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Congress Mania in Brussels, 1846–1856:

Soft Power, Transnational Experts, and Diplomatic Practices

David Aubin*

Abstract: In 1853, the director of the Belgium Royal Observatory Adolphe Quetelet welcomed delegates from several countries to two consecutives meetings that have acquired considerable reputation as the first international congresses of, respectively, meteorology and statistics. This paper examines the local context where several similar international congresses (on free trade, universal peace, prison reform, public hygiene, etc.) were organized in the same decade. It argues that the new Belgian state developed this new form of international conferences in order to bolster its soft power in the Concert of Nations. It also discusses tensions between national interests and global beliefs in the efficiency of science, which arose from these congresses.

Keywords: Scientific conferences; meteorology; statistics; Belgium; Adolphe Quetelet; soft power; science diplomacy; transnational science.

Short title: Congress Mania in Brussels

Abbreviations: *Congrès de statistique* = *Compte rendu sur les travaux du Congrès général de statistique, réuni à Bruxelles, les 19, 20, 21 et 22 septembre 1853* (Brussels: Hayez, 1853); *Explanations* (6th ed.) = Matthew Fontaine Maury, *Explanations and Sailing Directions,* 6th ed. (Philadelphia: E. C. and J. Biddle, 1854), 54–96; *Maritime Conference* = *Maritime Conference Held at Brussels for Devising an Uniform System of Meteorological Observations at Sea, August and September 1853* (No publisher, no date); Quetelet Papers = Fonds Quetelet, Archives de l'Académie royale des sciences, des arts et des belles-lettres de Belgique.

M. GARNIER (France). *Il n'y a ici que des statisticiens !* [1]

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[1] *Congrès de statistique*, 140.

On September 22, 1853, the General Statistical Congress was coming to an end in Brussels, and delegates were already thinking about where to meet next. Making the case for Paris, Alfred Legoyt, statistician at the French Trade Ministry, wished to counter reservations regarding the unstable political situation in France voiced earlier by the economist Horace Say. Referring to Say as a "compatriot," Legoyt was violently interrupted by the editor of the *Journal des économistes,* Joseph Garnier, who exclaimed: "There are only statisticians here!" (implying the congressists were united by their trade rather than divided by nationalities). Garnier's remark looks contradictory, since he was identified as being from France. But in what way did he, Legoyt, or Say represent their country? Legoyt surely had more claim than any of the other two to speak for the new Imperial Government of Napoleon III.[2] Was Garnier right to insist that they just spoke as scientists? Weren't countries themselves, or their governments, also stakeholders of the Congress? If so, were scientists stepping on diplomats' turf?

In recent years, science diplomacy is increasingly perceived as a major tool for states to generate soft power, while making global scientific enterprises and concerted international actions possible.[3] Although developed for organizations during and after the Cold War, science diplomacy is nothing new. In this paper, I argue that the newly established Belgian state, fashioning itself as a transnational hub for modern ideas, triggered the development of new forms of experts' diplomacy. Like traditional forms of state diplomacy, the Belgian idea of scientific diplomacy was played out in "congresses" and ultimately empowered its stakeholders. In so doing, the Belgian state prefigured a belief in the idea that soft power, a concept only developed later in the 20th century, could be accrued

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[2] On the representativity of delegates in technological conferences, see Léonard Laborie, "En chair et en normes: Les participants aux conférences de l'Union internationale des télécommunications, de sa fondation à sa refondation (1865–1947)," *Flux*, no. 74 (2008): 92–98; and *L'Europe mise en réseaux. La France et la coopération internationale dans les postes et les télécommunications* (Brussels: Peter Lang, 2010).

[3] On science diplomacy, see The Royal Society, *New Frontiers in Science Diplomacy: Navigating the Changing Balance of Power* (January 2010). On soft power, see Joseph Nye, *Soft Power: The Means to Success in World Politics* (New York: PublicAffairs, 2004). For an application of this concept to the 19th century, see Frank Muller and Heidi Mehrekens, eds., *Royal Heirs and the Uses of Soft Power in Nineteenth-Century Europe* (London: Palgrave Macmillan, 2016).

from organizing, and to a lesser extent partaking in, large international gatherings of scientist, or experts more generally. From the point of view of these experts, however, a tension arose between their belonging to transnational epistemic communities and national allegiances, which I also want to explore in the following.

In barely more than a month, in 1853, the Belgian capital hosted two famous international congresses. From August 23 to September 9, twelve men representing ten countries discussed a scheme for standardizing meteorological measurements on board ships crisscrossing the global ocean.[4] Just ten days later, on September 19, 87 Belgian experts and 64 delegates from 25 countries took part in the Statistical Congress. For three days, they discussed precise recommendations regarding the science of government and the gathering of data on demography, land use, economy, trade, criminality, and education. For the man who steered both conferences, the director of the Royal Observatory, Adolphe Quetelet (1796–1874), these meetings opened a "new era" in international scientific coordination.[5] Quetelet was right: more than any previous attempts at gathering scientists and specialists from several countries, the two meetings in Brussels raised hopes about the possibility of

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[4] On the Maritime Conference, see Guy T. Houvenaghel, "The First Insternational Conference on Oceanography (Brussels 1853)," *Deutsche Hydrographische Zeitschrift* B22 (1990): 330–336; Roger Charfier, "Fratres in Maribus 150 Years Ago, the First International Ocean Science Conference," *Journal of Costal Research* 20 (2004): 347-350; and Azadeh Achbari, "Building Networks for Science: Conflict and Cooperation in Nineteenth-Century Global Marine Studies," *Isis* (2015), 106: 257–82. See also a remarkable undergraduate essay by Glenn Richardson, "Betrayal in Brussels: The Conference that Changed International Science," Carlene Conrad Liebau Library Prize for Undergraduate Research, University of California, Berkeley (21 Nov 2015); available online: http://escholarship.org/uc/item/2302498d (accessed on 24 Feb 2018).

[5] The quoted expression is from Quetelet's opening speech. *Congrès de statistique*, 23. On Quetelet, see Theodore M.Porter, *The Rise of Statistical Thinking 1820-1900* (Princeton: Princeton University Press, 1986)), 41-55 and 100-111; Ian Hacking, *The Taming of Chance* (Cambridge: Cambridge University Press, 1990), 105-114; Alain Desrosières, *The Politics of Large Numbers: A History of Statistical Thinking,* trans. Camille Naish (Cambridge: Harvard University Press, 1998) 73-82; and Kevin Donnelly, *Adolphe Quetelet, Social Physics and the Average Men of Science, 1796-1874* (London: Routledge, 2015).

producing new scientific objects and measurement schemes. Both the Maritime Conference and the Statistical Congress are now seen as founding moments in the international organization of two global sciences.[6]

Although both meetings have recently attracted a lot of attention, they have never been put into the context of the "Congress mania" of mid-century Brussels.[7] From 1846 to 1856, no less than ten different meetings took place in the Belgian capital, at a time when such international gatherings were rare events. Dealing with a wide range of topics, from economic free trade to universal peace and from agriculture, public hygiene, and charities to prison reform (table 1), most of these congresses have often been assimilated to other events on similar topics. But Quetelet's activities invite us to look at both the Maritime Conference and the Statistical Congress as separate manifestations of the same trend. Inspired in his youth by Saint-Simonian ideas, he believed that scientists felt a natural need to gather due to the "spirit of general association."[8] Taking their cue from his remarks at the Congress, historians have sometimes understood Quetelet's conception of statistics in terms of his meteorological practice. At the time when the definition of "statistics" was debated, the meteorological

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[6] The Brussels Maritime Conference was inspirational for the 1873 International Congress in Vienna which led to the establishment of the International Meteorological Organization (today the World Meteorological Organization). Similarly, the origins of the International Statistical Institute, which regularly organizes the World Statistical Congresses since 1885, have been traced back to the Brussels Congress.

[7] For a recent parallel study of both meetings, see Kevin Donnelly, "Redeeming Belgian Science: Periodic Phenomena and Global Physics in Brussels, 1825-1870," *History of Meteorology* 8 (2017): 57-73.

[8] *Congrès de statistique*, 23. On the Saint-Simonian inspiration, see David Aubin, "'Principles of Mechanics that are Susceptible of Application to Society': An Unpublished Notebook of Adolphe Quetelet's at the Root of his Social Physics," *Historia Mathematica* 41 (2014): 204–223.

analogy was a potent resource for shaping the field.[9] Since then, however, historians have shown that the meaning of these practices also was in the process of being negotiated. Views regarding observation practices and routines, standardization of instruments, mathematics and theory-building, networks of data collection as well as the shape of national institutions for the weather were perhaps as diverse as there were in statistics. To study the goals of Quetelet and the participants to the Brussels meetings, it is therefore helpful to move away from ill-defined disciplinary boundaries.[10] A closer look at practices seems more promising and Quetelet's enthusiastic embrace of the international conference as a form of scientific organization indeed owed in part to his overall scientific program, the gathering of data on periodic phenomena.[11]

In the light of later forms of internationalism, there is a tendency to see the Brussels conferences as relative failures. Politics was allowed to intermingle with science, nationalism

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[9] Stephen M. Stigler, "Adolphe Quetelet: Statistician, Scientist, Builder of Intellectual Institutions," in *Actualité et universalité de la pensée scientifique d'Adolphe Quetelet. Actes du colloque organisé à l'occasion du bicentenaire de sa naissance, Palais des académies, 24-25 octobre 1996,* Académie royale des sciences, Bruxelles, 1997 (*Mémoire de la classe des sciences*, 3e série, tome 13): 47-61. See also Éric Brian, "Observations sur les origines et sur les activités du Congrès International de Statistique (1853–1876)," *47th Session of the International Statistical Institute* (The Hague, 1989), 1: 121–139. For a discussion of this analogy, see David Aubin, "Observatory Mathematics in the Nineteenth Century," in *The Oxford Handbook of the History of Mathematics*, ed. Elanor Robson and Jacqueline Stedall (Oxford: Oxford University Press, 2009), 273–298, on 287–291.

[10] On the history of meteorology, see James Rodger Fleming, *Meterology in America, 1800*–1870 (College Park: Johns Hopkins University Press, 1990); Katharine Anderson, *Predicting the Weather: Victorians and the Science of Meteorology* (Chicago: University of Chicago Press, 2005); Fabien Locher, *Le savant et la tempête: Étudier l'atmosphère et prévoir le temps au XIXe siècle* (Rennes: Presses universitaires de Rennes, 2008).

[11] Donnelly, "Redeeming Belgian Science," 59–63.

overcame internationalism, and as a result, the congressists' lofty goals never fully materialized.[12] But for Quetelet and his generation of Belgian civil servants, international cooperation was not necessarily opposed to national interests.[13] Here, too, a focus on practice, away from nationalist and internationalist ideologies, is useful. Taken together, the Brussels international congresses, I want to argue, provided a forum where participants developed transnational diplomatic practices while starting to negotiate the boundaries of a diplomacy of experts.[14] In contrast to state diplomats, experts could hardly claim to represent their home countries, at least not to the extent of constraining their governments to ratify resolutions adopted at congresses. Most participants to the Brussels meetings—even though they had no official mandates—thus developed a hybrid sense of belonging, torn between defending their home countries' special interests and a transnational "epistemic community in the

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[12] Éric Brian, "Y a-t-il un objet Congrès? Le cas du Congrès international de statistique (1853–1876)," *Mil neuf cent* 7 (1989): 9–22; Brian, "Statistique administrative et internationalisme statistique pendant la seconde moitié du XIXe siècle," *Histoire & Mesure* 4 (1989): 201–224 ; Nico Randeraad, "The International Statistical Congress (1853 -1876): Knowledge Transfers and their Limits," *European History Quarterly* 41 (2011): 50-65. On internationalism, see Chris Leonards and Nico Randeraad, "Transnational Experts in Social Reform, 1840–1880," *International Review of Social History* 55 (2010): 215–239; Pascale Rabault-Feuerhahn and Wolf Feuerhahn, eds., "La Fabrique internationale de la science: les congrès scientifiques de 1865 à 1945," special issue of *Revue germanique internationale* 12 (2010) and references therein.

[13] Daniel Laqua, *The Age of Internationalism and Belgium, 1880–1930: Peace, Progress and Prestige* (Manchester: Manchester University Press, 2013), 17.

[14] Chris Leonards and Nico Randeraad, "Building a Transnational Network of Social Reforl in the Nineteenth-Century," in *Shaping the Transnational Sphere: Experts, Networks, and Issues from the 1840s to the 1930s*, ed. Davide Rodogno, Bernhard Struck, and Jakob Vogel (New York: Berghahn, 2015), 111–130. For a recent survey of transnational science, see Simone Turchetti, Néstor Herran, and Soraya Boudia, "Have We Ever Been 'Transnational'? Towards a History of Science Across and Beyond Borders." *British Journal for the History of Science* 45 (2012): 319–336.

making" that mostly materialized in their largely unsuccessful hopes of enrolling national governments and their administrations in global projects drafted at the meetings.[15]

The construction of global science thus relied on technical and scientific experts acquiring political and diplomatic skills. Zooming in on the local Belgian political and cultural context, we simultaneously broaden the scope of our disciplinary interest. In this context, expert civil servants like Quetelet saw an opportunity to use their national governments' assistance in order to draft international agreements in the pursuit of global goals. This point is especially well illustrated by the meteorological conference, which although organized by the United States, took place in Brussels—an interesting case of soft power having a concrete impact. We conclude by suggesting that although the Belgian congresses allowed scientists to sharpen their diplomatic skills, at least in the decades following these first meetings, the power to steer the action of the states toward the construction of global science largely escaped them.

[FIRST LEVEL HEADING] BRUSSELS AS A CONGRESS TOWN, 1846-1856

On December 16, 1853, Quetelet delivered a speech at the Royal Academy of Sciences, Letters, and Fine Arts, in the presence of the Duke of Brabant and heir to the throne, the future Léopold II. Contrasting the meetings he had just presided over with other forms of scientific organizations, Quetelet dismissed what he called "*general* congresses" as "universal bazar[s]."[16] One should not expect any "lights [to] come out of discussions between people who, for the most part, are completely foreign to one another and must review in a few days almost all the questions regarding a vast domain

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[15] Leonards and Randeraad, "Transnational Experts in Social Reform," 215. For a study of the statististical congresses inspired by Bourdieu's sociology, see Éric Brian, "Transactions statistiques au XIXe siècle: mouvements internationaux de capitaux symboliques," *Actes de la recherche en sciences sociales* 145 (2002): 34–46.

[16] Adolphe Quetelet, "Quelques remarques sur l'influence des Académies, des Congrès et des Conférences scientifiques," *Bulletin de l'Académie royale des sciences, des lettres et des beaux-arts de Belgique* 20-part 3 (1853): 417–427; all quotes on p. 421. See also Quetelet, *Histoire des sciences mathématiques et physiques chez les Belges,* 2nd ed. (Brussels: Murquartd, 1871), 397–404; and *Sciences mathématiques et physiques au commencement du XIXe siècle* (Brussels: Murquardt, 1867), 22–30, 90–93.

of science." Everyone, he added, "has in such congresses an equal right to speak, and . . . the most knowledgeable are almost always the last ones to make use of this right." Only by paying close attention to the local context can one realize that Quetelet was somewhat disingenuous here. At this point, national gatherings of scientists had been organized on a regular basis in Germany, Britain, and France for more than thirty years.[17] Earlier, he had approvingly compared the German meetings of naturalists and physicians to "bazars where everyone brings the product of one year's worth of work" to trade.[18] But Quetelet now believed that general congresses had not lived up to his expectations. While praising conferences focused on special questions, like the ones he had just presided over, Quetelet surely had in mind the experience of the past seven years—which he shared with many in his audience—during which he had partaken in six other national or international congresses.

Concerned with diverse issues, the congresses contributed to concerted efforts aiming at positioning Brussels as an intellectual hub in mid-century Europe. After gaining independence in 1830, Belgium had seen its neutrality guaranteed by the 1839 Treaty of London. Then, technology kicked in to help reinforce its capital's place at the heart of Europe. On June 15, 1846, two years after the inauguration of a connection to Cologne, the town lavishly celebrated the direct railway line to Paris, prompting the Belgian engineer Alphonse Belpaire to dream of a near future when communication networks would allow his country to become "the hearth around which [all European nations] will sit to share their ideas and hopes" and "the refuge where every national hatred and

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[17] First congress of German naturalists in Leipzig in 1822 organized by Oken (only 20 people present); first meeting of the British Association for the Advancement of Science in York in 1831; first session of the Scientific Congress of France in 1833. See Jack Morrell and Arnold Thackray, *Gentlemen of Science: Early years of the British Association for the Advancement of Science* (Oxford: Oxford University Press, 1981). There is no complete history of the German meetings (for a bibliography, see Beatrice Rauschenbach, "Gesellschaft Deutscher Naturforscher und Ärzte," *Reader's Guide to the History of Science*, ed. Arne Hessenbruch [London: Fitzroy Dearborn, 2000], 301–302), nor of the French Congress.

[18] Quetelet, "Notes extraites d'un voyage scientifique en Allemagne," *Correspondance mathématique et physique* 6 (1830): 225–239, on 230.

narrow rivalries will abate."[19] Commentators praised the "remarkable movement" putting Belgium in "a nice position . . . by developing intellectual life and by serving as the meeting point for other nations."[20] Already, the construction of Belgium's identity hinged, with lasting consequences, on its self-perception as a center for international relations.[21]

Year	Title of the Congress	Acting Chairman	Belgian + Foreign Participants	Sequence of meetings
1846	Liberal Congress	Defacqz	384 + 0	Follow up meeting on March 28, 1847
1847	Economists' Congress	De Brouckere	98 + 60	No immediate follow up
1847	Penitentiary Congress	Van Meenen	106 + 90	Frankfurt 1846; **Brussels;** London 1872; Stockholm 1885; Rome 1890…
1848	Agricultural Congress	De Brouckere	Belgian majority	**Brussels** 1848 1864; Vienna 1873; Paris 1878 1889…
1848	Friends of Universal Peace Congress	Visschers	Not listed	London 1843; **Brussels**; Paris 1849, Frankfurt 1850; London 1851; Manchester 1852; and Edinburgh 1853
1851	First Public Hygiene Congress	Vleminckx	246 + 0	Led to Second Public Hygiene Congress
1852	Second Public Hygiene Congress	Vleminckx	49 foreigners listed*	**Brussels** 1852 1876 1880 ; Turin 1882 ; Geneva 1884 ; The Hague 1887…
1853	Maritime Conference	Quetelet	2 + 10	**Brussels**; Vienna 1873; Rome 1879; Berne 1880; Copenhagen 1882; Paris 1885…
1853	General Statistical Congress	Quetelet	87 + 64	**Brussels**; Paris 1855; Vienna 1857; London 1860…
1856	International Congress of Charities	Rogier	177 + 120	**Brussels**; Frankfurt 1857.

< Insert Figure 1 here >

[19] Alphonse Belpaire, *Notice sur les cartes du mouvement des transports en Belgique* (Brussels: Vandermalen, 1847), 73. For a recent history of Belgium emphasizing railroads, see Marc Reynebeau, *Histoire belge, 1830–2005*, trans. Solange Delsart (Brussels: Racine, 2005), ch. 2 and 3.

[20] *Revue de législation et de jurisprudence* 29 (1847): 508.

[21] Laqua, *The Age of Internationalism*.

Belgium's economic and political situation was however less brilliant. The day before the inauguration of the railway to Paris, 384 delegates met in the gothic room of the Brussels Town Hall. Drafting a platform addressing the crises facing the nation, they formed the "Liberal Congress" on June 14, 1846 (fig. 1).[22] Even if this was the quasi-revolutionary founding assembly of the political party that gained power after the elections of August 1847, the Liberal Congress followed rituals that are strikingly similar to the proceedings of subsequent, less political, congresses. Meeting in the same room as the Liberal Congress, on September 16–18, 1847, the Belgian Association for Free Trade convened the international Economists' Congress.[23] Just two days later, the Penitentiary Congress was also held in the town hall. Contrary to the Economists' Congress, this was the follow-up meeting of another one in Frankfurt.[24] In September 1848, the Friends of Universal Peace Congress overlapped with the Agricultural Congress held in the town hall.[25] In September 1851, the Belgian ministry of Health organized a Congress for Public Hygiene, which led, a year later, at the Royal Academy of

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[22] *Congrès libéral de Belgique: Session du 14 juin 1846* (Brussels: Baertsoen, 1875). On the Liberal Congress as a response to a political crisis, see Joseph Tordoir, *Les Fondateurs du Parti Libéral: les congrès des 14 juin 1846 et 28 mars 1847* (Brussels: Centre Jean Gol, 2013). On the economic crisis, see Paul Servais, "La crise des années 1845–1848 dans l'est de la Wallonie," *Histoire & mesure* 17-1 (2011): 157–186.

[23] *Congrès des économistes, réuni à Bruxelles par les soins de l'Association belge pour la liberté commerciale* (Brussels: Deltombe, 1847); Michel Dumoulin, *Nouvelle Histoire de la Belgique* (Brussels: Complexe, 2005), 1: 33.

[24] *Débats du Congrès pénitentiaire de Bruxelles: Session de 1847, séances des 20,21, 22 et 23 septembre* (Brussels: Deltombe, 1847). On the international prison reform movement, see Martina Henze, "Transnational Cooperation and Criminal Policy: The Prison Reform Movement, 1820s–1950s," in *Shaping the Transnational Sphere*, 197–217; and Nir Shafir, "The International Congress as Scientific and Diplomatic Technology: Global Intellectual Exchange in the International Prison Congress, 1860–90," *Journal of Global History* 9 (2014): 72–93.

[25] *Congrès des amis de la paix universelle, réuni à Bruxelles en 1848, séances des 20, 21 et 22 septembre* (Brussels: Lesigne, 1849); *Congrès agricole de Belgique, réuni à Bruxelles, le 21, 22, 23 et 24 septembre 1848* (Brussels: Deltombe, 1848).

Medicine, to the gathering of the International Congress for Public Hygiene.[26] In 1853, the Maritime Conference and the Statistical Congress took place in rooms provided by the Ministry of Interior and the Royal Academy of Sciences. In 1856, finally, more than two hundred men and women attended the International Congress of Charities. Its president, Charles Rogier (1800–1885), a prominent member of the liberal government from 1847 to 1852, emphasized continuity in his opening speech:

> Five times in the last ten years, the Belgian capital has had the honor of being the seat of international meetings, where questions of common interest to all countries . . . were debated. The commercial, penitentiary, agricultural, hygienic, and statistical systems were successively the topic of deliberations at these *congresses of a new origin*, which seem called to take a great place and play a great role in the future of society.[27]

Although Rogier excluded from his consideration national events as well as the Peace Congress of 1848 and the Maritime Conference of 1853, we can find, *at a practical level*, a lot of common traits among all ten meetings. Local ad-hoc committees organized all the congresses and drafted a series of questions and resolutions to be addressed during the meeting. As a rule, the chair of the organizing committee was elected by acclamation as president of the congress. Vice-presidents from the major countries represented were also designated. Specific rules of conduct were drafted and adopted. Speaking time was limited and sessions sometimes held concurrently under the lead of elected members who then reported to the plenary sessions. All debates were stenographed and proceedings quickly published.

The German physician Georg Varrentrap (later a participant to several of the Brussels meetings, including the Statistical Congress) had already emphasized the novelty of this form of

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[26] *Congrès d'hygiène publique. Session de 1851: Compte rendu des séances, texte des resolutions votes, pieces à l'appui* (Brussels: Deltombe, 1851); and "Compte rendu du Congrès général d'hygiène publique de Bruxelles, session de 1852," *Annales d'hygiène publique et de médecine légale* 48 (1852): 443–476, on 446.

[27] *Congrès international de bienfaisance de Bruxelles: Session de 1856* (Brussels: Decq & Muquardt, etc., 1857). Emphasis added.

meetings.[28] Presiding over the Economists' Congress in 1847, the town councilor Charles de Brouckère (1796–1860) contrasted such gathering with diplomatic congresses, like the Congress of Vienna, where the "crowned heads" of Europe defended their own interests:

> Never have all the peoples of the world met to discuss, in common, their material interests [and] to reach by the means of science a single solution for all. . . . It is to the ignorance of the masses and the prejudices and the weaknesses of diplomats that one must attribute the narrow, selfish direction of all political congresses. You came, for the first time, to look into a question of fraternity among all human beings.[29]

In Belgium, the notion itself of the international congress increasingly appeared as a recent innovation whose merits were open to debate. The president of the International Public Hygiene Congress, Jean-François Vleminckx (1800–1876), inspector-general in the Belgian Army's Health Services, acknowledged that congresses had both detractors and enthusiasts. They served best, he claimed, not to forge new ideas, but to make them more precise and to publicize them.[30]

In Brussels, a belief in scientific progress was the core value that participants coming from various countries unambiguously shared. Chaired by Eugène Defacqz (1797–1871), a law professor at the University of Brussels, the Liberal Congress was placed under the "wise spirit of progress."[31] The president of the Penitentiary Congress, the judge Pierre-François Van Meenen (1772–1858), stated that "neither politics, nor philanthropy, nor even religion can make any progress, nor accomplish anything without science."[32] At the same Congress, the Dutch philanthropist Willem Hendrick Suringar (1792–1872), a frequent participant to international congresses, suggested that the relationship between criminality and heredity was a topic for Quetelet to take on.[33]

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[28] *Débats du Congrès pénitentiaire de Francfort-sur-le-Mein, 28, 29 et 30 septembre 1846* (Paris: E. Marc-Aurel, 1847), 9. Varrentrap is identified as one of the most active transnational expert for social reform in Leonards and Randeraad, "Transnational Experts," 226.

[29] *Congrès des économistes,* 2–3.

[30] "Congrès général d'hygiène publique" (1852), 450. See Évariste Warlomont, "J. F. Vleminckx, sa vie et ses travaux," *Bulletin de l'Académie royale de Belgique* (1876): 1006–1053.

[31] *Congrès libéral de Belgique*, 2: 61.

[32] *Congrès pénitentiaire de Bruxelles*, 22.

[33] *Congrès pénitentiaire de Bruxelles*, 70.

As for Quetelet himself, although he figured on the list of participants to most of the congresses, he seems to have taken little part in them. In 1848, however, he was vice-president of the program committee of the Agricultural Congress and tried to use it to his own advantage. Chairing the horticulture section, he geared its work toward a question that bore his imprint: an "annuary of nature" providing precise information about botanical seasons. In his "Instructions for the Observation of Periodic Phenomena," Quetelet had already drafted general guidelines for the study of astronomical, meteorological, biological, and sociological regularities.[34] Resolutions adopted by the Agricultural Congress followed closely the practices he recommended to his network of private observers. A committee was put in charge of devising tables where columns allowed observers to register the time at which a list of agreed upon plants came to leaf, blossomed, and bore fruits. The committee called for rational accounts of the results making use of a "theory that is well known in the science of statistics and elsewhere, the theory of averages."[35]

Although science played a large rhetorical part, practical application and effective implementation remained the main expected goals of the meetings, including the conferences chaired by Quetelet. The Penitentiary Congress embraced Jeremy Bentham's recent concept of panopticon but also the circulation of air within cells.[36] To investigate potato diseases, the Agricultural Congress put together a special commission.[37] And the Maritime Conference was concerned with columns in standard abstract logs for recording meteorological observations. Congresses sometimes drew criticisms for falling short of expectations. In 1847, a journalist extolled the Penitentiary Congress—"a true discussion where ideas spring [and then] are modified, enlightened, perfected, and turned . . . into the verdict of this international jury"—while dismissing the Economists' Congress as mere "oratorical, brilliant, but sterile, jousting."[38] But even the latter congress nearly unanimously adopted specific resolutions for promoting free trade in Europe.[39] As for the Peace Congress, perhaps the most overtly

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[34] Quetelet, "Instructions pour l'observation des phénomènes périodiques," *Bulletin de l'Académie royale de Belgique* 9 (1842): 65–93.

[35] *Congrès agricole de Belgique*, 64–66.

[36] *Congrès pénitentiaire de Bruxelles*, 180–185.

[37] *Congrès agricole de Belgique*, 145–147.

[38] *Le Constitutionnel,* 2 Oct 1847.

[39] *Congrès des économistes,* 120–121.

political with Karl Marx in attendance, it settled on four concrete resolutions. As summarized in front of the British Prime Minister later that year by its chairman Auguste Visschers (1804–1874), a member of the Belgian Mining Council, the Congress petitioned governments for the establishment of an International Supreme Court to settle conflicts between nations and the organization of a new "Congress of Nations."[40]

[FIRST LEVEL HEADING] THE SOFT POWER OF A YOUNG NATION

In the middle of the nineteenth century, Belgium was a young nation that, due to rapid industrialization, could lay a claim to a more active, modernizing role in the Concert of Nations.[41] In this light, the Brussels congresses appear as parts of a determined effort to play a leading role on the emerging transnational scene. On the eve of the Maritime Conference, the Duke of Brabant was married in an exuberant ceremony to Princess Marie-Henriette of Habsburg-Lorraine. This alliance signaled Belgium's desire to buttress its independence under the threat of Bonapartist France.[42] Simultaneously, "the topographical situation of Belgium, with its institutions and the calm that characterizes it," was seen as "favorable to [the organization of] scientific meetings, which are instrumental . . . in transforming humankind into a large family."[43]

Even if the Belgian state remained discreet, its role in the organization of the congresses was obvious to anyone. Assembled by a non-governmental organization, the Economists' Congress was described as the gathering of "the most illustrious savants in the moral and political sciences, statesmen, legislators, and magistrates of all parts of Europe, [as well as] landowners, capitalists, and industrialists."[44] Other congresses in Brussels were increasingly placed under the explicit aegis of the Belgian government. Directly or indirectly, it often provided the rooms where delegates met. A

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[40] *Congrès des amis de la paix universelle*, 78. The practicality of the proposals is underscored in David Nicholls, "Richard Cobden and the International Peace Congress Movement, 1848–1853," *Journal of British Studies* 30 (1991): 351–376.

[41] Paul W. Schroeder, *The Transformation of European Politics 1763-1848* (Oxford: Clarendon Press, 1994); Georges-Henri Soutou, *L'Europe de 1815 à nos jours* (Paris: Presses universitaires de France, 2007).

[42] *L'Indépendance belge,* 23 Aug 1853.

[43] *L'Indépendance belge*, 4 Jun 1852. See also ibid., 11 Oct 1852.

[44] *Congrès des économistes,* 3.

representative of the government regularly delivered an opening speech and foreign representations sent formal invitations. Beyond the pursuit of the greater good for humankind, therefore, the Liberal government of the small country whose neutrality was guaranteed by the Great Powers promoted, on the transnational stage, a specific agenda aiming at bolstering its soft power.

All the men who chaired the Brussels congresses held prestigious positions in the Belgian government or administration. The leading Belgian members of the congresses belonged to a generation who, after the Revolution of 1830, got positions of responsibility in the administration of the kingdom at a rather young age and then accumulated official functions in the Belgian state. Quetelet's influence sometimes attracted bitter criticisms from the press: "What a blessing that Providence has limited Quetelet's dynasty to just one budget-eater [*budgétivore*]."[45] His compatriots who consecutively partook in several congresses went on to play, in the emerging transnational communities of experts, a role out of proportion with their native country's power. The inspector-general of prisons Édouard Ducpétiaux (1804–1868) for example served as secretary to most of the congresses held in Brussels. He attended the Frankfurt Penitentiary Congress in 1846 and in 1851 suggested organizing a second Public Hygiene Congress with foreign delegates.[46] Prepared by Ducpétiaux, the Brussels Penitentiary Congress was opened by the Belgian minister of Justice. The Agricultural Congress was "welcomed" by the government, which put together an organization committee packed with Belgian legislators and civil servants. In 1852, an official body appointed by the government drafted the program of the International Hygiene Congress. In his opening speech, the minister of Interior Rogier underscored that Belgium had called eminent men from all Europe not only to promote public hygiene, but also to showcase his country's accomplishments in "this essential, but too often neglected, branch of public administration."[47]

Like the Economists' Congress, the Peace Congress in 1848 was by and large the result of a private initiative. Enrolling the help of British Peace Societies, the American activist Elihu Burritt

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[45] *Courrier de l'Escaut,* 19 Feb 1851.

[46] *Congrès pénitentiaire de Bruxelles*, 162; *Congrès d'hygiène publique* (1851), 91. On Ducpétiaux, see Théodore Juste, "Notice sur Édouard Ducpétiaux, membre de l'Académie, né à Bruxelles le 29 juin 1804, décédé dans la même ville le 21 juillet 1868," *Annuaire de l'Académie royale de Belgique* 37 (1871): 196–256.

[47] "Congrès général d'hygiène publique" (1852), 448.

(1810–1879) was responsible for making it happen. But, here again, the Belgian government endeavored to control the event as much as possible. Since his first idea was to hold the Congress in Paris, Burritt received the help of the United States ambassador to France. Revolutionary unrests and brutal repression in Paris in the summer of 1848 made him revise his plans. Settling for Brussels, the London members of the International Peace Society followed diplomatic protocols to get a formal invitation from the Belgian Minister of Interior Rogier. Officials granted various facilities such as passports, exemption from customs, and a special train from Ostend to Brussels for British delegates. In return, Rogier decided who would chair the Congress and instructed Visschers to put together an organizing committee composed of "recommendable persons."[48] Ten days before the start of the Conference, the committee was summoned at the ministry to confer with him. At the Congress, the Belgian statistician Xavier Heuschling (1802–1883), later an important member of the Statistical Congress, painted a positive portrait of his country. Because of its neutrality, he argued, Belgium derived great benefits from peace and could devote considerable sums to ways of communication, education, and the fine arts.[49] Thus was, despite the Belgian government having strictly constrained the Congress, an impression of benevolence promoted in front of an international progressive audience.

Assisted by Visschers, Quetelet also heavily relied on the means of the state to organize the Statistical Congress. At the Central Commission of Statistics, headed by Quetelet, a subcommittee (including several veteran congressists) got in touch with foreign correspondents to field the idea. With their help, Visschers explained, a program and a list of potential participants was drafted. Only after that, they wrote, they prayed "the [Belgian] government to inform foreign governments by diplomatic means, in order for them to be able, in the interest of science and the administration of their own countries, to send delegates to this meeting."[50] In the summer of 1853, the Belgian ambassador in Paris transmitted the invitations sent by his Minister of Foreign Affairs.[51] Speaking after Ferdinand Piercot (who had succeeded Rogier as minister of Interior) when the Congress finally met, Quetelet

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[48] *Congrès des amis de la paix universelle,* iv. Most of the "recommendable persons" (including Ducpétiaux) partook in other Brussels congresses.

[49] *Congrès des amis de la paix universelle,* 26.

[50] *Bulletin de la Commission centrale de statistique* 5 (1853): 33.

[51] *La Presse,* 5 Jul 1853; *Journal des débats politiques et littéraires*, 6 Jul 1853.

underscored these backstage diplomatic exchanges, emphasizing that many participants were official delegates sent by European nations in response to an invitation from the Belgian ministry of Foreign Affairs.[52] If all this was not enough to underline official support, the king in person attended the meeting on September 21.

With the help of the liberal government, this series of conferences established Brussels as a leading congress town in the middle of the nineteenth century. The Belgian government projected the image of a country providing rational solutions to the ills of the burgeoning industrial society in a liberal but orderly fashion. Its civil servants used the stage provided by the congresses to reinforce their intellectual stature on the European stage and over the years went on to play pivotal roles in the transnational epistemic communities that emerged from the congresses. Clearly aware of the soft power that could derived from them, European nations would thereafter increasingly compete for the honor of hosting scientific congresses.

[FIRST LEVEL HEADING] THE DAEDALUS OF METEOROLOGICAL DIPLOMACY

While the Belgian government was closely involved in all congresses held in Brussels, the United States administration promoted a Maritime Conference. Its agenda was consistent with Belgium's efforts to use soft power and the choice of Brussels as a conference site shows that these efforts had not been vain. The published records of the Maritime Conference suggest that the United States, another young and rapidly industrializing nation, also saw scientific diplomacy as an interesting form of soft power. A closer look at back-and-forth diplomatic dealings highlights the way in which scientists slowly developed their own diplomatic skills, while nations slowly came to terms with this new kind of international meetings.

At the start of the Conference, the director of the Naval Observatory in Washington, D.C., Matthew Fontaine Maury, explained that the meeting had been convened by his government in response to a call made in 1851 by British officers to extend a network of meteorological observation

[52] Other delegates reprented academies and learned societies, as well as local statistical commissions in Belgium. *Congrès général de statistique*, 22.

first set up by the Colonial Office.[53] Going through diplomatic channels, this demand had reached the U.S. Secretary of State, Daniel Webster, who transmitted it to the Secretary of the Navy, William Graham.[54] At this time, Maury had just published his ground-breaking "Wind and Current Charts" based on information he collected from American ships' logbooks. Viewing this publication "with great interest and satisfaction," Graham turned to Maury's advice regarding the appropriate response from the U.S. government to the British request.[55]. Like Quetelet seizing the occasion offered by the Agricultural Congress, Maury immediately saw that he could turn Graham's request to his advantage to enroll foreign cooperation in his scientific program. Nations, rather than scientists, were invited to cooperate. A "conference" would be organized in which "England, France, Russia and other nations be invited to cooperate with their ships . . . for the purpose of devising, adopting and establishing a universal system of meteorological observations for the sea as well as for the land."[56] Authorized to "confer with Her Britannic Majesty's officers, and others of proper jurisdictions, at home and abroad; and, in concert with them, to agree upon a system of observations, both for the sea and the land, which may be followed by meteorologists and navigators generally," Maury drafted a letter to bring the subject before the various governments.[57] The initial reaction was encouraging: "the emperor of Russia, and the kings of Sweden, Norway, Holland, and Denmark, have each signified their acceptance of the invitation to appoint an officer to confer as to the uniform system of observation."[58]

Others reacted lukewarmly. The most negative reply came from Munich, where the astronomer Johann von Lamont (1805–1879) recalled an unsuccessful precedent: "What the effect of a 'conference' would be, may be seen by the 'Magnetic Conference' at Cambridge (England) in 1845;

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[53] *Maritime Conference*, 36. On Maury, see Chester G. Hearn, *Tracks in the Sea: Matthew Fontaine Maury and the Mapping of the Oceans* (Camden: Greenwood, 2002); and Steven J. Dick, *Sky and Ocean Joined: The US Naval Observatory 1830-2000* (Cambridge: Cambridge University Press, 2002).

[54] *Explanations* (6th ed.), 14–15.

[55] Report of William A. Graham, 29 Nov 1851; quoted in Diana Fontaine Maury Corbin, *A Life of Matthew Fontaine Maury* (London: Sampson Low, etc., 1888), 70.

[56] Maury to Charles Morris, 21 Nov 1851;. *Explanations* (6th ed.), 20.

[57] Graham to Maury, 6 Dec 1851; *Explanations* (6th ed.), 23.

[58] J. C. Dobbin to Maury, 8 Jul 1853; *Explanations* (6th ed.), 41.

when the members of the conference returned home, every one followed his own plan, and did what he pleased."[59] At the Paris Academy of sciences, the exact meaning of the word "conference" seemed confusing to François Arago who called it "a Commission that would be comprised of observers belonging to all nations of Europe."[60] Interestingly, he expressed the wish that the French delegates be selected by the Academy, a recommendation the government later ignored when appointing the navy officer Alexandre Delamarche (1815–1884) to the Maritime Conference. In other countries, while reservedly positive, official responses varied widely. Contacted by Maury, Latin American countries sent no delegate to Brussels, but Brazil, Chile, and Columbia appointed scientists or diplomats to confer with him. In Europe, official reactions were likewise diverse. Portugal, the Papal States, and Sardinia instructed some of their scientists to receive Maury's instructions. Spain requested measuring instruments from Britain. After the conference, authorities in both Prussia and Spain felt compelled to explain why they could not participate.[61] For smaller nations, sending delegates to the Maritime Conference, as well as the Statistical Congress, was a sign of their partaking in the Concert of Nations. On January 2, 1854, the regent-king of Portugal underscored that "the results of the conferences cannot fail to benefit the countries that were represented."[62]

Due to Lamont's reticence, Maury decided to focus on measurement at sea and excluded land cooperation because of "the evident reluctance with which Russia, Austria, Bavaria, Belgium and other powers". Indeed, they "seem to regard any change in their system of meteorological observations on shore, and under which some of their *savans*, as [Heinrich Wilhelm] Dove, [Karl] Kreil, Lamont,

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[59] Lamont to Maury, 8 Feb 1852; *Explanations* (6th ed.), 47–48. About the Cambridge meeting, see John F. W. Herschel, "Report, explanatory of the proceedings which have led to an application on the part of the British Association for the Advancement of Science and of the Royal Society to Her Majesty's Government and to the Honourable Court of Directors of the East India Company," in *Report of the Fifteenth Meeting of the British Association for the Advancement of Science Held at Cambridge in June 1845* (London: Murray, 1846), 69–73; and John Cawood, "The Magnetic Crusade: Science and Politics in Early Victorian Britain," *Isis* 70 (1979): 493–518.

[60] François Arago, "Observations météorologiques," *Comptes rendus de l'Académie des sciences* 34 (1852): 213–214.

[61] *Explanations* (6th ed.), 42–49.

[62] *Le Constitutionnel,* 15 Jan 1854.

Quételet, *et al.*, have obtained a world-wide reputation."[63] In fact, there had already been some unsuccessful discussions among European meteorologists in view of organizing an international meteorological conference.[64] But the possibility of coordinating observations was regarded with skepticism. "The details of meteorology," the Astronomer Royal George Biddell Airy wrote to Quetelet, "are so numerous that it is difficult to establish any extensive system of connected observations."[65] Maury therefore reached the conclusion that any proposition to change radically systems of observation on land would "be regarded with more or less jealousy by many."[66]

At first, Maury wanted to organize the meeting in Paris in order to accommodate the ailing Arago, but he soon settled instead on Brussels as a venue and on "Belgium's Arago" (i.e. Quetelet) as the chair.[67] "The Belgian government, acting up to the enlightened views for which it is deservedly celebrated, admitted this conference to its capital with marks of the friendliest consideration."[68] The above shows Brussels hardly was a choice "by default," as sometimes claimed, but after many years of efforts an obvious place to hold such a conference.[69]

[FIRST LEVEL HEADING] THE SCIENTISTS' SOFTER POWER

"This meeting is . . . a true *Peace Congress*, which replaces words with facts."[70] For the press, the Maritime Congress put Belgium above the Great Powers who, in Vienna in the fall of 1853, were failing to find a resolution to the crisis that would soon lead to the Crimean War. With the peaceful gathering of navy officers in the service of humankind, the spectacle offered in Brussels strongly contrasted with deliberations carried out with cannonballs. Belgian neutrality was thus reinforced by science, which itself came to be seen as "one more power" on the side of humanity.[71] For Quetelet, the

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[63] *Explanations* (6th ed.), 40.

[64] Achbari, "Building Networks," 274.

[65] Airy to Quetelet, 20 Apr 1850. Quetelet Papers, 218.

[66] *Explanations* (6th ed.), 40–41.

[67] *Journal de Charleroi,* 21 Mar 1851.

[68] *Explanations* (6th ed.), 41.

[69] Charfier, "Fratres in Maribus," 348.

[70] *L'Indépendance belge,* 6 Sep 1853.

[71] *L'Indépendance belge,* 22 Sep 1853.

Conference had brought forth "fraternal language . . . understood by all peoples of the earth."[72] There was even a provision in the final agreement expressing the "hope that observers, amidst the excitement of war, and perhaps enemies in other respects, may in this continue their friendly assistance" for the benefit of science.[73]

The Maritime Conference offers a window into the transformation of diplomatic practices in the transnational forum of the congresses.[74] Commonly pictured as the practitioner of a "semi-occult science," the diplomat used to be one who "rarely speaks the truth, or only in half-truths" and "pretends to know what he ignores and to ignore what he knows."[75] By bringing together civil servants representing various states and scientific experts sent by academies and learned societies, congresses distributed the diplomatic power over a larger set of participants. As a result, the diplomatic field was infused with new norms—like the common good, scientific progress, useful applications—and new practices—like the careful examination of trivial technical considerations such as the number of columns in standard meteorological logbooks.

While the Belgian state benefited from its involvement in the organization of congresses, participants struggled with the kind of authority they brought to, and could derive from, such meetings. Although participants were selected by their countries, academies, or other non-governmental association to represent them at the Brussels congresses, the way this representation was understood remained open to negotiation. An incident at the Peace Congress is enlightening in this regard. Voicing his opposition to a resolution calling for the abolition of armies, the Spanish delegate Ramón de la Sagra (1798–1871) was asked whether he expressed this opinion in the name of a society.

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[72] Quetelet, *Météorologie de la Belgique comparée à celle du globe* (Bruxelles, 1867), 432.

[73] *Maritime Conference,* 30–32.

[74] Renaud Meltz, "Vers une diplomatie des peuples ? L'opinion publique et les crises franco-anglaises des années 1840*," Histoire, économie & société* 33-2 (2014): 58–78; Idem and Isabelle Dasque, "Pour une histoire culturelle de la diplomatie. Pratiques et normes diplomatiques au XIXe siècle," *Histoire, économie & société* 33-2 (2014): 3–16 ; Markus Mösselang and Torsten Riotte, *The Diplomats's World. A cultural History of Diplomacy, 1815–1914*, (Oxford: Oxford University Press, 2008); and Laurence Badel and Stanislas Jeannesson, "Une histoire globale de la diplomatie?" *Monde(s),* no. 5 (2014): 6–26.

[75] Adam Czartoryski, *Essai sur la diplomatie* (Paris: Amyot, 1864), 5–6.

The secretary Pierre-Philippe Bourson, from the Belgian Ministry of Justice, countered: "I am surprised. M. Ramón de la Sagra is a member of the Congress; he is his own delegate and expresses his own opinion."[76]

Understandably, some saw congressists as placing themselves above national interests. When Maury's ideas were discussed at the House of Lords, in May 1853, the press underscored the diplomatic importance of the proposed conference: "There is something cosmopolitan in the plan. It is . . . an exemplification of the fact that Governments now, like traders, are led by the force of circumstances to forget nationalities and promote the universal good."[77] Efforts by the British Navy to fight piracy and slavery, actions to secure a route across the isthmus of Panama, the establishment of international railways, the use of postage stamps, "and the care that is taken to prevent the inevitable breakup of the Turkish empire from embroiling Europe" all appeared as "emanation of the same principle". Governments were "extending the sphere of their duties and acting for the welfare of mankind," framing their policy more and more on cosmopolitan rather than on national principles.

Like many of the Brussels congressists, Quetelet however believed in a middle ground between cosmopolitanism and nationalism, two "pitfalls that can become equally fateful":

> Too little nationalism [*nationalité*] loosens the links that constitutes the social body; too much nationalism, on the contrary, by overly tightening these links, ends up in the choking of individualism within [the nation] and by producing isolation outside.[78]

Participants to such congresses in fact shared a strong belief in the capability of local governments to implement the resolutions agreed upon by transnational experts. To achieve global goals, both the Maritime Conference and the Statistical Congress negotiated detailed standards of measurement. Only governments, Quetelet thought, could guarantee their effective application, "and the surest means to

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[76] *Congrès des amis de la paix universelle,* 48. The activist Ramón de la Sagra was one of the foreign delegates present at most of the Brussels congresses. See Leonards and Randeraad, "Transnational Experts," 230–231; and Antón Costa Rico, "Sociedad burguesa y educación en el siglo XIX: la perspectiva reformista transnacional des Ramón de la Sagra y la educación en España," *Bordón: revista de pedagogía* 65 (2013): 47–60.

[77] "Improvements in Navigation," *The Economist*, 14 May 1853, 531–532, on 532. All quotes in this paragraph taken from this article.

[78] Quetelet, *Du système social et des lois qui le régissent* (Paris: Guillaumin, 1848), 223.

discard any sentiment of rivalry was that they all be represented and that discussion be free and on an equal footing in a conference characterized by the strictest neutrality."[79] Coming back from the Conference, Maury regretted having backed away from the standardization of land meteorology. To him, the direct involvement of governments was paramount to ensure that previous failures to coordinate internationally would not repeat: "governmental action is necessary to give it practical character."[80] Participants to other congresses agreed that their main task was to come up with practical recommendations implemented through the power of their respective governments. At the Economists' Congress, the jurist Carl With Asher, delegate from Berlin, was perhaps the bluntest when he suggested: "our goal is not just to learn [*nous instruire*]," but also to make sure that "governments and nations" would welcome the "fruits of our discussions."[81] Of course, most congress members were well aware of their limited power of negotiations. When he contacted foreign correspondents, Maury for example specified that "the plea proposed is based upon the principle of voluntary co-operation, and that I have no authority to pledge the Government of the United States for any expanse whatever."[82] British delegates to the Maritime Conference were explicitly forbidden to commit to anything that would entail additional spending.

From the experts' point of view, the Maritime Conference advanced the construction of a global science of the weather, as national meteorological services were established in the Netherlands, France, and Britain, thus allowing a global network later to emerge through the coordination of local weather services. In December 1853, Quetelet explained to the duke of Brabant that his ambition now was to build "the largest observation system ever conceived by the human mind—covering the entire globe in all its accessible parts."[83] At the same moment, he was conducting at night a delicate experiment to determine, by an exchange of telegraphic signals, the difference of longitude between Brussels and Greenwich. Like congresses, the practical experience of exchanging signals across borders made clear that the role of single observers was increasingly dissolved in complex acts of observing that were now distributed among scientists, instruments, and social means of

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[79] Quetelet, "Quelques remarques," 425. See also Quetelet, *Sciences mathématiques et physiques*, 24.

[80] Maury to Quetelet, 12 Dec 1853. Quetelet Papers, 1761.

[81] *Congrès des économistes,* 131.

[82] *Explanations* (6th ed.), 32.

[83] Quetelet, "Quelques remarques," 424–425.

standardization.[84] For Quetelet and Maury, international conferences by bringing in governments into the loop provided the tools needed to close the circuit. The exchange of measurements was useful only in so far as standards could be established internationally. Significantly, Quetelet was helped in this experiment by the engineer Julien Vinchent who later served as Belgium's expert at the Paris International Telegraphic Conference of 1865.

Since experts believed that governments were the only authorities able to impose the same standards globally, to stay constantly open science's eye needed coordination not just between scientists, but also between national governments. To exist effectively, global science required intergovernmental agreements. In Brussels, experts dreamed of achieving consensus by bypassing the usual diplomatic channels. However, trying to mobilize their respective governments in concerted actions for science and humankind, they generally failed to secure the means required to implement decisions taken by the congresses.

[FIRST LEVEL HEADING] CONCLUSION

"Congressmania is a disease of the century."[85] Twenty years after the Brussels meetings, the practice had become so common that satirists poked fun at it. "What to do in Autumn / Often people ask . . . The Congress scientific / Must bore us, just a bit / Its sopor-sudor-ific / Results, we all admit."[86] Boring but consensual, the scientific congress had by the 1870s become a regular feature of the fall season, in part because the Brussels mid-century congresses had fulfilled some of their goals. The model sketched then relied, on the one hand, on the power and resources of the state apparatus and diplomacy and, on the other, on the universal belief in the efficiency of science, supposed to be equally beneficial to all nations. A relatively open forum, the Brussels congresses gave rise to transnational diplomatic practices among experts who hoped they could use the rational consensus they settled on as leveraging governmental action in their home countries. The tension between the national interests

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[84] David Aubin, "Lignes de Faye: la jonction télégraphique Greenwich-Bruxelles-Paris, 1853–1854," *Bulletin de la SABIX*, no. 55 (2014), p. 51–64.

[85] Erasmus den Jonge [Louis M. Hermans], *Het schouwtooneel onzer dwaasheden: humoristisch-satirieke volksteekening opgedragen aan het Nederlandsche volk*, 2 vols. (Dordrecht: Revers, 1876–1878), 1:91.

[86] "The Congress Mania," *Punch, or the London Charivari* 66 (1874): 135.

defended by the states—and sometimes by their delegates—and the transnational values shared by the community of experts was however left unresolved.

The legacy of the Brussels congresses in relation to the emergence of modern forms of international scientific conferences clearly deserves more investigation. When formal agreements between nations was required, like at the Telegraphic Conference of 1865, a hybrid form of meeting emerged. Inspired by both traditional diplomatic congresses and the Brussels examples, the Telegraphic Conference gathered plenipotentiary diplomats assisted by technical and scientific experts.[87] But, for the most part, the great number of scientific congresses organized in the second half of the century generally eschewed official national representations at a diplomatic level. Congresses proved to be powerful tools for discipline-building, while participants learned to navigate around the tension between national interests and transnational values.[88] Usually unable to constrain nations, scientists endeavored to delineate scientific perimeters that defined transnational spaces without relying on direct coordination between states.

In 1849, a comic play about the Peace Congress in Paris raised a fundamental issue regarding the influence of congresses on governments. On stage, various nations, played by actors, sang that they were willing to disarm only if they were the last to do so and gradually left the stage: "They are escaping us," congressists complained.[89] In the late nineteenth century, state officials often escaped scientists' efforts at building global science. To be successful, this project ultimately hinged on their ability to self-organize, but also and increasingly to learn to master diplomatic skills.

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[87] *Documents diplomatique de la Conférence télégraphique internationale de Paris* (Paris: imprimerie impériale, 1865), 73–75. See Laborie, *L'Europe mise en réseaux.*

[88] See, e.g., Marc-Antoine Kaeser, "Une science universelle, ou 'éminemment nationale' ? Les congrès internationaux de préhistoire (1865-1912)," *Revue germanique internationale* 12 (2010), 17–31.

[89] Charles Desnoyers, *Le Congrès de la Paix: vaudeville en un acte* (Paris: Théâtre national du vaudeville, 1849), 10.