

# 8

## 'Sadder and wiser': St Petersburg 1872 and Budapest 1876

Russia and Hungary, the hosts of the last two editions of the international statistical congress, worked hard to prepare and execute the task entrusted to them. The St Petersburg congress was probably the most stylish of all the congresses, and that had everything to do with the city itself. In the course of the nineteenth century St Petersburg acquired the qualities of a European capital. Between 1800 and 1850 the population grew from 220,000 to 487,000. By 1869 the city had 550,000 inhabitants and by 1890 over one million. Infrastructural improvements were made as the city industrialised. Railway connections established with Warsaw and Tallinn in 1862 intensified St Petersburg's economic and cultural contacts with north-western Europe.

The cityscape assumed an international elegance. Théophile Gautier noted in his account of his travels in Russia that Nevski Prospekt was teeming with carriages, and the scene even surpassed the bustle of Paris at times.<sup>1</sup> The 'Passage', a magnificent two-storey arcade housing a theatre, shops and cafés, and featuring a glass roof, opened on Nevski Prospekt at the end of the 1840s. The enormous St Isaac's cathedral was completed in 1856. At the time, its dome was the third largest in the world. The nobility and the nouveau riche had mansions built in eclectic styles in a departure from the harmony of the eighteenth century. Tranquillity gave way to excitement. Musicians, painters and dancers sought and found access to the ultimate in European modernity. Max Nordau, a correspondent from the *Pester Lloyd* who visited the city to cover the creation of the Three Emperors' League in 1873, was overwhelmed by the contrasts between Budapest, his city of birth, and the Russian capital. In his eyes, St Petersburg in the 1870s was comparable to Vienna before the revolution of 1848 and Paris in the heyday of the Second Empire: the city 'revels in enjoyments with an intensity of which even the hedonistic Romans were incapable.'<sup>2</sup>

The participants of the St Petersburg congress stayed in the best hotels in the

city at the city's expense. Coaches were made available to drive them to their meetings each day. The conferees and their families were invited to receptions and offered excursions nearly every day. Right before the opening session, they were treated to a boat trip to the botanical gardens and the islands. Afterwards, they were received at the Kamenny Ostrov (Stone Island), the palace of the Grand Duchess Helena Pavlovna, and were welcome there throughout their stay in the city. During the congress, they had free admission to the museums of St Petersburg; the Hermitage was of course the favourite. Near the end of the congress, the programme offered a visit to Kronstadt's Forts: 280 people boarded 16 boats flying national flags. The newspapers wrote of a magnificent procession.<sup>3</sup> Congress participants were given free passage on the Russian railways during their journey to and from St Petersburg. The contrast between this and the simplicity of the congress in The Hague could not have been starker.

The congress in Hungary was similar to the gathering in Italy nine years earlier in that the host was a young nation eager to introduce itself to the world. Budapest became a single city when Buda, Pest and Óbuda were unified in 1873. The city's population increased from 54,000 in 1800 to 140,000 in 1850 and 370,000 in 1880, following the trend of rapid growth in European capitals in the nineteenth century. Budapest experienced a period of large-scale modernisation. The city government commissioned designs for new boulevards, bridges and public buildings. Between 1850 and 1890 the German–Austrian culture was gradually supplanted and Budapest became a Hungarian city.<sup>4</sup> In 1865, the Academy of Sciences moved to a brand new building in Lipótváros, the government district. The monumental neo-Renaissance building marked the transition to a new national architectural style, and it was the most obvious location for the international statistical congress.

The conferees were offered an extensive social programme in Budapest too. The closing dinner was held in Svábhegy, in the hills of Buda. The Hungarian winegrowers invited the participants to their vineyards to taste over eighty wines. The statisticians were overwhelmed by so much hospitality. Engel hoped that the tenth congress (which never took place) would be held in a smaller, less imposing place so that it would be easier to concentrate on statistics. Afterwards, the British health inspector Frederic J. Mouat wrote: 'The balls, banquets, excursions, receptions, and other entertainments were organised on a princely scale, and had but one defect, if it be permissible to use such a term in relation to arrangements which were perfect in themselves. They were, if possible, too numerous, and too great a strain upon the mental and physical capacities of those engaged in the serious work of the congress.'<sup>5</sup>

While Europe's statisticians gathered at their international statistical congresses, the continent was in a constant state of unrest. After the Franco-Prussian War of 1870–1871, the turbulence subsided, but this did not bring better times for the congress. Indeed, the new balance of power in Europe was strengthening the nation-state at the cost of international cooperation. Not since the Congress of Vienna had the countries of Europe been so focused on finding means to shore up their own states and so heedless of good international

relations. The long economic depression that began in 1873 fostered national self-interest and protectionism, which was not conducive to the free circulation of statistical data. The attempts made by the international statistics community to streamline their organisation by, for example, establishing a 'supranational' permanent commission, were at odds with the inward orientation of national governments.

Moving the international congress to Eastern Europe was a logical step. Russia had implemented sweeping reforms in the early 1860s, and it was no longer possible to pass over this great power. And the 'new' state of Hungary was determined to present itself as a progressive nation eager to integrate into modern Europe. Eastern Europe, however, was no more united than Western Europe. Relations between Russia and Hungary had been anything but strong in the recent past. The Hungarians had not forgotten the tsarist intervention in their revolution of 1848–1849. Russia's interference had thrust them back into a period of neo-absolutism that lasted until 1867. Since then, Hungary had been pursuing liberal policies under Ferenc Deák's leadership. The Austro-Hungarian Compromise of 1867 transformed the Habsburg Empire into a dual monarchy, in which only defence, foreign relations and the financial aspects of these two policy areas were managed jointly. Hungary's parliament immediately introduced new legislation on ethnic minorities, education and criminal law. It was prepared to pursue a more liberal course than the tsarist empire. Despite the reforms implemented by Alexander II, Russia continued to represent old Europe politically and economically. A tsarist autocracy was not a particularly fertile environment for liberalism, the rule of law and political participation. Further reforms had no chance of success without the support of the machinery of state. As we have seen before, statistics was a faithful and versatile servant to both regimes.

### **Statistics in Eastern Europe**

There were three traditions of statistics in tsarist Russia: descriptive statistics (based on the ideas of German scholars), political arithmetic and administrative surveys, all of which had flourished to a certain degree back in the eighteenth century. The ministries that replaced the collegial administrative bodies in 1802 were charged with the task of producing regular statistical reports. This marked the beginning of official statistics in Russia and very nearly coincided with the rise of Napoleonic statistics in Western Europe. A statistics department was set up at the Ministry of Police in 1811 and transferred to the Ministry of the Interior in 1819. The Russian state developed an ambivalent attitude towards statistics. In the 1830s and 1840s, the work of prominent statisticians like Karl Hermann, Dmitri P. Zhuravskii and Konstantin I. Arseniev was censored. Hermann and Arseniev were even removed from their chairs at the University of St Petersburg for publishing numbers that presented an unfavourable picture of conditions in the countryside.

Under the careful management of Ivan Vernadski – a participant of the congresses in Vienna, London and Berlin – statistics came to be seen in a better light. He convinced the Russian bureaucracy that statistics was a useful instrument for state-building.<sup>6</sup> The statistics department at the Ministry of the Interior underwent a gradual process of professionalisation, primarily as a result of the major reforms of the early 1860s. In 1863 Russia established the Statistical Council and Central Statistical Committee in compliance with the congress's decisions concerning the organisation of national statistics. Petr Petrovich Semenov was appointed director of the Committee. In 1869 he organised the first 'modern' census in St Petersburg, which resulted in a headcount correction of nearly 25 per cent.

Following the abolition of serfdom, the *zemstvo* system was promulgated in 1864. A *zemstvo* was an elected provincial body vested with a certain degree of autonomy. *Zemstvos* conducted regular statistical inquiries, which together formed 'the largest collection of statistics on an agrarian society'.<sup>7</sup> The *zemstvo* statisticians were well versed in Quetelet's ideas and the German Historical School's criticism of it. The first Great Russian statistical congress took place in 1870, assembling hundreds of statisticians from all parts of the empire. Notwithstanding Western Europe's impression that Russian statistical practice was weak – an opinion shared by many Russians – the statistical apparatus of the vast Russian empire was probably much more advanced in the nineteenth century than many people thought.

Hungarian statistics had a less illustrious history but the Hungarian statisticians, under the leadership of Károly Keleti, were determined to change that. Keleti had first proposed a national statistics for Hungary at the congress in The Hague – two years after the formation of the dual monarchy and Hungary's partial independence. Following the short-lived experiment of 1848–1849, Hungarian statistics was entirely subordinated to Austrian absolutism: 'The statistical publications of the day, in a foreign language, could be but of little importance to us'.<sup>8</sup> The Hungarian Academy of Sciences, which had fought for the national language and culture since 1825, established a statistical committee in 1860 to foster a national statistics that 'could no more be the work of strangers than a national history'.<sup>9</sup> The Academy's statistical committee independently organised a census with the assistance of churches and private citizens and published the results in 1864. After the Austro-Hungarian Compromise a statistics department, managed by Keleti, was set up at the Hungarian Ministry of Agriculture, Industry and Trade. In 1871 the department became an autonomous agency. Keleti looked to Europe for examples of organisation and implementation practices, which were based on the decisions of the international statistical congress. The young Hungarian state was in the advantageous position of being able to build new state institutions from scratch. Keleti also sought an audience for his statistics. Shortly after independence, he organised a series of public courses which drew some three hundred people from all levels of public administration and society.

Keleti was a member of a new generation, though he was only a few years

younger than his Russian colleague Semenov. Keleti would go on to play an important role in the establishment of the International Statistical Institute in 1885, by which time Semenov had retired from administrative statistics. Statistics was just one of Semenov's many pursuits. He was born in 1827 on the country estate of Urusovo in what is now the province of Lipetsk, 400 kilometres south of Moscow.<sup>10</sup> Like many members of the Russian nobility, Semenov attended cadet school in St Petersburg as a first step towards a career in government service. His exceptional examination results secured him an exemption from military service.

He studied science at the University of St Petersburg in its early days when there were relatively few students and intensive contact between lecturers and students was possible. Semenov graduated in three years rather than the usual four. As a student he moved in progressive circles with people who were highly critical of the tsarist bureaucracy and serfdom. He became friends with Nikolai Danilevski, a utopian socialist in his younger years who would later gain renown for his pan-Slavist work *Russia and Europe* (1869). Semenov kept any tendencies he may have had towards radicalism under control and focused his energy on science instead. The arrest and imprisonment of his friend Danilevski in 1849 reinforced his desire to always strive for compromise and a positive outcome. This is not to say that he always sought the path of least resistance. His ideal was the neostoic notion of 'constantia', or constancy, a virtue that was fed by an unwavering fortitude unmoved and unperturbed by random circumstances. From the vantage point of that ideal, he felt a sense of affinity with Quetelet's ideas of the average man.

In 1849 Semenov became a member of the Russian Geographical Society, which had been established four years earlier as one of many initiatives taken under Tsar Nicolas I to enhance the prominence of science. The society attracted many progressive scientists and scholars who would make a name for themselves in the reform years under Alexander II. Semenov came into contact with young intellectuals and civil servants with whom he would prepare the decree abolishing serfdom in 1860.

To aid his recovery from a serious illness Semenov decided to make a tour of Central and Western Europe in 1853. After travelling for several weeks in Central Europe and France he attended a course of lectures by Gustav Rosé and Carl Ritter in Berlin in the summer of 1853. He was translating and annotating Ritter's standard work, *Die Erdkunde von Asien*, for the Russian Geographical Society. To his delight, he had an opportunity to speak to an ageing Alexander von Humboldt, who encouraged him to undertake a study expedition to Tian Shan in Central Asia that he been planning. He practiced by trekking on Mount Vesuvius on various occasions in 1854 and 1855.

Back in St Petersburg, Semenov began the preparations for his trip to the Tian Shan Mountains, a virtually unexplored area. Semenov had to conceal his true destination from the Russian government since even military expeditions had not penetrated that far and private initiatives were discouraged; it was the time of the Crimean War and its aftermath. Semenov was in the Tian

Shan region, a remote corner of the Russian empire, close to the north-western border of China, in 1856 and 1857. On several occasions he encountered Fyodor Dostoyevsky, an acquaintance from his university days, who spent the final years of his exile there in Semipalatinsk. But the highpoint for Semenov was undoubtedly his expedition into the heart of Tian Shan, where no European had set foot before. He refuted several assumptions of Ritter's and Humboldt's concerning the composition of the soil in the region, measured the snow-line in the mountains and discovered uncharted glaciers. The trip solidified Semenov's reputation as a geographer. In 1860 he was appointed chairman of the physical geography department of the Geographical Society and vice-president of the Society in 1873. He organised several more expeditions to Central Asia and in 1906 was permitted to officially add 'Tian-Shanski' to his surname.

Semenov was known primarily as a geographer, but he had more than one string to his bow. After his career in public administration he became a senator in 1882, which allowed him to devote time to his other passion, the fine arts. He had been collecting paintings by Dutch and Flemish masters of the sixteenth and seventeenth centuries since the 1860s. In 1910 – four years before his death – he donated the entire collection (600 paintings and 3,500 engravings) to the Hermitage.

In addition to being an explorer, art collector, civil servant and politician, Semenov was a statistician. In the nineteenth century these areas of interest were more closely related than we can imagine today. The director of Austrian statistics, as we have seen, was a proficient painter; Vissering must have had an extraordinary collection of photographs; Quetelet was happiest associating with writers and artists, and had even composed an opera. The Russian Geographical Society assisted and inspired Semenov in all his areas of endeavour (during his expeditions he was always accompanied by a painter, who recorded the landscapes and people they encountered along the way). Chorography – the describing and mapping of geographic regions – was closely related to statistics. Semenov spent over two decades working on a monumental dictionary of geography and statistics of the Russian Empire, which was published in volumes between 1863 and 1885.

When Semenov returned from his first trip to Tian Shan, St Petersburg was engrossed in a debate about major reforms, including the abolition of serfdom. Many of the key figures involved in the debate were people he knew from the Geographical Society. The Society gave the progressive position a voice, while the majority of landowners took a reactionary stance. Semenov, himself a large landowner with serfs working his estates, was in favour of transferring land to freed farmers. He supported the ideas of the enlightened bureaucrat Nikolai A. Milyutin, who was pursuing far-reaching reforms from inside the Ministry of the Interior.

Semenov was a distant cousin of General Jakov I. Rostovtsev, a conservative, who had been put in charge of the committees responsible for drafting the new legislation. Rostovtsev was impressed by Semenov's reputation for neutrality. Rostovtsev believed that because Semenov had managed to stay out of the

heated debates raging in St Petersburg he was in a position to help ease divisions. Semenov's statistics expertise was a key factor in Rostovtsev's decision to add him to the committee of reformers, because once serfdom was abolished it would be necessary to calculate how much rent farmers would have to pay landowners and how much tax landowners would owe the state. This was a thorny issue because both payments had to be based on rational grounds, the cadastre, or land registry, while the Russian agrarian economy was geared towards 'sufficiency' and subsistence rather than profit maximisation. These were quantities that were difficult to record in a cadastre.

Semenov was well-versed in these matters, not only as a landowner but also as a statistician. He was familiar with the international debate on cadastral description, but also knew that the Russian cadastre poorly reflected the realities of the agrarian economy. Nevertheless, for many decades it had been the primary source of information about the state of agriculture in Russia, but that information generated an incomplete picture of Russian farmers that was considerably more pessimistic than reality warranted.<sup>11</sup>

Rostovtsev died before the emancipation process was completed, so Semenov's role grew significantly. He was the linchpin of the committee for most of 1860, and acquired a good position at the State Chancellery for his efforts. In 1863 he was appointed to the statistical council of the Ministry of the Interior and sent to the international congress in Berlin. At the same time, he was made director of the statistics department, a position he would occupy for nearly twenty years. For those two decades, he would serve as the 'first ambassador' of Russian statistics in Europe.

### The final congresses

The congress in St Petersburg was delayed by the Franco-Prussian War of 1870–1871, but in August of 1872 representatives of every country in Europe made their way to the Russian capital.<sup>12</sup> Despite recent events, there was no sign of animosity among the delegates. The plenary meetings were held in the great hall of the Noblemen's Assembly, which – according to a description in the *Sankt-Peterburgskie Vedomosti* (St Petersburg Gazette) – was beautifully decorated. At the entrance was a banner bearing the coat of arms of the Russian empire, surrounded by various national flags. The names of the cities that had hosted previous congresses were engraved onto two shields. Twenty-two shields containing the French names of the countries that had sent representatives were placed around the hall.<sup>13</sup>

Reorganisation was the intractable issue facing the congresses of St Petersburg and Budapest (and the meetings of the permanent commission held in between). The first problem was the choice of language. As always, the organisers had to agree on the languages that participants would be allowed to speak at the congresses in Russia and Hungary. The Russian preparatory commission proposed French and Russian as the official languages. The use of other

languages in debates would be tolerated if the bureau (i.e. the minutes secretaries) agreed. Engel and Farr insisted that everyone had a right to speak his national language, whether or not the bureau approved: this was 'not an issue of politics but of statistics'.<sup>14</sup> The Russians had no choice but to concede.

The Hungarian preparatory commission tried to steer a middle course by adopting a rule stating that in addition to French and Hungarian, every language would be tolerated. Engel protested that this was too weak and maintained that everyone had the right to speak another language. This gave rise to a discussion about whether the proceedings should be translated into French immediately. They decided that was a step too far and settled for a summary. The reports show that French was the dominant language at both congresses, but German was widely spoken. Displaying a good sense of humour, the Italian delegate Cesare Correnti addressed the conferees in Latin at the close of the Budapest congress.

The census was a fixture at every congress, and other topics such as population registers, migration, nationalities and mortality tables were frequently discussed in relation to it. In St Petersburg the issue of actual population versus legal population came up again, though the congress had decided years before to count the actual population. Rather than proceeding along the path they had chosen, the statisticians backtracked and introduced a third option: the effective or regular population (whether or not '*de séjour habituel*', people who lived at a particular address but were absent during the headcount, were deemed members of the legal population depended on the type of registration that a country or city maintained). With his usual enthusiasm for definitions, Engel remarked that he could come up with a few more alternatives and that there were even categories of persons who eluded every definition.

It gradually became clear that each country had slightly different aims for their population counts and had adopted different methods. For example, Russia's primary interest was in the headcount for each administrative unit rather than a total population count. Ernst Engel wanted to know everything and had introduced individual, multilingual census cards in Prussia. To make the operation even more efficient, Engel had instructions for filling in the cards distributed two weeks before the count. The census officials gave every household envelopes in which to keep their cards until they could be retrieved. Not wanting to be outdone by Engel, the others explained the ways in which their countries were professionalising the census process, though many had to admit that high illiteracy rates made individual census cards practically useless. It was obvious that previous congresses had affected the way censuses were held, but there was still disagreement on some of the vital issues, such as precisely who should be counted. Engel was not surprised. 'The population is about as unstable as the atmosphere', he said.<sup>15</sup> Granted, it was difficult to make agreements on standardisation, but the world was not standing still and statisticians appeared to have trouble keeping up. The congress adopted a resolution that permitted diversity and stood in stark contrast to the original objectives. They elected to abandon the uniform rules concerning the legal and regular population, 'given

the time- and country-specific variations in legislation.<sup>16</sup> Quetelet must have heard this with sorrow in his heart.

And so it went with most of the topics addressed in St Petersburg and Budapest. It gradually dawned on the statisticians that in their search for uniformity they had discovered diversity. In fact, they had laid the foundations for diversity to a certain extent themselves. Every few years they got each other excited about a wide range of statistical research but all too often they lacked the means to fully harmonise their data. Sometimes, though, there were surprising exceptions. Crime statistics, for example, had been on the agenda since Brussels and discussed in detail in Paris, Vienna, London and Florence. The moral dimension of crime statistics appealed to statisticians. Prior to the congress in St Petersburg, Georg Mayr of Munich indicated that little progress had been made in the area of international crime statistics and he knew why. Because crime statistics were closely connected to national criminal law, they were more difficult to generalise than, say, the number of births or deaths.<sup>17</sup> The Russian preparatory commission agreed. M. Rajevski and J. Oetin wrote in the congress programme that though national statistics provided some insight into the state of a country, they had little comparative value.<sup>18</sup> The St Petersburg congress was able to build consensus on detailed forms which apparently could be used to standardise the registration of crimes and sanctions, irrespective of the criminal justice system involved.

Was it easier to reach agreement on topics that seemed to have no impact on national interests? The congresses in St Petersburg and Budapest again tackled the issue of using graphics in statistics. The advantages and disadvantages had been discussed at length in Vienna and The Hague. One of the experts, Georg Mayr, sent Semenov a report before the St Petersburg congress in which he elegantly and lucidly contrasted his cartographic method with Quetelet's averages. This was a minor revolution in the international statistics community. If they wanted statistics to play a significant role in society, Mayr argued, statisticians could not settle for large averages and abstractions but would need to define the spatial and temporal dynamics of social phenomena with as much precision as possible. The 'geographical method', based on a detailed territorial classification, was the appropriate instrument. According to Mayr, 'for each concrete statistical problem [this method] abandoned the easy use of large averages applied to large administrative units, and instead sought the precise geographical boundaries of natural groups of facts.'<sup>19</sup> A proper spatial unit was defined as the area in which an average could reasonably be calculated. These units were very different from states or provinces. By this method, Mayr was able to calculate child mortality in Southern Germany with greater precision than ever before by taking local averages as his starting point rather than national or regional averages. Mayr's smallest possible 'natural' units came to replace Quetelet's averages.

Semenov was taken with this method, and had employed it in a survey of the Russian population. He believed that Russia's administrative units were ill-suited to drawing connections between population figures and the 'underlying

causes.<sup>20</sup> Zones shaped by natural forces were a much better place to start. Semenov's background in physical geography made him highly receptive to Mayr's ideas. Those ideas, however, increased the complexity of the statisticians' task. The impossibility of counting everything was matched by the difficulty of determining the appropriate natural environment for obtaining usable averages.

Other experts, like Adolf Ficker of Vienna and Hermann Schwabe, director of the statistical bureau in Berlin, also submitted proposals on cartography and diagrams to the Russian preparatory commission. Schwabe believed that the use of diagrams was essential to the advancement of statistics: 'Anyone who considers the massive, pompous calculations which, unfortunately, are commonplace in statistical publications cannot possibly be amazed by the unpopularity of statistics, but must be inspired to cultivate an appealing form of presentation that is different from, and supplementary to, the tables. We must not forget that our generation more than any other is striving for a *natural representation of all things*, because that is the starting point of nearly all political and social reforms.'<sup>21</sup>

Ficker's and Schwabe's main points related to chorographic mapping (descriptive mapping of countries or regions), identifying discontinuities in statistical series and shading (practice had shown that differences could be depicted only by working with gradations of light and dark). In Schwabe's opinion, graphical representations were ideally suited to illustrating correlations, provided that the underlying numbers were made comparable by, for example, converting absolute numbers into percentages. Harmonising cartographic symbols was a more difficult task. Even thornier was the question of whether diagrams and maps could be used together. Draft decisions concerning all of these problems were drawn up and would be discussed at the congress. Semenov added a draft decision calling for every subsequent congress to set up an exhibition of graphical representations of statistics, complete with explanatory text.

The subcommittee that prepared the final decisions on graphics methods presented modest proposals in the end. Schwabe introduced the topic at the general meeting. With little optimism, he said the problem was not unlike trying to square a circle. Gesturing towards the diagrams that the participants had put on display, he concluded that full comparability should not be the goal. He explained to his audience that 'every diagrammatic table has a highly individual character ... In this domain, the mind and the imagination should have complete freedom. Uniformity may be applied as appropriate, but our statistical diagrams should be allowed to reflect national customs and individual practices.'<sup>22</sup>

The French economist Émile Levasseur came to the same conclusion regarding statistical maps: 'Each map should be made by different means, in accordance with the diversity of objectives.'<sup>23</sup> Those were heavy-handed conclusions at a congress that set such great store by standardisation. Engel was troubled. Semenov, also a member of the old guard, rushed to his aid, suggesting that the congress should decide that the time was not ripe for uniform rules

on this matter. Everyone was satisfied that this was a good compromise.

The topic came up again in Budapest in the form of a report on the exhibition of graphical representations at the congress (at least one proposal was put into practice). Semenov, Ficker, Mayr and Lefvasseur saw the 686 catalogue numbers and could only conclude that the quantity was impressive despite the lack of guidance from the congress on this matter. Every country had submitted samples of maps and diagrams. Maps of all descriptions were a speciality of the dual monarchy and Russia, while Britain had always had a preference for diagrams. In the commission's view, graphical representations could be useful in popularising statistics and help representatives of the state and the private sector understand statistical overviews.

It would be unfairly limiting to assess the successes of the international statistical congresses merely on the basis of their stated objectives. The Budapest congress continued to explore contemporary mass society and initiated new statistics covering such areas as large cities, public limited companies, industrial accidents, railways, epidemic diseases, spring water, agriculture and forestry, cottage industries, institutions for factory workers etc. As specialisation increased, it became decidedly more difficult to maintain unity and ever more important to streamline the decision-making process. But that was somewhat problematic.

What was the best way to organise international cooperation at the interface of science and public administration in the nineteenth century? Statisticians had been trying to answer this question since their first gathering. Without a mandate, they could promise each other very little and there was as yet no model for European integration. The most they could do was try to make their decision-making process as efficient as possible.

### **The permanent commission: beginning of the end**

Each congress attracted large numbers of participants from the organising country. On the one hand, this was good for the congress's image in the host country. On the other, the experts felt that the large turnout diminished the quality of the debate. Since Berlin, the official delegates had been meeting in advance at what they called the *avant-congrès*. The proposal to establish a permanent commission dated from the Berlin congress too, but nothing had come of it. The official representatives had convened after the congress in The Hague to try to come up with a new organisational structure. With his experience in large-scale reform, Semenov must have thought he had what it took to facilitate a solution at his congress. Not surprisingly, reorganisation of the congress was a priority during the preparations.

Semenov distinguished between conferences of 'free' scientists and scholars and conferences of statisticians. Statisticians needed the direct cooperation of their governments to actually implement their joint decisions. This scenario was virtually unknown in international law, which made the statistical congresses

both unique and complicated. They combined private and public elements, making it all the harder to develop an adequate decision-making procedure. Semenov summed up the main problems: first, official representatives formed a small minority in the plenary meetings, which meant that technical matters received too little attention; second, the congress agenda was drafted by the national preparatory commissions, which were not particularly well-versed in international issues; third, a thorough inventory had yet to be made of the political, administrative, legal and social state of affairs in participating countries; fourth, there was too little continuity in the activities of the congress; and finally, the congress had no way of verifying whether its decisions had been implemented.

Semenov believed that the solution was to improve the distribution of tasks among 'producers' and 'consumers' of statistics. He believed that the best results could be achieved by establishing a permanent commission, based on the ideas put forward by Ernst Engel in Berlin in 1863. The permanent commission would comprise the directors of national statistics agencies and official representatives who had attended at least five congresses. The commission's remit would include monitoring compliance with congress decisions, producing the congress agenda and facilitating international statistics projects. The commission would convene at least twice between congresses, and one such meeting was to be scheduled in the run-up to the opening session. Future congresses would be held once every five years.

The proposal was discussed at the pre-congress meeting of official representatives. Von Baumhauer, who spoke first, raised serious objections. He thought that the five-year interval was much too long and that an excess of rules would place too great a burden on the organising countries. He also had concerns that a permanent commission would lack authority if its membership was constantly changing, a scenario he envisaged and feared based on his experience in the area of crime statistics. By contrast, Engel endorsed the proposal wholeheartedly. The majority of the delegates fell in line with Engel and Semenov.

It soon became clear that determining the make-up of the commission was going to be an awkward problem. The debate that ensued foreshadowed the innumerable discussions and negotiations that would take place within the context of European integration nearly a century later. Should all parties be represented proportionally or was a functional approach preferable? Should they take a political or a technical line? Should membership be restricted to government officials, or could scientists and scholars who, for example, had a seat on a national central statistical commission be seconded to the permanent commission? No one wanted to cause affront, but it was obvious that membership would have to be limited. And who would preside over the permanent commission?

Constant Bodenheimer, a Swiss delegate, suggested limiting the size of the commission to five members in order to maximise its effectiveness. Despite his proclivity towards compromise, Semenov fiercely opposed this restriction. How could five members adequately represent countries of which they were

not citizens? How would they acquire the knowledge they needed about those countries? Bodenheimer answered: 'The argument that some countries would be unrepresented in the permanent commission is of secondary importance to me. What we do is not politics, it is science, and science is not Russian, not German, not English, not Spanish.'<sup>24</sup> And he noted examples of international committees for telegraphy and calculating the meridian. Incisive as ever, Engel observed that statistics – given its thousands of objects – was not comparable to telegraphy or identifying the precise location of the meridian.

Professor Émile Worms of the University of Rennes, one of five official French representatives, and the Swedish statistician Fredrik Berg wondered how permanent the permanent commission was to be. A single meeting would not be sufficient to guarantee continuity. Without realising it, they were anticipating the arrangement that would replace the congress ten years later: a permanent institution.

Since the *avant-congrès* was unable to reach a decision, Semenov, Engel, Émile Yvernès, Max Wirth and Von Baumhauer formed a subcommittee and agreed to work out a detailed proposal. They made the following suggestions: the permanent commission would lay the groundwork for international statistics; it would meet at least once between congresses; the organiser of the congress held most recently would chair the permanent commission. Sensibly, the subcommittee did not provide any specifics as to membership. However, the subsequent discussion of their proposal revealed that the five men had given it some thought. Most countries would be represented, provided all the participants in the international statistics project launched at the congress in The Hague submitted nominees. Unrepresented countries could delegate their director of national statistics. This arrangement was adopted at the St Petersburg congress. Twenty-seven representatives (eight from Germany) attended the first meeting of the permanent commission in Vienna in 1873. There was no one there from Britain. Karl von Czoernig, by then retired from active service, was one of the ten guests of honour. The commission attended to several pending matters and assessed the progress on the international statistics project. Like the congress, the permanent commission was unable to achieve any major breakthroughs in Vienna or at its second meeting in Stockholm in 1874.

The permanent commission met again immediately before the congress in Budapest. Initially, there was some confusion as to the purpose of their meeting. Had they convened in their capacity as the commission or was their meeting actually the pre-congress? It was also unclear precisely who the rightful members of the permanent commission were. This uncertainty signified a lack of unity and efficacy, which was compounded when the permanent commission, having finally disentangled itself from other bodies, evaluated its priority project – international statistics. Little progress had been made on the international statistics series commissioned at the congress in The Hague, as the first inventory of results taken at the St Petersburg congress showed.

Levasseur had developed a system of geographical divisions for Europe and the rest of the world that the authors would be expected to abide by. His

division of Europe into four zones is somewhat remarkable from a modern-day perspective: North-Western Europe comprised Britain and the Nordic Countries; Eastern Europe was actually just Russia; Central Europe included Austria-Hungary, Switzerland, Germany, the Netherlands, Belgium and France; and Southern Europe covered the remaining Mediterranean countries. At least on this point there was agreement. The rest of the project posed a much greater challenge, as would become clear when the time came to evaluate it again in Budapest, seven years after the congress in The Hague. The French were making headway with their statistical overviews of the agriculture industry and civil and commercial law in Europe. Not to be outdone, the director of the statistical bureau of the city of Budapest, Joseph Körösi, announced that he had completed an international statistical survey of large cities. Luigi Bodio presented a survey of savings banks, which he himself described as deficient. Anders Nicolai Kiaer of Norway had published the first volume of commercial shipping statistics, but he never completed the work.

The permanent commission met again in Paris in 1878, but this meeting would be the last. It appears that they had plans to continue, because they made yet another attempt to define the remit and composition of the commission. The statistics service of the German empire was strongly opposed to a provisional charter, and the fact that the commission would be based in Paris, where an international library and the editorial office of the planned newsletter would be housed, was an insurmountable obstacle. By all appearances, Chancellor Otto von Bismarck personally forbade the Prussian statisticians to attend any new meetings of the commission. The commission cancelled a scheduled meeting in Rome in 1879 without setting a new date and Keleti resigned as chairman.<sup>25</sup> The line of continuity was severed. Without a permanent commission, there would be no more congresses, and with that an era ended, as the poet says, 'not with a bang but a whimper'.

### Quetelet's legacy

The end of the international statistical congress cannot be attributed solely to the utopian visions of uniformity or organisational impotence. After a quarter of a century, a generation of statisticians had disappeared from the scene. For various reasons many of the key figures who had been involved from the very beginning – Quetelet, Visschers, Von Baumhauer, Czoernig, Maestri, Legoyt and Dupin – were not in Budapest. The Budapest congress paid tribute to the statisticians who had passed away since the previous congress. Charles Dupin, already a man of advanced years when he managed the Paris congress, had died in 1873. Louis Wolowski, one of the many Poles who had fled to France in 1831 and acquired French nationality, died shortly before the congress. Semenov gave a brief eulogy for Christian David, who had represented Denmark since 1853. Others paid homage to Samuel Brown, Hermann Schwabe, director of the Berlin statistical bureau, and Edouard Horn, who had only recently returned to

Hungary, his home country after roving around Europe.

But the man who was missed most of all was, of course, Adolphe Quetelet. He made his final appearance in St Petersburg, where he tried one last time to explain the principles of probability to his most faithful supporters: 'In our science things are probable, but some probabilities are more evident than others; take life expectancy – you could say that a man aged 77, like myself, is unlikely to have more than two or three years to live and you would seldom be mistaken.'<sup>26</sup> However many errors we can attribute to Quetelet, he was right about that. In 1874, he succumbed to illness.

Ernst Engel, considered by many to be his most fervent student and likely successor, delivered a long speech on the achievements and the shortcomings of the father of international statistics. He admitted that his words were more polemic than eulogy, but that was fitting to the memory of Quetelet. Putting Quetelet's life into a broader context, Engel quoted what Franz Xaver Neumann-Spallart had written in the Vienna *Neue Freie Presse* immediately after Quetelet's death: 'Erudite Europe has grown old.' With the passing of giants like John Stuart Mill, Justus von Liebig, David Friedrich Strauß, Jules Michelet and now Quetelet 'the best branches of European intellectual life had fallen leaf by leaf.'<sup>27</sup>

Following Neumann, Engel explained that before Quetelet man believed that, as the culmination of Creation, he was the centre of the universe and everything around him was subject to laws from which he alone was exempt. Building on Vico and Laplace, Quetelet developed the idea that laws controlled human life, too. If this was the case, then the mathematical method Quetelet knew so well from astronomy could be used to analyse social phenomena. From this ensued the familiar metaphor of the average man, who like any tribe or state was subject to the law of averages.

Engel used this metaphor to explain the innovation that Quetelet had brought to the world. 'In essence,' said Engel, 'he was a determinist. The search for causal links in what appeared to be voluntary acts of individuals was at the core of all his studies.' With his approach, he made moral statistics and the mathematical method mainstream. But would his contribution withstand the test of time? Had statistics become an autonomous discipline? Was the 'average man' a useful concept?

Engel answered these questions with great caution. He wondered why Quetelet had remained so passive in the face of growing criticism of his work, especially from Germany. Engel pointed out that many thought Quetelet had never fully recovered from the stroke he suffered in 1855. He published nothing of consequence after 1855, only revised editions of his earlier work. Should the statisticians assembled at the congress take the criticism of the master to heart? 'Are we pursuing the wrong goals?' Engel wondered aloud.<sup>28</sup> It was irrefutable that statistics had failed to acquire the autonomous status that Quetelet had so passionately advocated. More and more voices were saying that statistics was nothing more than an auxiliary science. Even in Belgium statistics had become 'science's Cinderella.'

But Quetelet's statistics, his 'social physics', stimulated the development of a science 'which has still not been properly named'. Some called it 'sociology', some 'mass psychology', and others 'demography' or 'demology'.<sup>29</sup> The latter was coined by Engel himself and would be as unsuccessful as Quetelet's 'social physics'. It was up to Quetelet's followers to continue his work, and strive for an overall 'system of human interactions'.

Engel acknowledged indirectly that he was troubled by the tenacity with which Quetelet sought the natural laws that controlled human interaction. In his opinion, Quetelet took too little account of the political laws that were sometimes the product of compelling circumstances but usually the outcome of a battle between political parties. Consequently, the object of moral statistics, 'that which presents itself for quantification', is the result of political arbitrariness, so how can abiding laws be at its root? Engel revealed a similar reservation with respect to the 'average person'. What would an average of all physical, mental and moral characteristics look like? And even more important, what use would it be? In practice, facts that reflect special circumstances were more useful than an average of everything and everyone.

With that, the bottom dropped out from under the international statistical congress, or at least Quetelet's version of it. Engel could only conclude that statisticians would never be able to make the same observations at the same time, like meteorologists and hydrographers. The international statistics project was well on its way to becoming a waste of time: '... despite two decades of congress decisions on the use of identical census and summary forms for all branches of statistics, no such forms are being used in any area of statistics in any of the civilised states.'<sup>30</sup> Nevertheless, the congress could leave a legacy behind if statisticians upheld the objectives formulated in Berlin in 1863 by standardising statistical publications, generating statistics reports on state and society so that questions of international consequence could be answered, promoting appreciation of statistics and organising regular meetings of statisticians from all over the modern world. Engel found it regrettable that issues like the living standard of the working class, which had been on the agenda in 1853, had not been given more attention. He referred to the work of Édouard Ducpétiaux in Belgium and Frédéric Lefebvre in France, and hoped that small-scale precision studies of that kind would be conducted more frequently. 'It should be possible to construe the volumes and patterns of production and consumption from the actual income and expenditure of workers (*of whom only an adequate number of typical and characteristic representatives are observable*) with a level of precision that import and export statistics could never provide'<sup>31</sup> (emphasis added). This was a cautious step towards sampling, a method that would not be widely accepted until the twentieth century. Despite his good intentions, Engel had set forces in motion that would erase the name of Adolphe Quetelet from the collective memory.

Engel would have liked nothing better than to set up an international Quetelet foundation to award prizes and travel grants and subsidise international statistical publications. Quetelet was, after all, the 'embodiment of internationality'.

He immediately added that the international legal rules needed to accomplish this were nonexistent. What Europe could not offer statistics, it could not give one of its champions either.

Engel's realism must have been discouraging. Neither the congress nor the permanent commission was viable – that much was already clear in 1876. Was there any scope for progress and, if so, what shape would it take? What was left of the optimism that had drawn the first conferees to Brussels in 1853? By the end of the 1870s the statistics community was certainly sadder, but was it also a bit wiser? Though the congress movement did not survive, it is not unreasonable to suggest that the statisticians had actually achieved a great deal. Statistics had become an integral part of public administration. The epilogue attempts to evaluate the benefits of the statistical congresses.

There is no call to end on a negative note. According to the *Oxford English Dictionary*, 'sad' originally meant 'orderly and regular in life; of trustworthy character and judgement; grave, serious', which explains the combination of 'sad' and 'wise' in the expression. In that sense, the statisticians were undoubtedly sadder and wiser after nine international congresses. They had made a serious attempt to elevate statistics to a higher plane, but the uniformity they sought remained elusive. For the time being, statistics would continue to develop along national lines. Europe may have become more orderly, but in many respects it was still an unknown quantity.

## Notes

- 1 T. Gautier, *Voyage en Russie* (Paris 1866–1867) I, p. 116.
- 2 M. Nordau, *Erinnerungen Erzählt von ihm selbst und von der Gefährtin seines Lebens* (Leipzig and Vienna n.d.), p. 56.
- 3 *Peterburgskie vedomosti*, 18/30 August 1872.
- 4 C. Horel, *Histoire de Budapest* (Paris 1999), p. 160; K. Bakker, *Boedapest. Metropool in het hart van Europa* (Amsterdam 1996).
- 5 F.J. Mouat, 'Preliminary Report of the Ninth International Statistical Congress, held at Budapest, from 1st to 7th September 1876', *Journal of the Statistical Society of London* 39 (1876) no. 4, 642–643.
- 6 E. Kingston-Mann, 'Statistics, Social Science, and Social Justice: the Zemstvo Statisticians of Pre-Revolutionary Russia', in S.P. McCaffray and M. Melancon (eds), *Russia in the European Context 1789–1914. A Member of the Family* (New York 2005), pp. 117–118.
- 7 D. W. Darrow, 'The Politics of Numbers: Zemstvo Land Assessment and the Conceptualization of Russia's Rural Economy', *The Russian Review* 59 (2000), 54.
- 8 Ch. Keleti, 'Hongrie', in: *Congrès International de Statistique à la Haye, Compte-rendu des travaux de la septième session du 6 au 11 septembre 1869, Troisième partie* (The Hague 1871), p. 46.
- 9 *Ibid.*
- 10 W. Bruce Lincoln, *Petr Petrovich Semenov-Tian-Shanskii: the Life of a Russian Geographer* (Newtonville, MA, 1980).
- 11 D.W. Darrow, 'Statistics and "sufficiency": toward an intellectual history of Russia's rural crisis', *Continuity and Change* 17 (2002), pp. 63–96.
- 12 *Rossiiskii gosudarstvennyi istoricheskii arkhi,v St Petersburg*, Historical Archives of the Russian State (St Petersburg), Ministry of the Interior (MVD), Central Statistical Committee,

- 1290 (1870) reg. 2, dossier no. 62, letter from the minister of the Interior to the Ministry of Finance, 25 April 1871.
- 13 *Petersburgskie vedomosti*, 9/21 August 1872.
- 14 **Congrès International de Statistique**, *Compte-rendu de la huitième session à St-Pétersbourg. Deuxième partie, Travaux du congrès* (St Petersburg 1874), p. 6.
- 15 *Ibid.*, p. 101.
- 16 *Ibid.*, p. 113.
- 17 **Congrès International de Statistique**, *Compte-rendu de la huitième session à St-Pétersbourg. Première partie, Programme* (St Petersburg 1872), fifth session, p. 1.
- 18 *Ibid.*, p. 7.
- 19 *Ibid.*, first session, p. 53.
- 20 *Ibid.*, p. 55.
- 21 *Ibid.*, annexes, p. 62.
- 22 **Congrès International de Statistique**, *Compte-rendu de la huitième session à St-Pétersbourg. Deuxième partie, Travaux du congrès* (St Petersburg 1874), p. 383.
- 23 *Ibid.*, p. 387.
- 24 *Ibid.*, p. 41.
- 25 J.W. Nixon, *A History of the International Statistical Institute 1885–1960* (The Hague 1960), p. 9.
- 26 *Ibid.*, p. 139.
- 27 Cited in **Congrès International de Statistique**, *Compte-rendu de la neuvième session à Budapest. Deuxième partie, Travaux du congrès* (Budapest 1878), p. 89.
- 28 *Ibid.*, p. 100.
- 29 *Ibid.*, p. 102.
- 30 *Ibid.*, p. 108.
- 31 *Ibid.*, pp. 109–110.