The Mechanics of Internationalism

Culture, Society, and Politics from the 1840s to the First World War

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One Language for the World
The Metric System, International Coinage, Gold Standard, and the Rise of Internationalism, 1850–1900

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In 1866 Charles Sumner, the well-known Republican abolitionist from Massachusetts, tried to persuade his fellow members of the US Senate to embrace the metric system of weights and measures:

> There is something captivating in the idea of one system of weights and measures, which shall be common to all of the civilized world, so that at least in this particular, the confusion of Babel may be overcome. Kindred to this is that other idea of one system of money. And both of these ideas are, perhaps, the forerunner of that grander idea of one language for all the civilized world.[1]

The topoi so strongly supported by Sumner were familiar to like-minded reformers in other countries, whether in the Americas or Europe. 'One set of measures for all, one coinage for world trade, is the demand that is at present being voiced in all countries.' wrote a German author in 1869.[2] This enthusiasm needs to be understood within the context of vigorous efforts at the time to turn the French metric system into a new international system of standards. Also up for debate was the proposal to establish an International Monetary Union, in which the member countries were to issue uniform gold coins based on the French

[1] Charles Sumner, *The Metric System of Weights and Measures: Speech of Charles Sumner in the Senate of the United States, July 17, 1866* (Boston, 1866), 3.
[2] C. Bopp, *Die internationale Maß-, Gewichts- und Münz-Einigung durch das metrische System* (Stuttgart, 1869), p. iii.

currency that would circulate freely and be recognized as legal tender in all countries of the Union. Both issues were crucial to the emerging international movement from the middle of the nineteenth century. The first part of this essay will examine why the metric system created during the French Revolution played such a prominent part in this internationalism. It will be argued here that inherent in the metric system was an ideology both of state- and nation-building in a universal setting. This ideology appealed strongly to influential groups of scientists, civil servants, and businessmen who were reflecting on the possibilities for closer economic, political, and social integration of the nation-state within the broader setting of transnational exchange. The same applies to the far more complicated plan to create an international coinage, the topic addressed in the second part of this essay. Although originally these two initiatives were closely interlinked, they fared quite differently. Whereas the Metre Treaty of 1875 laid the foundations for one of the most important international organizations and international systems of standards ever to be created, efforts to establish a formal universal system of coinage based on gold failed utterly. Instead, the 1870s witnessed the rapid spread of that 'mythical beast',[3] the international gold standard, and thus another path toward internationalism different from that of the metre and the proposed international coinage. The last part of this essay examines the constraints on the international political system that created the framework for establishing two different, almost ideal-typical mechanics of internationalism in the early 1870s. It argues that, despite their radically different institutional set-ups, the ideologies underlying the metre and gold became powerful signifiers of nineteenth-century liberal internationalism and popularized a language of 'civilization' and economic and social 'progress' that characterized this movement before the First World War.

[3] Barry Eichengreen, 'Editor's Introduction', in id. (ed.), *The Gold Standard in Theory and History* (New York, 1985), 1–36, 2.

1. The Metre and the Ideology of Internationalism: A Success Story

Reflecting on the origin and meaning of the word 'internationalism' in 1870, the American scientist, businessman, and representative of the US government at several international conferences Samuel B. Ruggles wrote in a report to Secretary of State Hamilton Fish that it was John Quincy Adams who held the honour of having been the first to propose an 'association of nations to promote the common interest of man' that would agree on a common standard of weights and measures. Until that time neither England nor France had any definite idea of the 'thing, that the word [internationalism] now denotes'.[4] A few philanthropists in Adams's day may have vaguely foreseen that common 'internationality' to which the civilized nations now aspired, continued Ruggles, but the idea was not clearly presented for the consideration of any civilized government until Adams, then Secretary of State in President Monroe's cabinet, produced his famous and lengthy report on weights and measures to Congress in 1821. In it he traced the history of weights from the Garden of Eden to the present and praised the metric system. Ruggles was deeply imbued with the spirit of the new, mid-century internationalism that promised interaction in the form of 'links of sympathy' between societies on issues from which each country would profit. He was sure that some day 'one common language of weights and measures will be spoken from the Equator to the poles'.[5] And as a true Republican, he knew where to look for enemies: the 'progress' produced by the French Revolution, which had fathered the metre, was being jeopardized, even lost, in a period of reactionism after 1815, when 'the fugitive princes, restored to their thrones, lost no time in digging up and reinstating the obsolete and musty weights and measures of

[4] Untitled report by Samuel B. Ruggles to Secretary of State Hamilton Fish, New York, 28 Apr. 1870 (National Archives, Washington, RG 59 M 37 Microfilm Roll No. 11), 3. D. G. Brinton, *Ruggles of New York: A Life of Samuel B. Ruggles* (New York, 1968) (reprint of the 1946 edn.), is deficient in many respects.

[5] Ruggles, Report, 14.

the preceding age'. They saw the metric system as the 'hateful offspring of the French revolution'.[6] Unlike the international congress proposed by Adams, international congresses in the post-Napoleonic period were needed by the sovereigns of the Holy Alliance and their ministers strictly for the purpose of 'closing their various wars for ambitious objects, and concerning very slightly, if at all, the civilization and advancement of their people'.[7]

Ruggles brings up all the arguments of the nineteenth-century liberal internationalists. This is not surprising. More than just one among many other national systems of measurement, the metric system was surrounded by an ideology that was closely linked to that of the French Revolution. Inscribed in the metric system was a set of closely linked narratives of scientific progress and perfectibility, as well as state- and nation-building in a universal setting.

Proponents of the metric system usually argued five main points in its favour. First, they stressed its rationality. The strength of the system lay in its invariability, commensurability, and consistency, and its decimal structure that was not only simple and logical but supposedly also easy to learn.[8] Defined as the ten-millionth part of the earth's quadrant, the metre was based on nature and not on men. Scientists had defined and controlled the new standards, and made them prescriptive; scientific expertise had conquered tradition. The Graeco-Latin foundation of the nomenclature was based on the assumption that it created a unifying, truly international language, which allowed scientists of all nations to communicate with each other.[9]

[6] Ibid. 12.

[7] Ibid. 7, 16.

[8] Witold Kula, *Measures and Men* (Princeton, 1986), esp. 267 ff.; Ken Alder, 'A Revolution to Measure: The Political Economy of the Metric System in France', in M. Norton Wise (ed.), *The Values of Precision* (Princeton, 1995), 38–71; Theodore M. Porter, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (Princeton, 1995), 21 ff. There is an extensive English literature, starting in the 1850s, in defence of the metric system, in which these arguments were used time and again. Many of them resemble arguments developed by John Quincy Adams, Charles Davies, *The Metric System, Considered with Reference to its Introduction into the United States; Embracing the reports of the Hon. John Quincy Adams, and the Lecture of Sir John Herschel* (New York, 1871).

[9] The nomenclature was highly contested from the start, not least because of the unfamiliar names. Several changes were made as early as the revolutionary period, see G. Bigourdan, *Le Système métrique des poids et mesures: son établissement et sa propagation graduelle, avec l'histoire des opérations qui ont servi à déterminer le mètre et le kilogramme* (Paris, 1901), 80 f.; as in France itself after 1812 (ibid. 193 ff.), efforts were made abroad to introduce more familiar, customary names, albeit usually rather unsuccessfully. See Edward Franklin Cox, 'A History of the Metric System of Weights and Measures, with Emphasis on Campaigns for its Adoption in Great Britain and the United States Prior to 1914' (Ph.D. thesis, University of Indiana, 1956), 137 ff.

Second, it was argued that the metric system fitted into the overall attempt to destroy the established notions of the feudal past by way of the new calendar, the decimal division of time, and the decimal measurement of the circle.[10] It embodied the possibilities of modernity, namely, the spirit of a *tabula rasa* associated with the French Revolution. Thus British contemporaries often viewed it as the opposite of such 'stubborn things' as 'national liberty and customs'.[11] To replace the thousands of local and occupational weights and measures of pre-Revolutionary France was a prerequisite for creating market transparency. Pre-modern units that embodied traditional notions of task and value had to be replaced by the new neutral units, however foreign to a population accustomed to traditional modes of calculating.[12]

This is closely related to the third point made by the system's supporters. The establishment of the metric system was analogous to the narrative of building the modern nation. Italy is a good example in this respect. Originating in Sardinia in 1844, the metric system spread and, in fact, became one of the foundations of the newly founded nation.[13] This argument on assisting nation-building dates back to the French Revolution. The point was not simply that the metric system would enable the citizens of the new

[10] Michael Meinzer, *Der französische Revolutionskalender (1792–1805): Planung, Durchführung und Scheitern einer politischen Zeitrechnung* (Munich, 1992); Paul Smith, 'La Division décimale du jour: l'heure qu'il n'est pas', in Bernard Garnier and Jean-Claude Hocquet (eds.), *Genèse et diffusion du système métrique* (Caen, 1990), 123–35.

[11] Thus Lord Donoughmore, who argued that he 'was not prepared to say that if this country had just passed through a crisis similar to that which occured in France in 1789, and we had a tabula rasa to deal with, it might not be desirable to adopt the metric system'. *Debates in Both Houses of Parliament on the Metric Weights & Measures Bill: Session 1864* (London, 1864), 12.

[12] Alder, 'Revolution to Measure', 45. Ministère de l'Agriculture et du Commerce, *Congrès International pour l'Unification des Poids, Mesures et Monnaies, tenu à Paris, les 2, 4, 5 et 6 septembre 1878* (Paris, 1878), 55.

[13] Ibid. Report by the Italian Senator and chemist Stanislas Cannizzaro, 45.

nation to speak a common language of weights and measures, but that, as the Polish economic historian Witold Kula has argued, metrological and juridical equality went hand in hand.[14] Thus the history of the metre came to be seen as tantamount to the potentials of political modernization. Even though the metre, the kilogram, the litre, and their decimal nomenclature did not become legal until 7 April 1795, and the prototypes were not finalized until 1799, the Jacobin National Convention had produced a preliminary metre as early as 1 August 1793. The French *nation*, stated a report of the National Convention, was to receive as quickly as possible that benefit of the Revolution, thus rooting out the territorial and feudal divisions that evolved from the old weights and measures.[15]

Fourth, the history of the metre supported the romantic narrative of the 'positive' state. The post-Revolutionary period was one of failure for those wishing to introduce the new metric system, simply because the state refused to exert its power over a recalcitrant population. In 1812 French legislation gave in to widespread public resistance to change and permitted the still commonly found traditional weights and measures to be used in addition to the metric system.[16] It was not until 1837 that the metric system was reinstated in France as the sole authoritative system, coming into force in 1840. To impose the metric system on the French people meant to rely on the full force of the state: the hierarchical administration of weights and measures of the *départements* with their capacity to police the people, the courts, and, not least, the schools (which in France had never stopped teaching the metric system). Although certain branches of the economy and the people stubbornly resisted change, this second effort to impose the system was quite successful.[17] These and

[14] Kula, *Measures*, 185 ff.

[15] Bigourdan, *Système*, 34.

[16] Cox, 'History', 117 ff., provides a good summary of the protest against the metric system; Yannick Mareck, 'Autour des résistances au système métrique', in Garnier and Hocquet (eds.), *Genèse*, 135–44.

[17] The eradication of old habits of counting remained an important issue in France, not least in order to demonstrate to critics from abroad that the metric system was to replace all older systems, see Ministère de l'Agriculture et du Commerce, *Congrès International*, 57; for the continuity of pre-metric habits and thinking see Arthur E. Kennelly, *Vestiges of Pre-metric Weights and Measures Persisting in Metric-System Europe 1926–1927* (New York, 1928).

other subsequent successes in national integration were eagerly studied by other countries. The lesson was crucial: in order to meet the demands of national integration—economically, politically, and socially—and fulfil the promises of the Revolution, the capacities of the state were required.[18]

Fifth, this integration of the (nation-)state by way of the metric system was to be embedded in a universal framework. Once again, by reason of its origin, the ideology of the metre was heavily imbued with a narrative of international co-operation and understanding. The metre had a distinct universalist quality. The medal struck to commemorate the introduction of the metric system in France on 19 Frimaire of the year VIII (10 December 1799) bore the inscription 'A tous les temps, a tous les peuples'.[19]

However, the creation of a new metrological system in France during the 1790s was not the result of international scientific co-operation, which many scientists, including Thomas Jefferson, had called for in the eighteenth century. Britain never responded to French requests for co-operation.[20] Nevertheless, from the beginning France sought international legitimization of its metric system, which was the prerequisite for spreading it. Late in 1798, Charles Talleyrand, in his function as Minister of Foreign Affairs, invited on behalf of the Republic a number of nations occupied by France to send scientists to what became the first modern conference of its kind. The scientists were to approve the geodetic work of the French scientists. Only upon completion of the scientific reports resulting from this

[18] For a good survey of the different national efforts, see the Reports from Her Majesty's Representatives in Europe on the Metric System, Part I, July 1900, House of Commons, *Sessional Papers 1900*, vol. 80; Reports from Her Majesty's Representatives Abroad on the Metric system, Part II, Feb. 1901, ibid. 90, 1901.

[19] For the text of the law, see Bigourdan, *Système*, 176 f.

[20] Talleyrand maintained that Great Britain and France had too long been 'at variance with each other, for empty honour or for guilty interests' and that it was time 'that two free Nations should unite their exertions for the promotion of a discovery that must be useful to mankind', letter quoted in A. E. Berriman, *Historical Metrology: A New Analysis of the Archeological and the Historical Evidence Relating to Weights and Measures* (New York, 1953), 141.

conference in the spring of the following year did the National Institute of Sciences and Arts authorize the final platinum prototypes of the metre and the kilogram.[21]

Even though this international conference was probably convened as much for show as for scientific purposes, it nevertheless reflects the efforts to make the metric system an issue for an international 'epistemic community' of scientists who were to collaborate closely with each other and also with their respective governments. However, such an epistemic community, whose innovations were gradually 'diffused nationally, transnationally, and internationally to become the basis of new or changed international practices and institutions', only emerged late in the nineteenth century.[22]

When the metric system was propagated by France again in the 1840s, all five arguments played a considerable role. One factor helping to stimulate the new efforts was undoubtedly that Belgium, Holland, and some German states formerly occupied by France had kept the metric system throughout, albeit at times in hybrid forms in terms of both nomenclature and subdivisions.[23] The system of commercial treaties that multiplied after the Franco-British trade treaty of 1860 gave added weight to proposals for unification. The treaty not only laid the foundations for rapidly growing free trade in Europe, but also promised to bind Great Britain

[21] Bigourdan, *Système*, 146 ff.; Maurice Crosland, 'The Congress on Definitive Metric Standards, 1798–1799: The First International Scientific Conference?', *Isis*, 60 (1969), 226–31. Basing the metre on geodetic measurements was widely criticized. Thomas Jefferson objected, for example, that this process 'excludes, *ipso facto*, every nation on earth from communion' with French scientists. C. Doris Hellmann, 'Jefferson's Efforts towards the Decimalisation of United States Weights and Measures', *Isis*, 16 (1931), 266–314, 286. Jefferson's own plans, which he proposed to the American Congress and which were more in tune with the scientific community of his time, were to use the second pendulum for the basis of the measures. Measurements of the second pendulum were to take place on 45 degrees longitude, the nothern border of the United States, which he considered an easy connection between Europe and the United States; thus the measurement would be 'accessible to all persons, in all times and places', ibid. 291 f., 297.

[22] Thus the general formulation of Emanuel Adler and Peter M. Haas, 'Conclusion: Epistemic Communities, World Order, and the Creation of a Reflective Research Program', *International Organization*, 46 (1992), 367–90, 373.

[23] Bigourdan, *Système*, 245 ff.; Aimé Pommier, 'Quelques Échanges d'étalons des mesure entre la France et d'autres pays au XIX siècle', in Garnier and Hocquet (eds.), *Genèse*, 174–8.

closer to the Continent.[24] The new international forums provided by universal exhibitions and international congresses were vitally important for the emergence of the metric movement. The statisticians, economists, and government officials who assembled at the International Statistical Congresses in Brussels in 1853, Paris in 1855, Vienna in 1857, London in 1860, Berlin in 1863, and Florence in 1867, and who considered themselves keen to confine 'the investigations and discussions within the domain of actual fact' and to avoid 'abstract and empty speculation',[25] regularly passed resolutions that drew attention to the difficulties arising from the various systems of weights and measures. Pragmatic issues of statistical comparison played a prominent role, and the call for standardization of the various systems was from the start imbued with highly idealistic language.[26] Likewise, the jurors and commissioners of the Exposition Universelle of 1855 in Paris appealed to their 'respective governments and enlightened individuals who were well disposed towards civilization and advocates of peace and harmony throughout the world' to adopt a universal system of weights and measures based on the decimal system.[27] Working with some of the delegates attending the Statistical Congress that was also taking place in Paris for the Exposition, they set up an informal meeting of about 150 delegates. This meeting affirmed earlier pro-metric resolutions, and, on the initiative of a member of the Royal Society of London, James Yates, established the International Association for Obtaining a Uniform Decimal System of Measures, Weights and Coins. By the late 1850s, this association could boast an illustrious group of members from fifteen different countries, including the United States.

These British reformers were of great importance, also with respect to similar initiatives in other countries. When

[24] For an excellent analysis see Gabriele Metzler, *Großbritannien—Weltmacht in Europa: Handelspolitik im Wandel des europäischen Staatensystems 1856 bis 1871* (Berlin, 1997).

[25] Ruggles, Report, 19.

[26] For a good summary of resolutions passed on international congresses, see Cox, 'History', 170 ff.

[27] Bigourdan, *Système*, 248; Cox, 'History', 169.

Parliament facultatively introduced the metre in Great Britain in 1864,[28] supporters hoped that this would be only a stop on the way towards compulsory introduction. However, the Royal Standards Commission claimed in its second report in 1869 that however advantageous the decimalization of weights and measures as well as coinage, the superiority of the metric over the existing customary system had not yet been proven. The Commission went on to explain that the imperial standards were as perfect as modern technology and science could make them. Finally, the Commission was concerned about public 'resistance, active and passive'. Self-government and the fact that the executive had 'far less power of compelling obedience to the law' than had governments on the Continent would make legal compulsion difficult, concluded the report.[29] The pro-metric groups stepped up their agitation. A bill to make the metric system compulsory, introduced into the House of Commons in 1871, was defeated by a narrow vote. One year earlier, in 1870, the British government had rejected similar demands in India. This development is symptomatic of the overall efforts of the British government to block any entanglements with the Continent after 1869-70.[30]

The British case is important in another respect. The imperial standards of weights and measures in Great Britain

[28] The metamorphosis of the British branch is symptomatic of the rise of the metric movement in that country. Whereas the branch originally advocated only the decimalization of English coinage and the customary system of weights and measures —issues that gained considerable attention in Great Britain at the time— its members soon become adamant proponents of the metric system. For a short summary of the failure of the movement for the decimalization of coinage at the end of the 1850s see D. P. O'Brien, *The Correspondence of Lord Overstone*, i (Cambridge, 1971); for further developments cf. Henry Tayler, *The Decimal System as Applied to the Coinage & Measures of Great Britain Dedicated to the Lord's Commissioners of Her Majesty's Treasury* (London, 1851); James Yates, *Narrative of the Origin and Formation of the International Association* (2nd edn.; London, 1856); Cox, 'History', 169 ff., 249 ff.

[29] *Second Report of the Commissioners Appointed to Inquire into the Condition of the Exchequer (Now Board of Trade) Standards: On the Question of the Introduction of the Metric System of Weights and Measures into the United Kingdom* (London, 1869), in House of Commons, *Sessional Papers 1868–1869*, vol. 23, 4, 6; a good summary of the report is given by Cox, 'History', 314 ff.

[30] Cox, 'History', 325; Ministère de l'Agriculture et du Commerce, *Congrès International*, 18, 32; Metzler, *Großbritannien*, ch. 15.

were *de facto* spread all over the world. Yet in contrast to France, Britain apparently made no effort to disseminate its system actively. The fundamental reform of weights and measures, the older prototypes of which had been destroyed during a fire in 1834, was not used as an opportunity to co-ordinate any sort of international standards, not even with the United States, a country which, since its foundation, had struggled with the challenge of unifying and standardizing its own system of weights and measures.[31] The British reforms, which set the two countries further apart, actually reinforced the pro-metric movement in the United States. Especially under the auspices of the Republican Party, the metric issue became a major factor for the advocates of a stronger federal government in the 1860s.[32]

The seemingly favourable reception of the metric system during the 1850s and 1860s in the world's greatest economic power, Great Britain, was followed attentively on the Continent. In the German states, the metric movement had gathered momentum rather slowly. With the introduction in 1839 of the *Zollpfund* (customs pound), defined as 500 grams, the Customs Union took the first step towards unifying weights. Following much lighthearted discussion on this issue, the German Bund set up a commission of experts who were to submit recommendations for a uniform system of measurements for Germany.[33] This report lashed out against the English system, which was not considered to be an alternative. Reference was made to the British branch of the Inter-

[31] W. H. Miller, *On the Construction of the New Imperial Standard Pounds; on the Comparison of the New Standards with the Kilogramme des Archives and on the Construction of Secondary Standard Pounds, a Ten-Pound Weight, a Kilogramme, and a Series of Troy Ounce Weights* (London, 1857); Cox, 'History', 430; Sarah Ann Jones, *Weights and Measures in Congress: Historical Summary Covering the Period of the Continental Congress and Including the Adoption of the Joint Resolution of 1836 and 1838*, National Bureau of Standards Miscellaneous Publication M122 (Washington, 1936).

[32] For a history of the American movement see Cox, 'History', 432 ff.

[33] Harald Witthöft, 'Der Staat und die Unifikation der Masse und Gewichte in Deutschland im späten 18. und im 19. Jahrhundert', in Jean-Claude Hocquet (ed.), *Acta metrologiae historicae III* (Ostfildern, 1992), 49–72, 65. A good description of this commission and subsequent events can be found in *Second Report of the Commissioners Appointed to Inquire into the Condition of the Exchequer*, 101 ff.; for some of the technical issues discussed see also Kathryn M. Olesko, 'Precision, Tolerance, and Consensus: Local Cultures in Germany and British Resistance Standards', *Archimedes*, 1 (1996), 117–56, 131 ff.

national Association, which bemoaned the fact that 'sad confusion and total want of fixed principles prevail in the English system of measures', and that in this respect 'neither the law nor actual practice of the country can be regarded as [a] guide for any civilized nation'.[34] Specialists harboured serious reservations about British concepts of precision.[35] Strong trade links with neighbouring countries such as Switzerland, Belgium, France, and the Netherlands also favoured the metric system. The Deutsche Handelstag, the influential association of the chambers of commerce in the German states, also strongly endorsed the metric system, referring time and again to the resolution of the international congresses.[36]

Although, with hindsight, the metric system appears to have been the most plausible way to unify the various heterogeneous systems of weights and measures, this course was not uncontested in the German states. In the 1830s Prussia, like Great Britain, had embarked on a reform of its customary weights and measures on the basis of the work of the highly acclaimed Prussian astronomer Friedrich Wilhelm Bessel. This new scientific basis undoubtedly enhanced the authority of these old standards. Bessel had also fundamentally undermined the scientific authority of the metre. He had demonstrated that the metre contained a serious defect, namely, that the 'true length' was 1/75,000 smaller than the authoritative Parisian prototypes. Thus Bessel stripped the metre of its scientific aura, and apparently ridiculed the 'ideal pretensions' of the French system. Given the supposed superiority of the Prussian measures, the Berlin Academy of Sciences strongly opposed the metric system.[37]

In the end, the decision to introduce the metric system was fundamentally a political one. To many of its supporters

[34] *Second Report of the Commissioners Appointed to Inquire into the Condition of the Exchequer*, 102.

[35] Olesko, 'Precision, Tolerance, and Consensus', 132.

[36] Julius Gensel, *Der Deutsche Handelstag in seiner Entwicklung und Thätigkeit 1861–1901* (Berlin, 1902), 8, 20.

[37] Kathryn M. Olesko, 'The Meaning of Precision: The Exact Sensibility in Early Nineteenth-Century Germany', in Wise (ed.), *The Values of Precision*, 103–34, 121–5; Witthöft, 'Staat und Unifikation', 62 f.; Wilhelm Förster, *Lebenserinnerungen und Lebenshoffnungen* (Berlin, 1911), 89 f.

in the southern German states, it came as a 'pleasant surprise' when the Prussian administration opted against its own national standards after 1866.[38] At the first session of the newly founded Reichstag of the North German Federation, the government introduced a widely acclaimed law for the unification of weights and measures. The metre became a means of national integration that could draw on a broad liberal consensus and at the same time appease 'jealousies prevailing between the individual states'.[39]

By the 1860s, the metre and the kilogram were rapidly becoming international standards in terms of their increased acceptance throughout Europe and the Americas. This development posed some problems. It was well known that physical duplicates of the metre and kilogram were only approximations of the Parisian prototypes. When an official mission of German scientists went to Paris in 1863 in order to compare the weights which Prussia had received via Alexander von Humboldt in 1817, the Germans discovered that the customs pound, which was based on Prussian prototypes, was too 'light'. In close collaboration with French scientists, they undertook the first significant research into what was to become the German metre and kilogram.[40]

Given that many countries had adopted or were seriously considering adopting the metre, it is understandable that the question of how to define the metre as a universal, authoritative standard was one of the principal issues concerning the advocates of the French system. In 1861 the Committee of the North German Federation asked for a convention between all states interested in constantly maintaining total uniformity of weights and measures, 'so that it

[38] August Pleibel, *Lehr- und Hilfsbuch zur Einführung des metrischen Systems für Maß und Gewicht in Württemberg* (Stuttgart, 1869), p. iv; Förster, *Lebenserinnerungen*, 89 f.; *Second Report of the Commissioners Appointed to Inquire into the Condition of the Exchequer*, 102 f.

[39] Witthöft, 'Staat und Unifikation', 71; an English version of the report of the commission of the Reichstag can be found in *Second Report of the Commissioners Appointed to Inquire into the Condition of the Exchequer*, 103 ff.; Förster, *Lebenserinnerungen*, 90.

[40] A. Brix, *Bericht über die im Jahre 1863 angestellte Vergleichung zweier dem Königl. Handels-Ministerio angehörenden Metermaße mit dem Urmeter der Kaiserlichen Archive zu Paris* (Berlin, 1867). The German prototype was calibrated to be 1.00000301 of the original French metre, see also Olesko, 'Precision, Tolerance, and Consensus', 135.

should not be endangered by the self-will or the separative tendencies of any single State'.[41] Similarly, a committee of Russian scientists, appointed by the Academy of Science in St Petersburg, extolled the superiority of the metre as a universal system, but bemoaned the dangers inherent in the current situation. The French had constructed copies for the different nations to use. Since these copies were made independently of each other, slight discrepancies between them arose, thus giving rise to the danger that a French, a German, an Austrian, a Swiss, a Danish, and an American metre would soon exist. The Russians called for an international commission, composed of delegates from all countries, to be charged with the task of constructing uniform prototype standards.[42] They reiterated the demands of the International Geodetic Association, which had met two years earlier, in 1867, in Berlin to discuss how to measure the shape and size of the earth. In its resolution, the association had called for a 'common unit of measurement' to be established 'for all the countries of Europe, and for all times, as exactly and invariably as possible'. It also recommended the 'construction of a new European prototype metre', a task that was to be transferred to an international commission representing all the interested states.[43]

In order to unify the system, it was necessary both to find procedures for agreement and to establish ultimate authorities. To put it somewhat paradoxically, since the metre was a matter of convention guaranteed at national level by the authority of law, it needed to be regulated by international convention at supranational level. The necessity to establish some sort international control over the metre was one of the obvious outcomes of attempts to universalize the metric system. Although highly suspicious of allegations that the work of the founders of the metric system was inaccurate and

[41] *Second Report of the Commissioners Appointed to Inquire into the Condition of the Exchequer*, 107.

[42] 'Système métrique: confection des étalons prototypes des poids et mesures. Rapport de la commission nominée par la Classe physico-mathématique de l'Académie des Sciences de Saint-Pétersburg', *Comptes rendus de l'Académie des Sciences*, 69 (1869), quoted in Bigourdan, *Système*, 257.

[43] *Allgemeine Conferenz der Europäischen Gradmessung: Bericht über die Verhandlungen vom 30. September bis 7. Oktober* (Berlin, 1868), 126 ff.

of suggestions that the prototypes under French control should be dethroned, the Bureau de Longitude and the Academy of Sciences of Paris did see the need to strip the metre of its image as a purely French undertaking and to delegate to an international commission some authority in determining the construction and verification of the standards destined for different countries.[44] On the basis of these considerations, the French government on 16 November 1869 issued invitations to an official conference of experts that met in Paris the following year.[45]

2. Creating an International Coinage: A Story of Failure

The French invitation in 1869 came at a time when debate was flourishing in many fields about the use of international conventions to regulate the increase in the volume of transnational interactions. Another area in which the internationalization of standards was intensively debated in the late 1860s was coinage. Was it not possible to arrive at some sort of international agreement first, by creating a *universal standard of account*, for example, by way of a uniform decimalization of the monetary unit, and second, by establishing a *uniform standard of value*, for example, by using gold, silver, or both metals as the monetary unit? Moreover, the shape and weight of coins would have to be defined.

The idea of creating some sort of world currency was anything but new. Utopian thinkers and aspiring empire-builders throughout the ages had dealt with it, and much of their thinking had highly idealistic connotations.[46] Even if lofty idealism continued to be characteristic of the ideas of some money reformers, the issue was, as in the case of the metre, also associated with highly pragmatic interests in state- and nation-building. In Switzerland, Italy, Scandinavia, and the German states, fragmented authority over monetary matters came to symbolize the lack of national unity. There

[44] Bigourdan, *Système*, 258 ff.

[45] Ibid. 272 ff.

[46] For a good summary, see Wilhelm Trimborn, *Der Weltwährungsgedanke: Eine historisch-kritische Untersuchung* (Jena, 1931).

were numerous efforts to unify the various systems through bilateral or, more often, multilateral agreements.[47] Switzerland, Italy, and Belgium based their coinage on the French franc and its fractions as a standard of value, which made it possible for the coins of the four countries to circulate freely as legal tender. Finland also based its coinage on the French system. In 1865, France, Switzerland, Italy, and Belgium formally joined in the Latin Monetary Union.[48] In the United States and England, debates started in the 1850s on assimilating the two national currencies.[49]

Behind the contemporary debates over unification of currencies lurked another issue, namely that of the metallic unit. At mid-century, only Great Britain and Portugal had a pure gold standard. More common was the bimetallic standard of gold and silver, the prices of which were legally fixed in a certain ratio. In all countries with a *de jure* bimetallic standard, such as the United States, France, and the countries of the Latin Monetary Union, a huge influx of gold from California in the 1860s drove the silver coins out of circulation. As the value of gold coins fell and that of silver coins appreciated, it turned out to be profitable to melt down the latter in order to sell the silver. Thus for all practical purposes, most countries just minted gold. Throughout the 1860s, calls for a fundamental change in the monetary regime grew louder in all countries not yet on a gold standard. With the introduction of greenbacks during the American Civil War, the United States had a *de facto* national currency. However, at the end of the war a broad consensus emerged that the country should return to a metallic basis, more specifically, to the gold standard.[50]

[47] For a survey, see Teresia Theuerl, *Eine gemeinsame Währung fur Europa: 12 Lehren aus der Geschichte* (Innsbruck, 1992); Carsten Hefeker, *Interest Groups and Monetary Integration: The Political Economy of Exchange Regimes Choices* (Boulder, Colo. 1997), ch. 3: 'Monetary Integration in the XIXth Century'; Charles Kindleberger, 'Internationale Monetary Reform in the Nineteenth Century', in id., *Keynesianism vs. Monetarism and Other Essays in Financial History*, (London, 1985), 213–25.

[48] Theuerl, *Eine gemeinsame Währung*, 175 ff.; Henry Parker Willis, *A History of the Latin Monetary Union: A Study of International Monetary Action* (New York, 1971 reprint).

[49] Henry Russel, *International Monetary Conferences: Their Purposes, Character and Results* (London, 1898; reprint New York, 1974), 20 f.

[50] Walter T. K. Nugent, *Money and American Society, 1865–1880* (New York, 1968), chs. 4–5, 9; Robert Sharkey, *Money, Class and Party: An Economic Study of Civil War and Reconstruction* (Baltimore, 1959), 57 ff.

It is not surprising that the advocates of the metric system had the clearest ideas of how to unify the various currencies. The decimalization of the units of account and possibly also uniform metric gold weights promised a clean slate. Every country embracing this universal standard would have to change its monetary system in order not to privilege any one country by allowing it to keep the currency with which it identified.[51] One of the most outspoken members of this group was the French economist Michael Chevalier, who had close links with the English metric movement. As early as 1850, he proposed the introduction of altogether new units of coinage for France, consisting of 5 and 10 grams of gold respectively. He found supporters for his cause outside his own country.[52] His most ardent followers were in England Leone Levi, in the United States the radical Republican and chairman of the Congressional committee for coinage, measures, and weights William D. Kelley, and in Germany an odd group consisting of slightly esoteric souls and of bureaucrats who hoped to use the metric system as a means to strengthen the Customs Union.[53]

However, with regard to money the metric enthusiasts were fighting a losing battle in France as in most other countries. Their opponents argued that they underestimated the tremendous difficulties of such a fundamental change of

[51] Rumours persisted that the so-called 'decammatrists'—those wishing to base the coinage on a decagram (10 grams) of gold—were planning a 'Saxon Monetary Union' with which to counteract French hegemonic ambitions in monetary matters. See Samuel B. Ruggles, *International Coinage: Supplemental Report to the Department of State* (Washington, 8 Apr. 1870), 27, 33 f.; A. G. Mosle, *Das teutonische Münzsystem: Ein Beitrag zur Lösung der deutschen Münzfrage* (Bremen, 1870), 3 f., spoke out against 'Frenchifying' the German monetary system.

[52] Trimborn, *Weltwährungsgedanke*, 46 f., 56; T. A. Tefft, *Universal Currency: A Plan for Obtaining a Common Currency in France, England, and America, Based on the Decimal System with Suggestions for Rendering the French Decimal System of Weights and Measures more Simple and Popular* (London, 1858); M. Léon, *De l'uniformité des monnaies: notés presentées à l'Académie des Sciences et suivies d'une lettre de M. le Ministre des Finances* (Paris, 1868); M. Léon, *Uniformité des poids et mesures et établissement d'une monnaie universelle* (Toulouse, 1863).

[53] Trimborn, *Weltwährungsgedanke*, 46 f., 56 ff.; Eugene Nothomb, 'Die Weltmünze', *Preußische Jahrbücher*, 24 (1869), 161–90; Mosle, *Das teutonische Münzsystem*.

system. Furthermore, there was sensitivity to the fact that the public at large would not accept the new units. Time and again critics referred to the example of the gold crown (*Krone*) of a decagram (10 grams) issued by the German Customs Union after 1857 for trade purposes. Despite the fact that this coin embodied all the virtues of the metric system, it turned out to be a failure.[54]

Standardization of coinage had to be based on pragmatic ideas, argued the majority of the proponents of international coinage. In fact, it is astonishing to see how quickly this group gained ground after the Fifth Statistical Congress, held in Berlin in 1863, had put the topic of worldwide currency unification onto the agenda of an international public. As in the case of the metric system, it was again the British delegation that demonstrated particular zeal in proposing an international solution. This shows once more how domestic controversies over the decimalization of the British coinage, which at the time had strong supporters even among those who were otherwise critical of the metric system,[55] were fought with the help of an international movement. Up for debate was the uniform decimalization of the currencies, and the reduction and assimilation of existing monetary units.[56] In Berlin Samuel Ruggles proposed a model for universal coinage that was intensively discussed in the years that followed. Such a coinage was to be based on gold, with the French gold coinage functioning as the basic

[54] At the time it was debated whether the crown was unpopular because it had been rejected by the people, because it was not accepted as legal tender, or because it had no lower denominations. Dr Soetbeer, the Handelstag's financial expert, was critical of the fact that it had been created without consulting commercial circles. *Verhandlungen des dritten deutschen Handelstages zu Frankfurt vom 25. bis 28. September 1865* (Berlin, 1865), 52 f.; Ruggles, *International Coinage*, 87; see also 'Conférence Monétaire Internationale, procès-verbaux', in *Report from the Royal Commission on International Coinage; together with the Minutes of Evidence and Appendix*, House of Commons, *Sessional Papers 1867–1868*, vol. 12, appendix III, 165; Ministère de l'Agriculture et du Commerce, *Congrès International*, 83.

[55] Although the above-mentioned Royal Commission spoke out against the metric system with regard to weights and measures, it explicitly advocated the decimalization of the coinage, cf. *Second Report of the Commissioners Appointed to Inquire into the Condition of the Exchequer*, 4 f.

[56] Russel, *International Monetary Conferences*, 21 f.

unit. The gold content of the British sovereign and the American half-eagle were to be slightly reduced, so that one sovereign, five American dollars, ten Austrian florins, and twenty-five gold francs all had the same value.[57] Ruggles's proposal required most countries to make compromises: Great Britain by reducing the gold content of its sovereign, and France by abolishing its bimetallic standard. The United States was least affected because silver and gold were *de facto* out of circulation as a result of the Civil War. This proposal was far-reaching and controversial indeed, and the Fifth Statistical Congress adjourned with the recommendation that the different governments be invited to a 'special congress' to discuss these matters.

The French Emperor Napoleon III put himself at the forefront of the movement toward monetary integration. As a first step, in 1865, the Latin Monetary Union was formed under the leadership of France. It was to unite more closely the weight, names, form, and circulation of all the gold and silver coins in France, Switzerland, Belgium, and Italy.[58] The purpose of this union was defensive in nature, a reaction to the disruptive effects of the appreciation of silver. However defensive, economic reasoning played into the hands of political calculation. Probably Napoleon III and his advisers calculated from the outset that this union would become the nucleus of a broader union including other major countries. While preparations were made to set up an international monetary conference to coincide with the Exposition Universelle in Paris in the summer of 1867,[59] the United

[57] *Reports of Samuel B. Ruggles, Delegate to the International Statistical Congress at Berlin, on the Resources of the United States, and on a Uniform System of Weights, Measures and Coins* (Albany, NY, 1864), 45; Russel, *International Monetary Conferences*, 21 f.

[58] For the following cf. Willis, *History of the Latin Monetary Union*, 33 ff.; Angela Redish, 'The Latin Monetary Union and the Emergence of the International Gold Standard', in Michael D. Bordo and Forrest Capie (eds.), *Monetary Regimes in Transition* (Cambridge, 1994), 68–85, 76 ff.

[59] An international committee was formed that was to set the agenda for the conference; see *Paris Universal Exposition, 1867, Reports of the United States Commissioners: Extracts from the Report of the International Committee on Weights, Measures and Coins, with a Notice of the Use of the Metric System in the United States and its Relations to Other Systems of Weights and Measures* (Washington, 1870); Russel, *International Monetary Conferences*, 37 f.

States, Prussia, and other countries received formal invitations to join the Latin Monetary Union.[60]

Nineteen European countries and the United States sent delegates to the diplomatic conference arranged by the French government. This International Monetary Conference was to deal solely with matters of coinage.[61] Concurrently, an 'independent meeting' was held, also in Paris, by the British branch of the International Association for Obtaining a Uniform Decimal System of Measures, Weights, and Coins and the British Association for the Advancement of Science. Although the French government provided ample help to make this meeting of experts possible, it did not have the same official status as the International Monetary Conference. However, its delegates consisted of an illustrious group of scientists, men of industry and commerce, and government officials, many of whom attended on behalf of their respective governments.[62]

Despite all the differences of opinion expressed at these two conferences, it was clear from the start that there was a broad consensus in favour of gold as a single monetary standard. Those who favoured an altogether new system of gold coinage based on metric weights did not make much headway.[63] If there was to be any solution, the assimilation of *existing* currencies promised to be the only plausible one. However, it was anything but clear how to make even this come about. Only the group of like-minded men attending

[60] Russel, *International Monetary Conferences*, 38, 40 ff. For the invitation to Great Britain and the ensuing debate over the participation at the conference cf. also the documents in *Report from the Royal Commission on International Coinage*, appendix I.

[61] For an excellent summary see Russel, *International Monetary Conferences*, 34 ff.; Nugent, *Money and American Society*, ch. 8; Friedrich Xeller, *Die Frage der internationalen Münzeinigung und der Reform des deutschen Münzwesens mit besonderer Rücksicht auf Süddeutschland* (Stuttgart, 1869).

[62] *Report of the International Conference on Weights, Measures, and Coins, Held in Paris, June 1867; Communicated to Lord Stanley by Professor Leone Levi and Report of the Master of the Mint and Mr. Rivers Wilson on the International Monetary Conference Held in Paris, June 1867*, House of Commons, *Sessional Papers 1867–68*, vol. 27. For a summary see Russel, *International Monetary Conferences*, 47 ff.

[63] One of the most avid advocates, the French economist Michael Chevalier, was not a member of the French delegation; one of the Belgian delegates who took up this issue, pleading emphatically not just to leave 'traces in the snow but imprints in stone', saw himself isolated. Cf. 'Conférence Monétaire Internationale, procès-verbaux', 166.

the independent meeting agreed relatively easily on establishing the five-franc piece as the basic unit of this international coinage and on introducing a new twenty-five-franc piece to correspond to the new English sovereign, which was to be slightly devalued in terms of its gold content.[64]

This proposal was also debated at the Monetary Conference from the first day on with less success. The diplomatic nature of the meeting made things much more difficult. Neither the representatives of the German states, nor those of Great Britain wanted to commit themselves. The English delegate, Rivers Wilson of the Royal Mint, declared that the present system in Great Britain offered no serious inconveniences and that the British government did not consider it to be its duty to initiate efforts to assimilate its coinage with those of the Continent. The British delegates, continued Wilson, could not 'vote for any question tending to bind their government or express any opinion to induce the belief that Great Britain would adopt the convention of 1865'.[65]

Thus the results of the Monetary Conference, which ended on 6 July, were in many respects inconclusive. Clearly there was no consensus on the form such a new international monetary sytem should have. However, it would be wrong to consider the conference a failure. By hosting these conferences at the Exposition Universelle, Napoleon had made himself the champion of monetary unification. Although the close association of this plan with his controversial personality might seem a considerable liability, working against the idea's chances of success, it caught on in most countries that had participated in the conferences.[66]

That there was substance behind the theoretical reflections at the conferences was demonstrated by the preliminary treaty between Austria and France, signed on 31 August

[64] 'Report on the Uniformity of Coinage', in *Report of the International Conference on Weights, Measures, and Coins.*

[65] 'Conférence Monétaire Internationale, procès-verbaux', 175 f.

[66] See also for the following Russel, *International Monetary Conferences*, 87 ff. and particularly the excellent description by Nugent, *Money and American Society*, ch. 10; Karl Helfferich, *Geschichte der deutschen Geldreform*, 2 vols. (Leipzig 1898), i. 123 ff.

1867.[67] After its defeat by Prussia in 1866, Austria severed its ties with the German Customs Union. Suddenly, here was an opportunity to expand the Latin Monetary Union across the entire European continent. Specimen coins were struck, bearing the head of the emperor of each respective state with the reverse side uniformly inscribed '10 florins, 25 francs'. In addition, four-florin and eight-florin coins were minted that were the equivalents to the ten-franc and twenty-franc pieces of the Latin Monetary Union.[68] On almost every count, the preliminary treaty between France and Austria fulfilled some of the conditions upon which the delegates of the Paris Congress had agreed, namely, the introduction of a single standard based exclusively on gold; specific gold coins of equal quality (fineness was to be $^{9}/_{10}$, that, is a decimal fraction), with the five-franc gold piece and its multiples to be the unit; the coins of each nation could bear the names and emblems preferred by each, but all were to be accepted in every country as legal tender, public and private.

The idea caught on. 'In pursuance of the decisions of the Paris Monetary Conference' the Swedish government, in the spring of 1868, proposed successfully to the diet that a ten-franc gold piece be minted and used in foreign trade, followed by a twenty-five-franc piece as soon as the latter was issued in France.[69] One of the influential individuals pushing for this option was Wallenberg, the president of the Bank of Stockholm and a member of the first chamber of the Swedish Diet. Wallenberg was an avid advocate of the metric system and had participated in the Monetary Conference in Paris.

In the German states, crucial trading partners for Scandinavia, similar sentiments were being expressed, with the

[67] Documents on the negotiations for a monetary convention between France and Austria cf. *Report from the Royal Commission on International Coinage*, appendix VIII.

[68] Ruggles, *International Coinage*, 12; Russel, *International Monetary Conferences*, 88; Trimborn, *Weltwährungsgedanke*, 55.

[69] See the letters from the Foreign Office to the Treasury transmitting information relative to the Swedish currency, *Report from the Commission on International Coinage*, appendix XIII; Ruggles, *International Coinage*, 14; A. Janssen, *Les Conventions monétaires* (Paris, 1911), 107. The *Carolin* became legal tender in France, see Ministère de l'Agriculture et du Commerce, *Congrès International*, 79.

Deutsche Handelstag and the Congress deutscher Volkswirthe almost unanimously supporting the introduction of gold as a monetary standard.[70] The authority in monetary matters, the syndic of the Hamburg chamber of commerce, Adolph Soetbeer, called for coinage unification based on the five-franc piece as a means to unify the diverse monetary units of the mark, the thaler, and the florin, thus reversing an earlier resolution of 1865 which had called for a silver currency on the basis of the mark. Although some members of the Handelstag rejected the French scheme—the resolution in favour of this scheme that Soetbeer introduced at the 1868 meeting almost fell through[71]—it became the official position of this organization.[72]

Soetbeer expressed the hope that, under the influence of Sherman and Sumner, the United States would implement the plans which its delegate Ruggles had so arduously advocated in Paris.[73] Undoubtedly the United States promised to be the best ally of the supporters of international unification under French leadership.[74] It was a particularly favourable time for reform in the United States, because specie resumption had become a pressing issue following the Civil War.[75] Early in 1868, John Sherman, chairman of the Senate Finance Committee, introduced a bill which called for the establishment of the gold standard and a coinage designed according to the guidelines of the French system. Opposition and uneasiness about what action other countries would take prompted the Senate to postpone the

[70] Nugent, *Money and American Society*, 119 ff.; Deutscher Handelstag, *Zusammenstellung der Erklärungen und Gutachten von 35 Handelsvorständen in Betreff der Goldausmünzung in Deutschland*, ed. Bleibender Ausschuß des Deutschen Handelstages in March 1865 (Berlin, 1865); see also Helfferich, *Geschichte*, i. 123 ff.

[71] *Verhandlungen des Deutschen Handelstags 1868* (Berlin, 1868), 27 ff., 50.

[72] Adolph Soetbeer, *Denkschrift zur deutschen Münzeinigung*, ed. Deutscher Industrie und Handelstag (Berlin, 1869).

[73] Ibid. 61; Knut Borchardt, 'Währungs- und Finanzpolitik von der Reichsgründung bis zum I. Weltkrieg', in Deutsche Bundesbank (ed.), *Währung und Wirtschaft in Deutschland 1876–1975* (Frankfurt, 1976), 3–55, 5.

[74] See the letter by John Sherman to Ruggles, in which he wholeheartedly supported Ruggles's idea of making the American gold coins correspond to the gold five-franc piece, Russel, *International Monetary Conferences*, 42 f.

[75] For the following see Nugent, *Money and American Society*, 96 ff.; Russel, *International Monetary Conferences*, 93 ff., 110 ff.

issue;[76] in February 1870 it requested the President 'to invite a correspondence with Great Britain and other foreign powers, with a view to promote the adoption by the legislatures of the several powers of a common unit and standard of an international gold coinage'.[77]

In 1868, France sent President Johnson a specimen twenty-five-franc coin,[78] undoubtedly a gesture to demonstrate that France was seriously considering the recommendations of the International Monetary Conference. As the debates in France show, however, neither the bimetallism movement nor the proponents of a metric solution were so easily defeated by those speaking out for the gold coinage.[79] In 1870 a commission was set up to inquire into the issue of gold and the feasibility of minting a twenty-five-franc coin. Although the latter was found generally quite impractical for domestic purposes—both in size and value it was close to the 'Napoleon', the twenty-franc piece—the majority of the commission deemed it desirable in order to enable international monetary co-operation.[80]

As the advocates of international coinage were aware, much depended on Great Britain. For all practical purposes the sovereign represented a universal currency. Just as in the case of the metric system, there were high expectations and, it can easily be argued retrospectively, a great deal of wishful thinking went on among those who wanted Great Britain to become part of a future continental system. Although the British government had made clear that it objected to these plans, the conference led to some heated debates. Disraeli

[76] Although the bill was widely supported, a Senate minority report written by Senator Morgan criticized the intended reduction of the gold content of the dollar as being detrimental to the credit of the United States; in addition, William D. Kelley from the Committee on Ways and Means introduced in the House a bill proposing an altogether new monetary system that was to correspond with the metric system of weights. United States Senate, *International Coinage: I. Report of Senator Sherman, II. Report of Senator Morgan, III. Bill to Establish a Uniform Coinage, IV. Report of Mr. S. Ruggles* (Washington, 1868).

[77] Russel, *International Monetary Conferences*, 113.

[78] Ibid. 95.

[79] France, Ministère des Finances, *Procès-verbaux et rapport de la Commission Monétaire* (Paris, 1869); see also Nugent, *Money and American Society*, 115 f.

[80] France, Conseil Supérieur du Commerce, de l'Agriculture et de l'Industrie, *Enquête sur la question monétaire*, 2 vols. (Paris, 1872).

set up a Royal Commission after France had enquired formally whether Britain was prepared to associate its efforts with those of other nations. The majority of those testifying before the commission spoke—at times quite emphatically—in favour of joining a monetary union, even if this required a slight reduction of the gold content of the sovereign in order to make it conform with the future French twenty-five-franc coin. In the end, while the commission stressed the advantages of unification in its report, it clearly advised against 'tampering' with the pound. Instead, the members proposed a unification on the basis of the English currency, an idea which was to be proposed and discussed at another international monetary conference.[81] Observers at the time were already interpreting this as an elegant effort to 'choke the scheme'.[82]

However, this was not the end of the debate. In the summer of 1869 the Chancellor of the Exchequer, Robert Lowe, took up the issue. He argued that both France and England had to give up some of their prejudices in exchange for the 'blessings of one coinage throughout Europe', which he deemed 'a great step in civilization'. He referred to the report of the French Imperial Commission, which indicated that France was ready to abolish the bimetallic standard.[83] Regarding the recommendations of the International Monetary Conference, Lowe proposed that Great Britain reduce the gold content of the sovereign by 1 per cent so that this coin would correspond almost exactly to the weight of the twenty-five-franc gold coin. An outright devaluation was to be circumvented by introducing a small charge for the minting of coins, a 'seigniorage', of the same amount. This solution, he argued, would allow the sovereign to remain the same value at home while its international value—measured in terms of gold—would correspond to the French system. Lowe's speech caused an uproar, not least because he was implying that the government could determine the value of

[81] *Report from the Royal Commission on International Coinage*, p. xviii; Nugent, *Money and American Society*, 112 f.

[82] *Speeches, Letters, Articles, etc. on the Gold Coinage Controversy of 1869* (London, 1870), 290 (F. Hendricks).

[83] Ibid. 1 ff.; Russel, *International Monetary Conferences*, 102.

money, thus raising fundamental issues of money, value, and society. Amidst this heated controversy, the Association of Chambers of Commerce decided unanimously to present a report in favour of the internationalization of coinage based on the Paris idea. It was argued that Great Britain could not afford not to be a part of a powerful monetary union, and that the country would gain by far the most from membership since it had the strongest position in general trade.[84]

What were the reasons for the enthusiasm for an international coinage? One was the desire to create one large market to allow the free circulation of capital, goods, and manpower. 'Those countries which have the international coinage will be brought into as intimate a commercial relation with one another as we are now with the counties of our own country', argued the banker Sampson Samuel Lloyd, chairman of the Association for Chambers of Commerce.[85] In the majority report of the Senate, John Sherman wrote:

> Every advance towards a free exchange of commodities is an advance in civilization. Every obstruction to a free exchange is born of the narrow, despotic spirit which planted castles upon the Rhine to plunder peaceful commerce. Every obstruction to commerce is a tax on consumption; every facility to a free exchange cheapens commodities, increases trade and production, and promotes civilization. Nothing is worse than sectionalism within a nation and nothing is better for the peace of nations than unrestricted freedom of intercourse and commerce with each other.[86]

Although critical of the French scheme, Walter Bagehot, editor of *The Economist*, wrote in 1868 that 'ultimately the world will see one *code de commerce*, and one money as a symbol of it'.[87]

[84] Russel, *International Monetary Conferences*, 102; it did not take long for general opinion on this issue to shift within the Association, cf. *Royal Commission on International Coinage*, 10 (Jacob Behrends).

[85] Ibid. 1.

[86] US Senate, *International Coinage* (Sherman), 4.

[87] Walter Bagehot, *A Practical Plan for Assimilating the English and American Money, as a Step towards a Universal Money* (London, 1869), 13. Bagehot regarded the scheme proposed in 1867 as deficient because it did not create a 'common language of account'; the prerequisite for this was the introduction of a decimal coinage and a decimal system of accounts in England.

Like the metric system issue, the international coin issue was discussed in terms of creating a 'universal language', or, as the Astronomer Royal, George Airy, a member of the English commission, corrected an imprecise banker, 'the language of measure of value'.[88] Money would facilitate communication and intercourse between nations. It would create market transparency—especially for smaller merchants who hoped to gain a foothold in the continental market—simplify international monetary transactions, and ease the difficult translation of prices. Undue attention was paid to the plight of travellers and tourists who lost money when paying abroad in their national currency.[89] Resentment ran high against money changers. The introduction of international coins of equal value would put them out of business and force them to engage in labour of a 'productive character'.[90] Proponents of an international coinage were not impressed by the fact that much international trade was financed by bills of trade, the prices of which would continue to fluctuate. They conceived money and exchange almost exclusively in terms of coin and bullion.

These arguments were the stock phrases of economic liberalism, which envisaged a world without borders. Yet the idea of creating a set of universal coins implied certain premisses that are noteworthy with respect to the proposed international community of nations. Most important was the assumption that each country joining the Convention would accept the other countries' international gold coins as legal tender. The stamp which each government put on its gold coins was to certify their value in terms of metal content. Money was a commodity like any other, which, by way of economic exchange, communicated its economic and societal value. If necessary, it could be melted down into ingots.

The international coins were to represent their respective

[88] *Report from the Royal Commission on International Coinage*, 115.

[89] The Royal Commission contains numerous testimonies in this respect. See particularly that of the secretary of the Institution of Civil Engineers and representative of the firm Robert Stephenson & Co., ibid. 33 ff.; Edmund Knowles Muspratt, a chemical manufacturer of Liverpool, 37 ff., esp. 57; the professor of political economy William Stanley Jevons, 98 ff.; the Astronomer Royal, George Airy, 115.

[90] Ibid. 55 (Alfred Field).

nations. Circulating next to each other as legal tender, they represented, in an almost ideal way, an internationalism based on an equality of the 'civilized nations'. War and military conflict had no place in this vision of internationalism. However, the future family of international coins was highly competitive. In his report to the Secretary of State, Ruggles complained that because of their 'excrescent weight', the American coins did not 'pass' in Europe, and were melted down, although they were carefully and expensively coined at the American Mint. It was a sorry sight, he argued, 'to see our cherished republican emblems and the national monetary motto "In God we trust" brightly stamped upon our coins, all disappearing to give place to the crowned heads claiming "by the grace of God" to be sovereign in Europe'. Ruggles continued: 'the obliterated coin thus circulating under a foreign mask, carries with it no evidence of the American Union, as one of the leading powers of the world.' The international coin was a means of ranking the United States in the 'common family of nations'.[91] The result was exactly the opposite of 'Frenchifying' the American currency, as critics argued at home.[92]

The language of internationalism was infused with the language of national prestige and competition. It was argued that 'Napoleons' (twenty francs) would circulate in England, possibly 'superseding the Queen's head by that of the Emperor driving the former altogether out of circulation'.[93] Although this was highly improbable—the opposite was just as likely—there was indeed a chance that via the franc standard and its decimal denominations Great Britain would sooner or later be penetrated by the metric system.[94]

[91] Ruggles, *International Coinage*, 51, 55.

[92] Ibid.

[93] *Speeches, Letters, Articles, etc. on the Gold Coinage Controversy*, 21 (Leonard Bruton).

[94] For this very reason individuals such as Leone Levi favoured the continental system and supported the minting of a 'Victoria' with a value of 10 francs equal to 8 shillings. *Report from the Royal Commission on International Coinage*, 27 f.; cf. e.g., the testimonies of Sampson Samuel Lloyd, 3 ff., and Jacob Behrends, 10.

3. Two Modes of Internationalism

The enthusiasm for international coinage that ran so high, at least among proponents, as late as 1870 was dampened almost from one day to the next. The reason for this is to be found in the logic of power politics. After the Battle of Sedan in the military conflict between Prussia and France, the Emperor Napoleon, the *spiritus rector* of the international coinage movement, vanished. Once the Franco-Prussian War was over, the chances of states committing themselves to binding treaties on such a sensitive issue as money dwindled. As has already been mentioned, early in 1870 the American Senate had asked the President to ask other countries about possible co-operation in international gold coinage. By September it was clear that the 'whole scheme had fallen to the ground'.[95] The logic of power politics vindicated those who had been highly suspicious of these initiatives from the start.

Victorious Prussia set the agenda in monetary matters as in others. France was on the defensive. The unification of the currency was one of the top priorities of nation-building. But the French scheme was no longer to be the basis.[96] A feature of the newly created German mark was that in terms of its gold content it bore an odd relation to other foreign currencies, whereas in terms of value it pretty nearly matched the northern German thaler (from which it was, in fact derived) and, although to a lesser degree, the southern German gulden. This made the switch to the mark relatively easy, especially as the older denominations remained in circulation.[97] Similarly, the new American gold dollar, the new Dutch gulden, and the krone, which Sweden and Denmark introduced through a monetary union, did not correspond to each other in terms of their gold content. The fact that Sweden stopped the coinage of the above

[95] Russel, *International Monetary Conferences*, 114; Helfferich, *Geschichte*, i. 132 f.

[96] For a concise summary, see Borchardt, 'Währungs- und Finanzpolitik', 9 ff.; Helfferich, *Geschichte*, ii. 139 ff.

[97] The old silver coins were legal tender until 1908, thus creating a 'limping' gold standard.

mentioned Carolin in 1873 illustrates the fundamental change of heart that took place within a relatively short period.[98] What all this demonstrates is the pervasive nationalization of the currency issue. None of the countries which embarked on monetary reform in the 1870s had the slightest interest in linking their national currencies to a formal international monetary system.[99]

The German initiative robbed France of its place as the prime catalyst in monetary matters. Not only did the Scandinavian countries orientate themselves to the new Germany, a country so vital to their trade, but the Latin Monetary Union was also soon forced to follow Germany's lead and abolish its bimetallic standard.[100] Thus within a decade of the Franco-Prussian War, events had fundamentally transformed not only the different monetary regimes but also the debates on international coinage. Only its underlying principle, namely, the idea that the metallic basis of such coinage would be gold, triumphed. In the words of Gallarotti, Germany pulled the 'monetary chain gang onto gold'.[101]

Considering the failure of international coinage, the continuing efforts to establish universal standards of weights and measures are all the more interesting. In fact, all the major and minor powers of the world were involved in the 'metre diplomacy', which survived the Franco-Prussian War.[102] On the invitation of the Emperor, an international conference had met in Paris on 8 August 1870, the very day the Franco-Prussian War broke out. Although this

[98] See the complaints of Wallenberg in Ministère de l'Agriculture et du Commerce, *Congrès International*, 79.

[99] Marcello de Cecco, *The International Gold Standard: Money and Empire* (New York, 1984), 60; Giulio M. Gallarotti, *The Anatomy of an International Monetary Regime: The Classical Gold Standard, 1880–1914* (New York, 1995), 25.

[100] Diplomatic historians have given next to no thought to the implications of this development. For a summary of the complicated developments in the Latin Monetary Union see Theuerl, *Eine gemeinsame Währung*, 185 ff.; Redish, 'Latin Monetary Union', 79 ff.

[101] See the good description by Gallarotti, *Anatomy*, 169.

[102] To my knowledge there is no history of the complicated negotiations leading to the diplomatic conference of 1875 based on diplomatic sources. Bigourdan, *Système*, chs. 25–30 gives a detailed account of the technical questions; cf. also Cox, 'History', 194 ff.

conference soon had to be interrupted because of the approaching war front, it outlined the framework for an international structure for the metric system, an issue which had not been on the agenda of the conference when Napoleon sent out his invitations. This conference established a preliminary research committee, consisting of the French delegation and nine scientists from other countries, including two Germans who could not attend. The war was seen as a nuisance more than anything else, disturbing the delegates' work and depriving the conference of some respected members. Wilhelm Förster, the director of the recently founded Normaleichungskommission (Bureau of Standards and Weights), relates that his English colleague, the Astronomer Royal, George Airy, had proposed that Förster attend the conference to represent his government despite the impending war. Förster himself was apparently ready to go to Paris although the Prussian government—not surprisingly—stopped him from doing so. Only in the spring of 1872 were Förster and his other German colleague able to go to Paris for the first meeting of the preliminary research committee. This committee worked out proposals for the conference that convened in Paris in the autumn and that was attended by fifty-one delegates from thirty states (eleven of which were from the Americas).[103] On the agenda were technical questions that sparked heated debates reflecting different cultures, concepts of science, and definitions of precision both nationally and transnationally.[104] A Permanent Committee was formed, which prepared the details for the diplomatic conference.[105] Of

[103] Förster, *Lebenserinnerungen*, 105 f. It is not clear why Airy, who was also chosen to be a member of the research committee, did not come to Paris; Great Britain was represented by another delegate.

[104] These issues cannot be dealt with here. For documentation of the debates, see *A Report to the Board of Trade upon the Formation and Proceedings of the International Metric Commission at Paris, 1869–1872 by the Warden of the Standards, One of the Delegates from the United Kingdom* (London, 1873); Commission Internationale du Mètre, Comité Permanent, *Procès-verbaux des séances de 1872 et 1873* (Paris, 1873); for a vivid description, see Förster, *Lebenserinnerungen*, 111 ff.

[105] Bigourdan, *Système*, ch. 28, 328 ff. Cf. also *Papers Relating to the Meeting and Proceedings of the Diplomatic Conference at Paris for Making Provision, by Means of a Convention, for Effecting the Objects of the International Metric Commission* (London, 1875).

the twenty nations participating in this conference, all except Great Britain, the Netherlands, and Greece signed the Convention du Mètre.

The solutions for establishing the metric regime on a new international basis are quite characteristic with respect to the mechanics of emergent 'governmental internationalism', which all dealt with the need to construct a workable framework within the context of competing nation-states. First, the Metre Treaty was negotiated by the epistemic community of experts, and it is quite obvious that the states associated themselves as little as possible with these negotiations, at least publicly. *De facto*, these scientists, who were, after all, civil servants of their respective countries, appear to have collaborated very closely behind the scenes with professional diplomats.[106] Closely connected with this is, second, that the new International Bureau of Weights and Measures, paid for by the member countries, was controlled by these civil servant scientists. The work of the new Bureau was supervised by an International Committee of Weights and Measures consisting of fourteen-member delegations from each member country. This committee, in turn, was placed under the authority of a General (or International) Conference of Weights and Measures, consisting of all members, which was to meet every six years. Since every country that joined the convention had a seat in the General Conference, this became a truly international meeting place for those administering the metric system in their respective countries.

Although national suspicions and different scientific concepts continued to influence developments, an élite of professional international 'players' emerged. The president of the Comité Internationale from 1875 to 1891 was the Spanish General Carlos Ibánez de Ibero, a member of the Permanente Kommission der Europäischen Gradmessung. He was succeeded by Wilhelm Förster from 1891 to 1920, who had

[106] Those opposing any centralizing efforts included some French delegates who feared German influence, and the British and Dutch delegates, who objected to establishing a formal organization. For this and efforts to bring Russia into line with German ideas see Förster, *Lebenserinnerungen*, 152, 156.

numerous positions and functions in the relevant international movements and organizations. The same is true of the director of the observatory in Neuchâtel, Switzerland, Hirsch, who served as first secretary of the Comité International and, with Ibánez, was a leading member of the Internationale Organisation der Gradmessung until his death in 1901.[107]

Third, the efforts to keep the new organization out of the hands of national politics is most clearly illustrated by the fact that the extensive research facilities of the new Bureau were located on extraterritorial grounds outside Paris. Apparently this was a compromise to prevent the Bureau from being transferred to Switzerland while at the same time keeping it out of direct French control.[108]

Fourth, the prototype of the international metre was to be created and deposited in the new Bureau and was not to be associated with any nationality. Despite resistance from some French scientists who were very protective of 'their' metre, there was from the start a broad consensus in favour of transforming the French standard into an international one. This was achieved by doing away with the authority of the venerated *mètre des archives*. As early as 1870, it had been agreed that the French metre should *not* be used as the new international prototype. In terms of the logic of internationalism the solution is highly intriguing. A new, truly 'international metre' was to be created on the basis of the *mètre des archives* under the auspices of the international scientists. The latter supervised the French scientists, who carried out this extremely difficult task.[109] The scientists were aware that identical bars could not be created for all member countries. Hence the new international prototype was selected from among the copies made for the countries which had signed

[107] Ibid. 148. As is evident, geodesists played an important role. In 1886 this organization, which had traditionally been under strong German influence, was reorganized to resemble the Bureau of Measures and Weights. It changed its name from Permanente Kommission für Gradmessung to Internationale Organisation für Gradmessung. See Förster, *Lebenserinnerungen*, 189 f.

[108] Supposedly this compromise was strongly favoured by Förster and the German government; Förster, *Lebenserinnerungen*, 112.

[109] The creation of these bars was not only extremely expensive but also caused serious conflicts between the scientists, an issue that cannot be dealt with here.

the treaty. The new authority was, so to speak, a *primus inter pares*. At 0.12 micron, its bar had the smallest probable error by comparison with the *mètre des archives*. The other nations were allocated the remaining bars (with variation up to 0.4 micron) by lottery in order to prevent any jealousy.[110] On 28 September 1889, the new international prototypes were ceremoniously installed, and the lottery was held.[111] Four keys, rotated sexennially among the members of the International Committee, were necessary to gain access to the underground safes in which the international prototypes of the metre and the kilogram were stored.

By establishing an international scientific authority to oversee the standards of weights and measures, the international community ensured that the metric system did indeed live up to the expectations of those who had wanted the metre to become a symbol of a global civilization, 'a universal language which more closely unites countries in those respects in which their interests are one and the same'.[112] Although the metric system was still forced to compete against other major national systems (in Europe and Asia), its proponents boasted that it now defined the standards of the modern world, the more so as it co-opted electrical units.[113] Because the metric system soon became firmly rooted in the new technologies, it is not surprising that an ever greater number of countries joined the metre convention.[114] The adoption of the metric system gave scientists the opportunity to join an international epistemic community of like-minded colleagues, yet still left ample room for national styles of precision and control. For emerging nations, membership in this international community offered new

[110] Ways were soon developed of determining the length of the metre by the wavelengths of light, cf. Bigourdan, *Système*, 407 ff.

[111] Bigourdan, *Système*, ch. 17. *Conférence Générale des Poids et Mesures: comptes-rendus des séances de la première Conférence Générale des Poids et Mesures, réunie à Paris en 1889* (Paris, 1890).

[112] Cited by Cox, 'History', 379.

[113] Charles Édouard Guillaume, 'Les Systèmes de mesures et l'organisation internationale du système métrique', *La Vie internationale*, 3 (1913), 5–44.

[114] G. Bigourdan, *Les Récents Progrès du système métrique: rapport présenté à la cinquième Conférence Générale des Poids et Mesures, réunie à Paris, en octobre 1913* (Paris, 1913), 58 ff., 65.

forms of national representation, and at the same time taught them crucial lessons about state- and nation-building using what was heralded as the scientific and progressive decimal system.

These complicated arrangements and the subsequent development of the metre reveal a great deal about why efforts to create a universal coinage failed. First, it would have been almost impossible to delegate the entire 'technical' issue associated with such an endeavour to a special group of experts like those responsible for administering weights and measures. Second, an international coinage would have demand an unprecedented degree of political and economic co-ordination and co-operation between the different countries, which was hardly possible in the highly competitive, 'anarchistic' international political environment. Third, a convention would have linked the members of the International Monetary Union to the weakest and, at worst, to the potentially most ruthless of partners. The Latin Union with its subtle methods of bringing undervalued coins into circulation, and the various exchange crises, not only in Italy after 1866, but also in France during the Franco-Prussian War, are good examples in this respect.[115] Liberals such as the German Ludwig Bamberger were loath to describe and condemn these weaknesses. Not only in Bamberger's view, a convention in monetary matters for modern states was the equivalent of slavery for human beings:

> A human being cannot dispose of his freedom by means of a contract, and a state cannot dispose of its freedom by means of a monetary convention. The principle of its physical and spiritual existence is inherent in its monetary system. The circulation of money is, like the circulation of blood, a basic condition of its survival, and to tie these conditions of survival to other existences is both impermissible and impractical.[116]

Soon the language became more radical. A monetary

[115] Theuerl, *Eine gemeinsame Währung*, 192 ff.

[116] Ludwig Bamberger, *Reichsgold: Studien über Währung und Wechsel* (3rd edn.; Leipzig 1876), 36; cf. also id., *Die Schicksale des Lateinischen Münzbundes: Ein Beitrag zur Währungspolitik* (Berlin, 1885).

convention, declared the Prussian Finance Minister, Scholz, was nothing but 'treason'.[117]

To understand this adamant rejection of a monetary convention, one must be aware that the issue had changed radically since the 1870s. Within a few years, the earlier debates over the creation of a universal coinage had been replaced by debates over remonetizing silver, and establishing a bimetallic standard of gold and silver, whereby the value of the latter was to be fixed by way of an international agreement.[118]

Bimetallists attacked monometallists who preached the gospel of gold. Something important happened during these heated debates. Gold as a single standard of value, which had come to prominence during the monetary conferences in Paris in 1867, became one of the most powerful signifiers of 'internationalism', for both the defenders and the detractors of what become known as the international gold standard. The new ideologues of the gold standard energetically sang the praises of this metal as a power transcending national borders through its inherent language of value.[119]

First, gold epitomized free economic intercourse between nations, the free mobility of capital, goods, and human beings.[120] The resemblance between money and people was obvious. Just as men and women of wealth ideally crossed

[117] Quoted in Ludwig Bamberger, *Die Stichworte der Silberleute* (1892; 5th rev. and exp. edn., Berlin, 1893, 77.

[118] At the end of the 1870s this movement was spearheaded by France and the United States, which initiated a number of conferences to address this issue. They all failed, not least because Great Britain and Germany stubbornly refused to participate in any formal, international regimes in monetary matters. These controversies over bimetallism and the remonetization of silver culminated in the 1890s and split all countries along similar lines, although none as badly as the United States. For a description of the various congressses and meetings, Russel, *International Monetary Conferences*, is still unsurpassed. As I will show elsewhere, Bismarck's actions depended greatly on what Great Britain did. For Great Britain's resistance to entering into or helping to create a formal monetary regime, see Gallarotti, *Anatomy*.

[119] Nugent, *Money and American Society*, ch. 5. Leland Yeager, 'The Image of the Gold Standard', in Michael D. Bordo and Anna J. Schwartz (eds.), *A Restrospective on the Classical Gold Standard 1821–1931* (Chicago, 1984), 651–69; Gallarotti, *Anatomy*, 143 ff., Eichengreen, 'Editor's Introduction'.

[120] Bamberger entitled the fourth chapter of his book *Reichsgold* 'Die Fähigkeit auszuwandern: Grundbedingung jeder guten Münze' (The Ability to Emigrate: Fundamental Condition of Every Good System of Coinage).

borders without passports, gold was to circulate freely and unhindered. The gold flow between nations would function as an 'invisible hand' regulating economic exchange and prices, optimizing the situation of all actors, and, finally, creating economic stability by way of stable exchange rates. By establishing gold as a standard, countries would have to abide by the 'rules of the game' and 'weak' or financially 'undisciplined' countries would have to revert to paper money.

Second, inherent in gold was a narrative of progress, advancement, and civilization. Gold was the currency of advanced, 'civilized nations' with well-developed economies. As the proponents of gold repeatedly argued, silver currencies were synonymous with retarded economic development, just as large silver coins supposedly appealed to 'primitives' at home and abroad. Joining the club of the countries with gold currencies was not only a matter of economic opportunity but also proof of full standing in the 'civilized world'.

Third, all of these arguments were based on the premiss that gold had an inherent, 'essential' value. Unlike the metre or an international coin, the value of which needed to be agreed upon by way of convention, it was assumed that the value of gold conveyed itself objectively to all human beings. This is an important aspect with respect to conceptualizing internationalism on the basis of gold. Ideally, for the proponents of gold, this *societal appreciation* of the commodity gold (as opposed to *governmental fixation* of its price) created the very foundation of an economic and societal internationalism that linked societies in an imagined world of peaceful competition which would make possible the peaceful 'colonisation des uns chez les autres' (colonization of each other) that internationalists talked about so much.[121] Indeed, this societal appreciation of gold, so fundamental to the monometallic orthodoxy, enabled the establishment of an international monetary regime that was by nature national and not international in its objectives.[122]

[121] H. La Fontaine and P. Otlet, 'La Vie internationale et l'effort pour son organisation', *La Vie internationale*, 1 (1912), 9–34, 9, 12.

[122] Yet, as Gallarotti writes, 'the collective convergence onto similar domestic monetary regimes generated a set of definitive international outcomes'. Gallarotti, *Anatomy*, 25.

Thus the metre had no equivalent in a system of uniform coins, although this idea, so popular in the late 1860s, never disappeared altogether.[123] The Bureau of Weights and Measures was the formal intergovernmental agency assigned to guarantee the functioning and worldwide adoption of the metric system. On the other hand the gold standard was a most informal kind of international regime; not planned, not managed, yet loaded with highly ideological assumptions about how it worked—and it *did* work. By 1914 with very few exceptions, countries which deemed themselves 'civilized' had joined the 'chain gang' of gold, even if most of them no longer followed the informal rules that were associated with the international gold standard and supposedly governed it. Yet, when the international gold standard vanished and currency markets became truly nationalized with the outbreak of the First World War, it was realized what a powerful signifier of civilization and international, political, and economic order had been lost.

[123] e.g., see Gaston Moch, 'La Monnaie internationale', *La Vie internationale*, 5 (1914), 503–22.

4

Passports and the Status of Aliens[1]

ANDREAS FAHRMEIR

The Nineteenth Century as an Era of Liberal Migration Policy—a Misunderstanding?

As part of the 1889 Paris World Exhibition, the French Ministry of Commerce, Industry, and Colonies organized an international conference on state intervention in international migration. This conference, which was attended by officials and journalists from many European countries and the United States, passed two resolutions. First, it declared that migration was beneficial to states and individuals alike. Second, it expressed the opinion that states should not interfere with it.[2] The participants were convinced that these resolutions were an adequate description of states' policies, not calls for change. Recent works agree with this assessment. A survey of the history of migration published in 1992 sums up the state of the debate as follows: in 'the century of peace that followed [the Napoleonic Wars], only minimal state intervention touched migration practices. Working people wanted to cross borders, and they were usually free to do so.'[3] If international migration was not limited by governments, then everybody was free to travel, reside, and work where they wished without facing any obstacles related to nationality. Surely this would have been practical internationalism at its peak.

[1] More detailed documentation of some of the topics covered, particularly on German states and Britain, can be found in my *Citizens and Aliens: Foreigners and the Law in Britain and the German States, c.1789–1870* (New York, 2000).

[2] Ministère de Commerce, de l'Industrie, et des Colonies, Exposition Internationale de 1889, Direction Générale de l'Exploitation, *Congrès international de l'intervention des pouvoirs publics dans l'émigration et l'immigration tenu à Paris du 12 au 14 août 1889: procès-verbaux sommaires par M. le prince de Cassano* (Paris, 1890), 17, 34.

[3] Leslie Page Moch, *Moving Europeans: Migration in Western Europe since 1650* (Bloomington, Ind., 1992), 107. Cf. also Robin Cohen, 'Prologue', in id. (ed.), *The Cambridge Survey of World Migration* (Cambridge, 1995), 5.