers any blemish or defect, he refers it to the Statistical Secretary, who decides either to take notice of it or not.'[50] Hart's rules accepted a certain amount of error as inevitable, but he regarded errors as a spur to further improvement. He wrote Morse 'our statistical work, reports & figures, is of course, of a progressive kind and even wrong or unestablished views serve their purpose & start

[48] *Idem*, p. 3.

[49] Expression used by Hirth for the Chinese Shupan (*shuban*):

'Die hauptsächlichsten Zoll-Abrechnungsbücher werden in beiden Sprachen geführt und, da die Berechnungen von chinesischen Calculatoren mit Hilfe des *Suan-pan*, der chinesischen Rechenmaschine, von europäischen Assistenten und Linguisten mit Feder und Papier, und zwar getrennt ausgeführt werden, so sichert das beständige Vergleichen der Haupt-Summen in den verschiedensten Stadien ihrer Entwicklung eine gegenseitige Controle, die einen Irrthum in den Rechenschaftsberichten sofort aufdecken und im Keime zu corrigiren ermöglichen würde.' (Hirth 'Die Verwaltung' p. 79)

[50] China. *The Working*, p. 4.

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

questions which eventually get discussed and solved: but guesses &c. should not be put forward dogmatically.'[51]

E. B. Drew stated in his memoirs that Hart's supervision of the Statistical Department's work guaranteed the high quality of the outcome.[52] Such a judgement was at least in part informed by Orientalist assumptions about the superiority of the Customs Service. Hirth and Drew juxtaposed the 'complete impossibility of reliable reporting'[53] in China with the accuracy of their own meteorological, financial, epidemic, and economic data.[54] Not all Statistical Secretaries were uncritically enthusiastic about the Customs' quantification of Chinese trade. Hirth regarded statistics as a social construction of facts. He reminded the users that although the Service was characterized by bureaucratic accuracy in keeping records, local and temporal variations in spatial coverage, classification

[51] *Robert Hart Letters*, Hart to Morse 14.3.1905.

[52] Drew, *Sir Robert Hart*, p. 17: 'The published *Yellow Books* from the statistical department are models of care, taste, completeness and good workmanship; because Hart would accept nothing less. More than this: he encouraged such of his subordinates as might choose to write monographs on China subjects, to do so, and these if meritorious were published for sale or distribution.'

[53] 'So sind denn auch die officiellen Berichte über die eingenommenen Zölle, die vierteljährlich in englischer und chinesischer Sprache vom Zoll-Director zur Beförderung an die Central-Regierung durch den General-Inspector expedirt werden, in einem Grade zuverlässig, wie es bei uns Europäern allerdings selbstverständlich ist, wie es jedoch unter den früheren Verhältnissen in China für gänzlich unmöglich gehalten wurde.' Hirth. 'Die Verwaltung', p. 79.

[54] See Alfred E. Hippisley, *China: A Geographical, Statistical and Political Sketch* (Shanghai, s.n., November 1876): 'No reliable statistics regarding the climate of China are available; such, however, as could be obtained from observations taken by the harbor masters at the treaty ports, are given in the table appended.' (p. 6) 'The absence of periodically published statements of the collection in the several divisions of the empire renders impossible and accurate estimate of the Revenue of China. [...] The present revenue of China, from such scanty information as is obtainable, may perhaps be estimated at seventy-nine and a half million taels, say £ 25,000,000 annually, [...] Of these items, the only one of absolute certainty is the revenue derived from the Maritime Customs under the Foreign Inspectorate. ' (p. 15–16) 'the almost universal system of overstating the numerical strength of the provincial forces, make it exceedingly difficult to arrive at anything like a correct estimate of the military resources of the empire.' (p. 17) 'The Population of China is extremely dense, yet but little accurate information can be obtained regarding it from official sources.' (p. 20) 'Of the enormous traffic carried on by the thousands upon thousands of native junks engaged in the inter-provincial distribution of Chinese produce no accurate statistics are obtainable. Of the extent, to which vessels of the foreign type participate in this distribution, statistics are, however, obtainable through the medium of the published Returns of the Maritime Customs, and the foreign trade, which is exclusively carried on by vessels of foreign type, with India, Europe and America.' (p. 22)

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

of commodities, and standards of weight and value affected trade figures.[55]

In general, the Customs statistics were much praised by the foreign public.[56] At the 1873 Vienna Exhibition, for example, the Customs Service was awarded the Diploma of Honour for its silk exhibit, not on the grounds of the objects exposed, but because of the commercial interest of the statistical information produced. The jury notification made special mention of 'the statistical notes and arrangements' that had accompanied the Customs' contribution to the exhibition.[57]

By the turn of the twentieth century, Morse was much concerned about the usefulness of the Customs publications for merchants and statisticians. He criticized the arrangement of statistics according to different ports. This had become obsolete, he argued, because ports no longer represented supply districts as had been the case when the

[55] See Hirth, 'Die Verwaltung', p. 97: 'Die officielle Statistik ist hier, wie in anderen Ländern, den Schranken localer Eigenthümlichkeiten unterworfen, hält sich aber streng nur an Thatsachen, die sich durch officielle Buchführung als sicher ermitteln lassen. Es werden daher z.B. zur Feststellung des Verkehres Schiffe nur nach ihrem Tonnengehalte, nach ihrer Nationalität und nach der Zahl der unter jeder Flagge stattfindenden Ein-und Ausclarirungen notirt. Die Frage, wieviel von dem Tonnengehalte eines Schiffes bei jeder Reise zu Handelszwecken verwendet wurde, lässt sich unter den gegenwärtigen Verhältnissen nicht beantworten. ... Dergleichen Übelstände müssen beim Gebrauche der Statistik selbstverständlich mit in Betracht gezogen werden, d.h. man darf von der Statistik als Beweismittel nicht mehr verlangen, als sie billigerweise geben kann. Die Betheiligung einer Nation an dem Handel irgend eines Hafens oder des ganzen Reiches lässt sich in Ziffern überhaupt nicht gut ausdrücken; benützen wir aber das durch die chinesische Zollstatistik gebotene Material, so muss dies mit einer genauen Kenntniss von Thatsachen geschehen, die aus den vorliegenden Ziffern an und für sich nicht hervorgehen.' A contemporary discussion of the pitfalls of Customs statistics can be found in chapter 3 of Thomas P. Lyons, *China Maritime Customs and China's Trade Statistics 1859–1948*. (Trumansburg, NY: Willow Creek, 2003).

[56] 'The Customs publications are among the most elaborate volumes of public information and statistics issued in the world, its huge volume of "Decennial Reports' just circulated being possibly the most instructive single work ever printed about China.' Henry Norman, *The Peoples and Politics of the Far East. Travels and Studies in the British, French, Spanish and Portuguese Colonies, Siberia, China, Japan, Korea, Siam and Malaya* (New York: Charles Scribner's Sons, 1895), p. 241.

[57] In: 'The Vienna Exhibition'. Newspaper clipping of unknown provenance, *Papers of Edward Charles Macintosh Bowra (1841–1874) and Cecil Arthur Verner Bowra (1869–1947), his son*. School of Oriental and African Studies, London (PP MS 69), Box 3, Item 14: 'Translations of edicts, etc'. The statistics for the exhibition are published under: China. Imperial Maritime Customs. *Trade statistics of the treaty ports, for the period 1863–1872. Compiled for the Austro-Hungarian Universal Exhibition, Vienna, 1873: to illustrate the international exchange of products* (Shanghai: Imperial Maritime Customs Press, 1873).

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

Returns of Trade began in the 1870s. Instead Morse proposed in 1905 to arrange the statistics according to different commodities:

> A year's study of our published statistics leads me to the belief that we do not publish the information which the world wants in the shape desired. On the one hand, I find that we waste our resources in publishing statistics, which are not consulted, the proof of their inutility being that other countries do not give them; and on the other hand, our Customs offices laboriously collect information which is not now given to the world, but which only needs some compilation in this office to be of great value. [...] Regarding the detailed enumeration of the trade of China which now forms Part II of the annual Returns, there are certain tables which are required to show the progress of each port; but for information on commodities, no one would search the lists of each port, if it could be obtained from any other source. The statistician and the merchant do not wish to know the Imports at any one port; his desire is to learn all he can regarding each commodity, and it is information in this shape which the various trade circulars supply.[58]

Hart accepted Morse's suggestion, but classification by commodity was not a straightforward task. Classification schemes differed in the Chinese and foreign language versions of the Tariffs annexed to successive Sino-foreign treaties. Whereas the English Tariff was arranged alphabetically, the Chinese version categorized commodities according to their materiality. Further complications arose from the introduction of new commodities in the Chinese market.[59]

Such problems do not diminish the reality that the Customs statistical work formed a significant new departure in Chinese administrative practices. Hart's founding of the Customs Service was important not only because the Service generated a new source of revenue of great importance to the late Qing, but also because it introduced conventional standards for weights, monetary value, commodity classifications, and nomenclatures. Under Sir Robert Hart, statistical information on China's maritime trade furthermore was made known

[58] Despatch No. 1,711 Statistical Secretary to I.G. Reprinted in: China. Imperial Maritime Customs. *Returns of Trade for the Year 1905* (Shanghai: Statistical Department of the Inspectorate General of Customs, 1906), Part I, pp. xxviii–xxx. Hart accepts all of Morse's proposed changes in form of the Annual Returns. See Despatch No. 316 I.G. to Statistical Secretary. Reprinted in *idem* Part I, p. xxx.

[59] See Andrea Eberhard-Bréard, Invention of Foreign Trade Statistics in China at the Turn of the 20th Century,' in: *Economie et sociologie rurales: Actes et Communications*, 21 (2004), pp. 25–55. For a general survey on changes in nomenclature and classification in Customs statistics see Hu Jichang and Fan Mingmao, *Guoji maoyi tongji shang zhi huowu mingmu ji fenlei* (Classification and nomenclature of commercial products in international trade statistics) (Shanghai: Shangwu Yinshuguan, 1935).

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

to a public, who were seen as entitled to information on trade and at least part of the Qing's revenue.

Although the statistical publications of the Customs began in the 1870s, few other Qing bureaucracies followed suit until after China's defeat in the 1894–5 Sino-Japanese War and the Allied invasion of 1900. Major expansion of statistical activities only began during the New Policies initiated in 1901. As with other reforms, Chinese officials justified the introduction of new statistical methods as reviving hallowed traditions from antiquity. When it established a Bureau of Statistics, the Constitutional Government Commission memorialised:

> The origins of the methods of statistics stem from ancient times. The yearly accounts of the officials under the Zhou Dynasty were called *kuai*, monthly accounts were called *yao*, and daily accounts were called *cheng* . . . Although history does not record how they were compiled and transmitted, it is clear that antiquity valued statistics. Han Emperors ordered the compilation of registers in the prefectures and principalities. Tang Emperors instructed provinces and districts to report to the centre. Until today, at each end of a term of the year, offices inside and outside the capital must present memorials on population registers, city temples, revenues from taxes, and granaries. These all involve the great principles of civil and financial administration. It was always agreed upon that ancient and new regulations were specially to be handed down in course of time. Account books and astronomical records were handled with customary familiarity, and merely regarded as pure formalities reported to the government. Gradually their original meaning became lost. Having received Imperial sanction, we have established a Bureau of Statistics.[60]

Several reasons explain why the Qing implemented the model pioneered by the Customs Service on a broader scale without referring to it. A lack of fiscal pressure, the fear of the consequences of upsetting local arrangements, and resistance by powerful local officials and landholders were probably important. The Customs Service on the other hand sought to safeguard its statistical monopoly and was slow to transmit statistical techniques. There were Chinese on the Indoor staff of the Statistical Department, but they served at the clerical level, while the higher levels were occupied by foreigners, who believed that the Chinese clerks were not ready to advance higher. It was only in 1906, after the Qing established the Department for Revenue Affairs

[60] Memorial of the Commission for Constitutional Government for settling table patterns for civil and financial administration received on 11 March 1909. Reprinted in: *Zhengzhi Guanbao: Zouzhe Lei* (Government Gazette: Memorials), Vol. 493 (15 March 1909) (Beijing : Guanbaoju), 3–5.

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

(*Shuiwu chu*) in its new Foreign Office to oversee the Customs,[61] that Hart considered promoting a Chinese Clerk to the position of Assistant Statistical Secretary.[62] In a letter to Morse, Hart wrote:

> I want to ask you a question which I wish you to keep to yourself. The Customs edict will, sooner or later, push Chinese more to the front in the Inspectorate ranks, and the beginning will probably be made with young men educated abroad, joining 4th assistants and working their way up to Commissioners' rank. Henceforth, too, recruiting will have to look less for foreigners, and aim at finding and appointing Chinese. It occurs to me that your man, Mr. Ting, may be worthy of advancement of a kind that will show the Chinese generally that ability is appreciated, and that there is no objection whatever on account of nationality to Chinese in the higher ranks provided they are fit. How would he suit as Assistant Statistical Secretary? That's the question I want to ask! We are running short of men, and I am thinking of Chalmers for a port, and circumstances suggest Ting as his successor; but before going further, I should like to have your view: what is it?

Morse accepted Ting I-hsien [Ding Yixian], about whose background nothing further is known, more as a trial experiment to put Chinese in positions of responsibility. Although Morse agreed that it was the duty of the Customs to create a Chinese service, he doubted 'if administrative China is changed in the least, and if Western education has in any way altered their character.'[63] When Ding after Morse's retirement was appointed Acting Assistant Statistical Secretary in 1908, he had an additional foreign Deputy Commissioner at his side.

A wider interest in statistical institutions and theories in the Chinese government awoke about the same time as control over the Customs' service was taken over by the Board of Customs Control. In 1906, the Qing created a national institutional network and a legal basis to provide for the collection of statistical data mainly in the fields of financial and civil administration. The first

[61] 'The change ordered relative to publication of Statistics, viz: that they are to be submitted to the Ch'u [i.e. the *Shuiwu chu*] in manuscript before being printed, will probably delay publication and transfer to the Ch'u some responsibility that has hitherto been borne by the Statistical Department.' *Robert Hart Letters*,Hart to Sir Cecil Carnegie, 4.8.1906.

[62] Ting I-hsien from Zhejiang province had first been appointed in the service in Oct. 1885, and achieved the rank of Chinese First Clerk: A in April 1903, Principal Clerk: C (超等後班) in 1906, and Principal Clerk: B in April 1907. His civil service Brevet of Sub-Prefect was obtained by purchase, not examination. In 1908 Ting was temporarily appointed Acting Assistant Statistical Secretary and remained in that position at least until 1913, moving up to the rank of Chief Assistant A in June 1913. Data obtained from the *Service Lists* of the Maritime Customs Service.

[63] *Morse Hosea Ballou Letters*, Morse to Hart, S/O, 19June 1906.

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

statistics to be published concerned education (1907), followed by agriculture, industry and commerce (1908). Although various Chinese government bureaucracies did call on the Customs to supply statistical data,[64] Qing officials turned to Japan for inspiration to guide its new statistical efforts. After thirty years of operation, it is all the more surprising that the official accounts of the institutionalization of statistics in the late Qing state administration do not credit any influence to the Customs' Statistical Department in Shanghai and Sir Robert Hart. Overseas students who returned from Japan where they learned about statistics in Schools of Politics, Law or Economics were immediately hired in the newly created Statistical Bureau of the *Commission to Draw up Regulations for Constitutional Government*. Yet none of the Clerks or Writers that had served for many years in the Statistical Department in the Customs' Shanghai Office was transferred to the new statistical offices in the central government ministries or provincial bureaus. Zhang Zhidong, a key provincial official who sought a balance between reform and tradition and worked hard to maintain Chinese independence, was an important patron of the introduction of statistics via Japan in the curricula of New Schools after the education reforms of 1904.[65] Other influential activists in the constitutional movement, like Meng Sen, had translated from Japanese the first widely circulating textbook on social statistics.[66] While Robert Hart had collaborated closely in the 1860s and 1870s with key metropolitan officials like Prince Gong when they fought to recover from rebellion and war, Hart and Zhang Zhidong were not close. Hart's gradual decline of influence after 1887 due to the loss of his most important patrons in the Chinese government[67] might also be one of the reasons why in official documents Hart's

[64] See for example I.G. Circular No. 1,121 (6 January 1904), where quarterly statistics prepared for the Customs Gazette (Tonnage, Imports, Exports, Re-exports, Internal Transit, Opium, Special Revenue)) are required to be sent to the Board of Trade, which then started to issue every ten days a Board of Trade Journal (*Shangwu guanbao*). Reprinted in Maritime Customs, *Inspector General's Circulars. Vol. IX Second Series (Nos. 1,201–1,400) 1904–1906* (Shanghai: Statistical Department, 1907).

[65] See the Memorial of Zhang Zhidong *et al*. (received 29 November) to fix the rules and regulations for New Schools (*Zouding xuetang zhangcheng*). (Taibei: Tailian goufeng chubanshe (Shixue yanjiusuo), 1970), here: 'Universities of Law and Politics' (*Zhengfa ke daxue)*, 133–41.

[66] Original by Yokoyama Masao, *Tōkei tsūron* (A General Discussion of Statistics) (Tokyo: Yūhikaku Shobō, 1904). This was a very popular textbook in Japan, and had its 41st edition in 1921 (Tokyo: Senshū gakkō 1904)

[67] Morse, *International Relations*, vol. 3, pp. 404–8.

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

'progressive' statistical service did not serve as a reference to nurture statistical modernization and institutional reform on a larger scale, or why eventually such documents referring to the Customs' Statistical Department were discarded from the central archives.

Nonetheless, and against all expectations after the taking over of the Board of Customs Control in 1906,[68] the accounting monopoly over China's home and foreign trade remained in foreign hands long after Hart's departure in 1908, not just during the remaining years of the Qing but also the entire Republican period.

[68] One of Sir Cecil Carnegie's first reactions to the change in control over the Maritime Customs Service concerned the control of statistical data: 'I have heard that some changes have been ordered relating to the publication of statistics,' (Sir Cecil Carnegie to Hart, British Legation Peking Aug. 1st, 1906. Queen's University, Belfast, Special Collection, Robert Hart Correspondence, Box 10). For Hart's reply see note 61.

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

Annexe: List of Statistical Secretaries and their Assistants under Hart

Statistical Secretary, I. G. (Commissioner) 造冊處稅務司	Nationality	Appointed in present rank	Appointed first	Assistant Statistical Secretary, I. G. (Deputy Commissioner) 造冊處副稅務司	Nationality	Appointed in present rank	Appointed first
E. C. Taintor 廷得爾[69]	American	1873, Oct.	1865, Aug.	A. E. Hippisley 賀璧理	British	1875, April	1867, Jany.
E. C. Taintor	American	1873, Oct.	1865, Aug.	A. E. Hippisley	British	1875, April	1867, Oct.
H. Kopsch 葛顯禮 (Officiating)	British	1868, March	1863, Jany.				
E. C. Taintor 廷得爾	American	1873, Oct.	1865, Aug.	A. E. Hippisley	British	1875, April	1867, Oct.
F. Hirth 夏得 (Acting)	German	1870, June	1877, April[70]	A. E. Hippisley (on leave)	British	1875, April	1867, Oct.
J. McLeavy Brown	British	1877, Feb.	1873, April	A. E. Hippisley (on leave)	British	1875, April	1867, Oct.
柏卓安 (Officiating)				F. Hirth (Acting)	German	1870, June	1879, July[71]
G. G. Noetzli 那士禮 (Acting)	Swiss	1867, July	1863, Nov.[72]	F.A. Morgan 馬根	British	1880, June	1864, July[73]
E. McKean 吉德	British	1877, Feb.	1874, March	James Acheson 阿歧森 (Acting)	British	1880, April	1874, July[74]
E. B. Drew 杜德維[75]	American	1868, Oct.	1865, Oct.	F. Hirth	German	1882, April	1870, June
E. B. Drew	American	1868, Oct.	1865, Oct.	F. Hirth	German	1882, April	1870, June
E. B. Drew	American	1868, Oct.	1865, Oct.	F. Hirth	German	1882, April	1870, June

[69] Nominated Statistical Secretary in October 1873, a post which he filled until his death on the 16th of May 1878. See the 'Obituary: Mr. Edward Coe Taintor,' *Journal of the Royal Geographical Society and Monthly Record of Geography*, New Monthly Series, Vol. 1, No. 3 (Mar., 1879), 216–17.

[70] Second Assistant A.

[71] First Assistant B.

[72] Deputy Commissioner.

[73] Stationed in Peking, he officiated as Assistant-in-charge.

[74] Second Assistant A.

[75] On Drew's work as Statistical Secretary, see I. G's Despatch n° 381 to Stat. Secretary (1882), and n° 719 to Stat. Secretary (1887).

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

Annexe: Continued.

Statistical Secretary, I. G. (Commissioner)	Nationality	Appointed in present rank	Appointed first	Assistant Statistical Secretary, I. G. (Deputy Commissioner)	Nationality	Appointed in present rank	Appointed first
E. B. Drew	American	1868	1865	F. Hirth	German	1882	1870
E. B. Drew	American	1868	1865	F. Hirth	German	1882	1870
E. B. Drew	American	1868	1865	F. Hirth	German	1882	1870
E. McKean	British	1877, Feb.	1874, March	H. B. Morse 1/4/1888–15/3/1889	American	1887, Nov.	1874, Aug.
E. McKean	British	1877, Feb.	1874, March	P. G. von Möllendorf[76] (Acting since 1889, April)	German	1869, Oct.	1889, March
E. McKean	British	1877, Feb.	1873, April	P. G. von Möllendorf (Acting)	German	1869, Oct.	1889, March
H. Kopsch (+ Postal Secr.)	British	1868, March	1862, Jany.	P.G. von Möllendorf	German	1869, Oct.	1891, April
P. G. von Möllendorf (Acting)[77]	German	1869, Oct.	1897, June				
F. E. Taylor (+ Deputy Postal Secretary)	British	1894, May	1877, Jany.	E. L. Lépissier (Acting)	French	1898, July[78]	1869, June
F. E. Taylor (+ Deputy Postal Secretary)	British	1894, May	1877, Jany.	E. L. Lépissier	French	1899, March	1869, June
F. E. Taylor (+ Deputy Postal Secretary)	British	1894, May	1877, Jany.	E.L. Lépissier	French	1899, March	1869, June
F. E. Taylor (+ Deputy Postal Secretary)	British	1894, May	1877, Jany.	E. L. Lépissier	French	1899, March	1869, June
F. E. Taylor (+ Deputy Postal Secretary)	British	1894, May	1877, Jany.	W. Hancock	British	1902, July	1874, July

[76] Paul Georg von Möllendorf (1848–1901), Third Assistant A earlier was at the head of the customs and Vice-President of the Ministry of Foreign Affairs in Korea. See Morse, *International Relations* . . . , vol. 3, pp. 10–15.

[77] Commissioner Taylor was detached to the International Postal Union Congress, Washington that year.

[78] First Assistant A.

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

Annexe: Continued.

Statistical Secretary, I. G. (Commissioner)	Nationality	Appointed in present rank	Appointed first	Assistant Statistical Secretary, I. G. (Deputy Commissioner)	Nationality	Appointed in present rank	Appointed first
F. A. Carl (+ Postal Deputy Secretary)	American	1881, Dec.	1889, April	W. Hancock (Acting)	British	1903, Jany.	1874, July[79]
H. B. Morse 1/1/1904 – 31/12/1907	American	1896, June	1874, Aug.	E. Alabaster	British	1904, May	1889, June
H. B. Morse	American	1896, June	1874, Aug.	E. Alabaster	British	1904, May	1889, June
H. B. Morse (+ Postal Deputy Secretary)	American	1896, June	1874, Aug.	J. L. Chalmers	British	1901, April	1873, Oct.
H. B. Morse (+ Postal Deputy Secretary)	American	1896, June	1874, Aug.	J. L. Chalmers	British	1901, April	1873, Oct.
J. L.Chalmers (+ Postal Deputy Secr.) (Acting)[80]	British	1908, Jan.	1873, Oct.	Ting I-hsien (Acting temporarily)	Chekiang	1907, April[81]	1885, Oct.
J. L. Chalmers (+ Postal Deputy Secr.) (Acting)[82]	British	1908, Jan.	1873, Oct.	Ting I-hsien (Acting temporarily)	Chekiang	1908, Jan./Oct.[83]	1885, Oct.
				E. L. Lépissier (additional)	French	1899, March	1869, June
J. L. Chalmers (+ Postal Deputy Secr.)	British	1910, March	1873, Oct.	Ting I-hsien (Acting temporarily)	Chekiang	1908, Jan./Oct.	1885, Oct.
				E. L. Lépissier (additional)	French	1899, March	1869, June

[79]Chief Assistant A (*chaodeng bangban- qian ban* 超等幫辦 前辦).

[80]Morse on leave from Jan. 1st 1908 to 31st Dec. 1908.

[81]Principal Clerk B. Ting was the only Chinese to be in the position of Acting Deputy Commissioner.

[82]Morse on leave until 31st Dec. 1909, when he resigned.

[83]There are two contradicting entries. For Acting Deputy Commissioners we have Jan. (p.8), in the list for Principal Clerks B (paid 225 Tls.) we have Oct. (p. 83).

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press

Annexe: Continued.

Statistical Secretary, I. G. (Commissioner)	Nationality	Appointed in present rank	Appointed first	Assistant Statistical Secretary, I. G. (Deputy Commissioner)	Nationality	Appointed in present rank	Appointed first
P. H. King	British	1900, April	1874, Jan.	Ting I-hsien (Acting temporarily)	Chekiang	1908, Jan./Oct.	1885, Oct.
P. H. King	British	1900, April	1874, Jan.	Ting I-hsien (Acting temporarily)	Chekiang	1908, Jan./Oct.	1885, Oct.
				W. MacDonald (additional)[84]	British	1906, Feb.	1892, Oct.
J. L. Chalmers	British	1910, March	1895, Oct.	Ting I-hsien (Acting temporarily)	Chekiang	1908, Jan.	1885, Oct.
				W. MacDonald (additional)[85]	British	1906, Feb.	1892, Oct.

[84]New Foreign Assistant: Shaw, N. R. M. Third Assistant A, British, first appointed April 1907, in present rank since May 1912.

[85]New Foreign Assistant: Joly, P. B. Third Assistant B, British, first appointed Jan. 1910, in present rank since Nov. 1912. Additional Chinese Fourth Assistant B: Ho Chee Fai from Kwangtung, first appointed June 1901, in present rank since Oct. 1912.

https://doi.org/10.1017/S0026749X06002101 Published online by Cambridge University Press