Taina Syrjämaa

At Intersections of Technology and a Modern Mass Medium The Engineer Robert Runeberg and Exhibitions, 1867–1900

Abstract

This article examines the intersections of technology and the exhibition medium by focusing on an individual, the mechanical engineer Robert Runeberg. It makes visible individual involvement in transnational mobility and in large-scale processes of modernization. The article explores how becoming a modern professional was not only connected to formal education and practical training, but also to the capacity to extract and produce knowledge via the exhibition medium. Concurrently, the case discloses essential qualities, such as the cohesion, dynamicity and flexibility of the exhibition medium.

Keywords: exhibitions, media, technology, professionalisation, engineers, history

In April 1875, in a lengthy letter to the editor of *Helsingfors Dagblad*, a reader using the pen name 'R' championed the utility of a national industrial exhibition – an event that had not previously been arranged in Finland. The author argued that an exhibition could promote the quality of industrial production and machinery due to its inherent competitiveness. It would encourage prospective exhibitors to seek new alternatives to their current machinery and production methods, thus expediting technical development. Furthermore, it would facilitate the measurement and assessment of achievements as well as assist in conquering new markets.¹

The man behind the pen name 'R' was Robert Runeberg, a Finnish naval engineer who at the time was studying in Cherbourg in France. After completing his studies in the technical school of Helsinki in 1867, Runeberg's career trajectory incorporated many stints abroad, including spells in Manchester, Newcastle upon Tyne, London, Marseille, Le Havre and Stockholm. In parallel with developing his skills as a mechanical engineer in the shipbuilding industry, Runeberg also gradually honed his talents as a specialist of the exhibition medium. By 1875, when he wrote the letter to the

¹ R[uneberg], "Den finska utställningen år 1876".

editor, Runeberg had visited the great exhibitions² in Paris and Vienna in 1867 and 1873 respectively. He had also written a series of articles as 'the technical correspondent' of *Helsingfors Dagblad* at the Vienna *Weltausstellung*. And more was to come: when the national industrial exhibition was eventually realized in Helsinki in 1876, he was invited to assist the main commissioner. In 1878 Runeberg served as the Finnish commissioner at the Paris great exhibition, and in 1882 he assumed the same role at the all-Russian exhibition in Moscow. Furthermore, in 1900 he oversaw the Finnish contribution to the *exposition universelle* in Paris, long after having firmly established his career as a consulting engineer and a specialist of winter navigation and icebreakers in St. Petersburg. Evidently Robert Runeberg not only shared the widespread belief in progress – especially based on technology and industry – but was also convinced of the power of exhibitions as a mass medium.

By focusing on the case of Runeberg as a visitor, reporter and commissioner in diverse exhibitory events, this article explores how becoming a modern professional was not only connected to formal education and practical training, but also to the capacity to extract and produce knowledge via the exhibition medium. ³ The highly fragmentary and lacunose source material, typical of most exhibitions, exhibition visitors and organizers, constitutes an irrefutable challenge. In Runeberg's case, sources are also scarce and patchy. However, they are exceptionally rich in the sense that they enable an examination to be undertaken over many decades. The case of Runeberg enables an inquiry to be carried out regarding the intersections of professionalization, the circulation of knowledge and the mastery of the exhibition medium.

Grand exhibitions began to boom in the mid-nineteenth century. The biggest ones had global and encyclopedic ambitions and attracted tens of millions of visitors in their respective metropolitan host cities.⁴ One-off exhibitions were ephemeral, but they possessed durability in terms of constituting a method of producing and circulating knowledge to a large audience. With this in mind, Anders Ekström, Solveig Jülich and Pelle Snickars have powerfully argued that exhibitions should be viewed as a distinct medium that was interrelated with other contemporary media such as the press and dioramas.⁵ This perspective of historical media studies opens up a broader panorama

² The largest international exhibitions arranged in Britain were called "great exhibitions", whilst those arranged in the United States were known as "World's Fairs", in France they were named "expositions universelles" and in Austria "Weltausstellung". In this article, the British denomination is used as a generic term.

³ Professionals in the fields of technology and exhibitions have usually been studied separately: those studying the exhibition medium may not have paid much attention to the other activities of persons involved in organising exhibitions. In the same vein those focusing on the history of engineers and technology have only briefly referred to exhibitions as single, separate and short-lived events. Also in the case of Runeberg, those few studies that have referred to him have either depicted him as an engineer who made occasional forays into exhibitions, or as an an exhibition organiser who happened to be engineer by profession. Engman, "Robert Ivanovitj Runeberg – ingenjör", 75–90; Engman, *Lejonet och dubbelörnen*, 165–191; Holmberg, "Banbrytaren inom vintersjöfarten", 8–24; Smeds, *Helsingfors–Paris*, 145, 148, 181, 279.

⁴ See, for example, Greenhalgh, *Ephemeral vistas*; Findling & Pelle, *Historical Dictionary of world's fairs*.

⁵ 1897 Mediehistorier kring Stockholmsutställningen.

with regard to exhibitions that stretches beyond the single most spectacular great exhibitions and brings to the fore how such events were a widely popular modern means of mass communication.

In fact, the biggest exhibitions, which were arranged at irregular intervals, were merely the tip of the iceberg, whilst all kinds of minor exhibitions, which were more limited in their thematic or geographical scope, pullulated in a ceaseless manner. Recently these "at the margins" exhibitions, as well as the interconnectedness of various exhibitionary events, have gained some attention in historical studies.⁶ Yet, it remains difficult to grasp such a variegated and labile field. Another challenge centres on how to locate and connect the kaleidoscopic exhibition medium to other spheres of society and modernization.⁷

In this context, the paradigm of *histoire croisée*, as presented and developed by Michael Werner and Bénédicte Zimmermann, proves to be inspiring and helpful as it directs our attention to intersections. Large-scale phenomena, which otherwise easily elude analysis, become visible and examinable at those points of time and space where they cross and become entangled. Essential to this approach is the denial of simple causalities and the emphasis on dynamicity. It not only seeks to make visible single crossings, but also multiple intersections and asserts that each act of traversing by necessity alters and transforms all involved. Another significant aspect of the paradigm is that instead of trying to ascertain the similar quality of objects in order to undertake a comparative study, it encourages the exploration of asymmetrical relations on a variety of scales. Thus, it is possible to altermate and combine scales and categories depending on the research subject.⁸

The paradigm is used here to provide the focus, the structure and the level(s) of analysis. Inspired by *histoire croisée*, this article concentrates on a number of intersections of the studied phenomena and the examination is structured according to the most immediate points of encounter and interaction: namely, according to various temporary exhibitions over a temporal arch covering more than three decades. The case study also combines a variety of levels, or spheres of examination, which focus on an individual⁹ who was at the crossroads of technology and exhibitions, which had dimensions that spanned both national and transnational concerns.

An Aspiring Engineer Exploring Babylonian Paris in 1867

⁶ Geppert, *Fleeting cities: imperial expositions*; Filipová, "Introduction: The Margins of Exhibitions and Exhibitions Studies," 1–20; Syrjämaa, "Merging Peripheries and Centres", 285–302.

⁷ For an interesting inquiry into the correlation between vertical viewing in exhibitions and the conceptualization of modern society, see Ekström, Anders, "Seeing From Above", 185–207.

⁸ Werner and Zimmermann, "Beyond Comparison: *histoire croisée*", 30–50.

⁹ On the combination of the biographical approach and historical research in transnationalism, see Jalagin, "Vieraalla maalla kaukana", 113–131.

In July 1867 Paris was basking in the glory of its second *exposition universelle*. The contrast to agrarian Finland, which was suffering from dramatic crop failures and severe economic distress, was huge. The exhibition, which was to attract almost seven million visitors during its six-month run, boasted a huge, oval pavilion that was surrounded by numerous small national pavilions, thereby creating a condensed world.¹⁰ Among the most acclaimed events were Nadar's flights above the city in a balloon, which Runeberg witnessed and enthusiastically described in a letter to his mother. The young engineer, who was among the international crowd of spectators viewing these aeronautical spectacles, had just completed his studies in Helsinki and was en route to Britain to begin his first apprenticeship abroad.

It was no easy or popular task to become an engineer in Finland in the early 1860s, when Runeberg started his studies in Helsinki. Technical education in Finland began in the late 1840s, but more specialized curricula had only been launched a few years before Runeberg became a mechanical engineering student.¹¹ The rarity of Runeberg's chosen career path in a Finnish context is revealed by the fact that in 1867 only three other students concluded their studies in the technical school.¹² The professional group of Finnish engineers was small and not clearly defined: it has been estimated that there were some 250–350 engineers in the 1870s, but not all had obtained an official diploma. Less than 80 persons had completed formal education in Finland. Moreover, the group lacked a coherent professional identity.¹³

In an age of continuous specialization and the diversification of professions and educational institutions, an official diploma was of growing importance. Yet, it did not suffice for a young, prospecting engineer such as Robert Runeberg who followed the practice of travelling abroad to gain more experience. Travelling and learning have long been connected. Whether a young gentleman or an artisan of humbler social standing, travel has been viewed as a way to acquire new knowledge, exercise many skills and to gain professional credibility and social patrimony. Towards the end of the century, a growing number of experts of various fields and civil servants headed for abroad to learn.¹⁴

Technology, with its rapid developments and innovations, was a fundamentally transnational field: knowledge, techniques, professionals, machines and products circulated and constantly crossed national borders. In many ways Finland was connected to the on-going and widespread process of modernisation, yet it was relatively peripheral. This was not only due to its geographical remoteness, but also because of the slow modernisation of its economy and the even slower

¹⁰ For a brief history of major exhibitions see Findling and Pelle, *Historical dictionary*.

 ¹¹ Nykänen, Käytännön ja teorian välissä, 102–104, 113–114. See also Konttinen, Perinteisesti moderniin, 248–255.
¹² Matrikkeli, 179–181.

¹³ Konttinen, *Perinteisesti moderniin*, 173, Michelsen, *Viides sääty*, 129–130, 135.

¹⁴ Niemi, "Valtion, ammattikunnan ja oman edun", 11–21. On the international travels of the Helsinki civil servants and trustees between 1874 and 1917, see Hietala, *Innovaatioiden ja kansainvälistymisen vuosikymmenet*.

industrialisation of the Russian Empire. In these circumstances, it was crucial for the personal development of a young engineer to sample the centres of technological modernisation at first hand.

Paris and the great exhibition seem to have been major attractions to Runeberg as he took an express train from Lübeck to Paris and forewent the possibility of visiting any other cities in Continental Europe. His mother seemed to wonder somewhat about her son's haste during his first journey, but noted that in this way he could have more time at his disposal in 'Babylonian Paris'.¹⁵ A three-week sojourn in Paris during the exhibition was also a significant financial investment, especially as Runeberg had set out from Helsinki without knowing how to finance his forthcoming apprenticeship. He only applied for a grant from the Finnish Senate when he departed and an apprenticeship without salary awaited him in Britain.¹⁶

In the French capital he met two individuals with whom he would continue his journey to England: a coeval engineer named August Borgström, who had just completed his studies in Switzerland and Germany, and the well-established businessman A. W. Wahren. The latter had organized an apprenticeship for Runeberg in Manchester; a city that he regularly visited due to his own business affairs in the textile industry. Wahren had a great deal of experience in international business. He had founded his textile company in the late 1840s with Henrik Borgström – August Borgström's father and a long-time friend of Runeberg's father – and both the spinning machines and supervisors came from England.¹⁷ Wahren was also a frequent visitor to exhibitions, and his firm had participated already in the first great exhibition at Crystal Palace in London in 1851, as well as many other international events. In 1867, he promoted his current company, Forssa Ab, at the Paris exhibition, which won a silver medal for its cotton fabrics.¹⁸

Although Runeberg was a novice, he probably had some experience of the exhibition medium as he had most likely visited the Nordic exhibition in Stockholm the preceding summer. The Nordic exhibition had aroused a lot of interest in Finland and attracted numerous visitors among whom was Runeberg's uncle, Fredrik Tengström, an influential official in the State metallurgy and mining administration. Furthermore, his brother, Walter, displayed sculptures at the exhibition.¹⁹ As Robert Runberg was an intern on a steamer travelling between Helsinki and Stockholm that summer, it is most probable that he took the opportunity of the steamer's stopovers in Stockholm and visited the Nordic exhibition.²⁰ Yet, the Parisian exhibition was of quite a different magnitude.

¹⁵ F. Runeberg, *Brev till sonen Walter*, 18 July 1867 and 7 August 1867.

¹⁶ Runeberg's grant application. 1178/178 1867, Economic division of the Senate, National Archives of Finland. See also F. Runeberg, *Brev till sonen Walter*, 15 October 1867.

¹⁷ Jäntti, "Kauppaneuvos August Borgström"; Herranen, "Wahren, Axel Wilhelm."

¹⁸ On the involvement of Wahren and Forssa Ab in earlier exhibitions, see Smeds, *Helsingfors–Paris*, 55, 62, 66, 68.

¹⁹ F. Runeberg, *Brev till sonen Walter*, 18 July and 19 July 1866.

²⁰ Copy of a reference on working on board the steamer Aura attached to Runeberg's grant application. 1467/179 1872, Economic division of the Senate, National Archives of Finland.

Runeberg's comments reflect – not surprisingly – enthusiasm and delight at being able to attend the exhibition: it was 'excessively amusing' and 'beyond all acclaim'.²¹ The two young engineers no doubt scrutinized the various machinery sections with great interest. Runeberg's special interests laid in steamship engineering, whilst Borgström had embarked on a career in his family's textile business. Something of Runeberg's method of exploring the exhibition can be deduced from the way he described his attitude to machines during his apprenticeship in Britain: 'An idea can be as big and fine as you like but it can not be realized without detailed skill'.²² Therefore he emphasized the importance of studying the smallest details of a machine – and was also prepared to do simple and humble routine tasks as an apprentice.

At the time, exhibitions were considered to offer valuable information for specialists and industrialists regarding the latest advances in many fields, whilst also providing enlightening encyclopedic knowledge to the wider bourgeois public.²³ An appreciation of the great exhibition as a source for professional development is also revealed by the fact that the Helsinki Technical School funded the journey of three of its teachers to Paris – two of whom were engineers.²⁴ Thus, it is no wonder that Runeberg also wanted to gain the experience of exploring the exhibition on his way to Britain. As a matter of fact, two of his older brothers – Lorenzo, a physician, and Ludvig, a natural scientist – also visited the exposition whilst Walter once again exhibited his sculptures.²⁵

Runeberg's mother was worried about the financial burden of his apprenticeship and Parisian sojourn, but described how he 'himself is happy, eager and full of hope'.²⁶ Runeberg came from an elite family, with his father, Johan Ludvig, widely acclaimed as Finland's 'national poet'. However, in a household that included six sons and with Johan Ludvig being seriously ill for several years, it was not easy for the Runebergs to cope with the extra costs associated with travelling abroad. These were relatively big investments and show how attractive the exhibition was.

Exploring a great exhibition was considered to be an important source of the most up-to-date information, as well as being a fashionable undertaking. Visiting such a spectacular and much talked-about event was not only socially acceptable, but was also attractive and potentially rewarding. Visiting the exhibition can be seen as one of the many practices related to the quest for social respectability and professional credibility such as joining clubs. Like his fellow British engineers, Runeberg joined the local mechanical institution and Literary and Philosophical Society in Newcastle upon Tyne, for example, and in a transnational manner networked by joining the

²¹ Runeberg's letter describing his time in Paris has not been conserved, except for a brief summary made by his mother that she sent to another son. F. Runeberg, *Brev till sonen Walter*, 7 August 1867.

²² Robert Runeberg to Fredrika Runeberg, 9 August [1868 or 1869]. IV.1.62, SLSA 1105, Archive of Walter Runeberg, Svenska Litteratursällskapet i Finland.

²³ Greenhalgh, *Ephemeral vistas*, 20.

²⁴ Matrikkeli, 58.

²⁵ F. Runeberg, *Brev till sonen Walter*, 11 September 1867.

²⁶ F. Runeberg, *Brev till sonen Walter*, 2 July 1867.

Scandinavian Club in Shields.²⁷ A young man eager to become worldly-wise, to accumulate professional and social knowledge, experience, merits and credibility, could hardly miss a great exhibition, despite the expense.

An Engineer Reporting from Vienna in 1873

In May 1873, soon after the inauguration of the *Weltausstellung* in Vienna, Runeberg was about to head to his second great exhibition. He was a much more experienced engineer than six years earlier in Paris. His first sojourn as an apprentice in Britain had eventually stretched to three years, most of which he had spent working in a shipyard in Newcastle upon Tyne. After returning to Finland in 1870, Runeberg took up a permanent position as the 'first constructor' in a mechanical company in Vyborg, in South East Finland, which produced steamships and belonged to the large business cluster of the Hackman family. After Runeberg had been working in Vyborg for half a year he wrote to his brother saying that he liked his work and had adjusted to the new city, but he wished to continue developing his skills abroad: 'As long as one is young and free one should take advantage of seeing the world and learning.'²⁸

However, as Runeberg was unsuccessful in his grant application he was obliged to postpone the planned journey. ²⁹ Despite this disappointment, Runeberg succeeded in gaining many new professional experiences prior to his journey to Vienna. By the spring of 1873 he had worked at Forges & Chantier in Marseille, which built ships and steam engines. He had also been a superintendant in England during the construction of a steamship ordered by a Finnish client. Furthermore, he had also served for two short periods onboard ships sailing in the Baltic Sea and the Atlantic Ocean, eventually reaching Cadiz. Contemporaneously, he sought admission to an academy in Britain or France in order to further strengthen his naval engineering skills. ³⁰

Runeberg had become a young and cosmopolitan professional who seemingly travelled at ease around Europe. While once again residing in England, he made a trip to attend the 1873 *Weltausstellung* in Vienna. Runeberg explored and assessed this event with an engineer's gaze. As the 'technical correspondent' of *Helsingfors Dagblad* he reported from Vienna, describing, for example, his favourite naval engineering, the functioning of steam engines, weaponry and a

²⁷ On the quest of British engineers to perfect gentleman-like etiquette by founding clubs, see Buchanan, "Gentlemen engineers," 407–429. Robert Runeberg to Fredrika Runeberg, 9 August [1868 or 1869]. IV.1.62, SLSA 1105, Archive of Walter Runeberg, Svenska Litteratursällskapet i Finland.

²⁸ Robert Runeberg to Walter Runeberg, 29 March 1871, I.1.420, SLSA 1105, Archive of Walter Runeberg, Svenska Litteratursällskapet i Finland.

²⁹ Robert Runeberg to Lina Runeberg, Chrismas Day [1871], III.1.182, SLSA 1105, Archive of Walter Runeberg, Svenska Litteratursällskapet i Finland.

³⁰ See references attached to Runeberg's grant application. 1478/176 1875, Economic division of the Senate, National Archives of Finland.

competition arranged for various agricultural devices.³¹ Furthermore, he acquired some first-hand experience of issues related to displaying fine arts as he officially represented his brother, Walter.³²

The articles published on the front page of the liberal *Helsingfors Dagblad* show an eager and attentive observer with a specialist interest in steam engines. Runeberg shows pride in his profession and loyalty to his colleagues, as he often brings up technical novelties and mentions the engineers who had devised them. Veneration of inventors was popular in the nineteenth century, thus it is not surprising that Runeberg also praised these individuals, such as Ferdinand Lesseps, who was lauded for his 'enthusiasm and sanguinism' in carrying out his bold project of building the Suez Canal.³³ Yet, in Runeberg's texts it is salient that he repeatedly brings up the agency of engineers, both as individuals and as a professional group. It is apparent that in his visions of a modern society those possessing technical expertise would occupy key positions.

It was a common expectation that each exhibition needed to clearly display a new stage of development in the rapidly advancing march of progress.³⁴ Robert Runeberg also expected very concrete developments to be visible in Vienna. However, when measuring technical progress by examining what had happened during the six years that had elapsed since the Paris exhibition, Runeberg was rather disappointed. He expressed regret, for instance, regarding the slowness of travel and took as an example the ability to journey around the world. ³⁵ His example was a curious one, as many at the time were astonished by the new speed and relative ease and safety with which man could travel. In fact, Thomas Cook had even arranged a package tour around the world just before the Vienna exhitibion.³⁶ Historians have also characterized this epoche as an age of rapid and radical change vis-à-vis travelling and communication, which fundamentally altered dimensions of time and space. ³⁷ The speed of change, which was dizzying and overwhelming to many, was eventually deemed insufficient for an enthusiastic engineer like Runeberg who was longing for something much more advanced.

³¹ Articles entitled "Från Wiener-utställningen" and signed by R were published in *Helsingfors Dagblad* on 10, 16, 22 and 31 July, 7, 10, 18 and 28 August 1873.

³² However, Runeberg's commitment to the fine arts section may have been less than total: he explained in a letter to his brother that his motivation for assuming the role was in order to obtain free entrance to the exhibition. (Robert Runeberg to Walter Runeberg, 22 May 1873. I.1.420, SLSA 1105, Archive of Walter Runeberg, Svenska Litteratursällskapet i Finland.) Yet, it must be acknowledged that over the years Runeberg did many favours for his brother in terms of exhibiting his art works. This is a recurrent theme in Fredrika Runeberg's letters to Walter from 1867.

³³ R[uneberg], "Från Wiener-utställningen," *Helsingfors Dagblad* 10 July 1873. On the veneration of individual inventors and scientists, see MacLeod, *Heroes of Invention*.

³⁴ On the omnipresence of the belief in progress and the ambiguity of the concept of progress in exhibitions, see Syrjämaa, *Edistyksen luvattu maailma* and Syrjämaa, "Experiencing Progress".

³⁵ R[uneberg], "Från Wiener-utställningen," *Helsingfors Dagblad* 10 July 1873.

³⁶ Brendon, *Thomas Cook*.

³⁷ See, for example, the classic study by Schivelbusch entitled *Geschichte der Eisenbahnreise*.

Runeberg bemoaned the lack of major breakthroughs, or 'epoch-making discoveries': 'It is time that something was done; a new communication medium must be invented.' He believed in the tremendous potential of aviation and envisioned how it would revolutionise travel by enabling people to journey around the world in a few days. Yet, he saw that this field was lamentably underdeveloped at the time. He criticized the level of contemporary knowledge related to flying mechanisms and dismissed balloons – which had been the centre of attention in Paris – as their steerability was almost non-existent.³⁸

In addition to such sweeping visions, Runeberg's texts were often replete with detailed mechanical information on various working methods, as well as the size and output of machines. However, he had no intention of solely directing his reports to specialists, but sought a wide readership. In fact, technological knowledge was gradually becoming an organic part of all-round education. Respectable citizens – both men and women – were supposed to be interested in and able to appreciate displays of machinery and industrial production.³⁹

In one article, which preceded his tour of Vienna, Runeberg acknowledged the need for technical information in society at large. He regretted the fact that there were no consultant engineers in Finland to assist clients. Those, who had to make decisions, regarding such matters as the acquisition of a steamship or a new agricultural machine, were at the mercy of producers.⁴⁰ Runeberg himself contributed to remedying this situation by providing technical knowledge in numerous newspaper articles written in 1873 and 1874, including the series from Vienna, and by later becoming a consulting engineer.

In Vienna, Runeberg was one of numerous individuals who reported on the exhibition in the press thus connecting two powerful media of his time. Exhibitions have been called a meta-medium and have been compared to media archives, due to their manifold and strict interconnectedness with a number of other media. On the one hand, they gathered various media, from the press to panoramas. On the other hand, their existence has been mainly documented by other forms of media.⁴¹ Thus, Runeberg's articles contributed to the trend towards combining the two leading mass media and thereby extending the potential exhibition audience far beyond those able to visit Vienna.

Runeberg held a very positive impression of the press. He read newspapers eagerly and followed *Helsingfors Dagblad* even when residing abroad. Once he explicitly defended the importance and utility of newspapers and encouraged a friend, Robert Castren, to continue his journalistic career.⁴²

³⁸ R[uneberg], "Från Wiener-utställningen," Helsingfors Dagblad 10 July 1873.

³⁹ Brenni, Dal Crystal Palace, 35–63; Hoffenberg, An Empire on Display, 166–179; Syrjämaa, Edistyksen luvattu maailma, 177–195.

⁴⁰ R[uneberg], "Litet om ånghästkrafter." *Helsingfors Dagblad* 23 May 1873.

⁴¹ Snickars, "Mediearkeologi," 126–136.

⁴² Robert Runeberg to Robert Castren, 9 January 1876. SLSA 736.4, map 1. Archive of Robert Castrén. Svenska Litteratursällskapet i Finland.

His family background probably fostered Runeberg's interest in the press. In the 1830s, his father had founded a newspaper and his mother was one of the first female authors in Finland.

After the Vienna exhibition, Runeberg published a number of other articles. They varied from a large survey on the British patent system to various articles on minor news items, including descriptions of visits to some national and international exhibitions arranged in London. In these reports on exhibitions, Runeberg described, for example, the new technique of sandblasting, but also themes that were far removed from his field of expertise, such as cattle displays.⁴³ Runeberg's numerous commentaries on exhibitions show his conviction in the utility of the exhibition medium, yet he was not blindly confident of its ability to enlighten the paying public. Using gentle irony, he actually criticized many organizational solutions in Vienna as well in London.

In the context of his second visit to a great exhibition, Runeberg was still a curious visitor, but not only in order to increase his own knowledge and advance his professional development. Instead, he adopted a more active role in his capacity as a representative of an exhibitor and, more crucially, as a qualified engineer reporting the world's wonders to Finnish readers. In accordance with this task, his special professional interest in naval engineering yielded more coverage and began to be mixed with other spheres of interest, such as modernizing agriculture, which he must have considered to be important for Finland and for his readers. Thus, Runeberg became one of those – presumably hundreds if not thousands – of exhibition-goers who selected, interpreted and circulated the most up-to date knowledge in the press in order to inform those who were far away from the Viennese hub. The two biggest mass media outlets of the time—the press and exhibitions—became intertwined in these articles in a most concrete manner.

Organizer of a National Exhibition in Helsinki in 1876

The next great exhibition, the US centennial world's fair, opened in May 1876 in Philadelphia. Despite the long distance, Runeberg seriously entertained the idea of travelling to view the exhibition.⁴⁴ His plans, however, changed when in the autumn of 1875 he was offered the post of commissioner of the first Finnish industrial and art exhibition – an event which he himself had championed. Thus, in the spring of 1876 when the attention of the wider world was focused on Philadelphia, Runeberg was busily working in Helsinki, where he was assisting the head commissioner, the industrialist A. W. Wahren. The Finnish National Exhibition was small when compared to international events: it was open for two and a half months and attended by some 90,000 visitors and the exhibition catalogue contained some 3200 items.⁴⁵ Still, it was the largest

⁴³ R[uneberg], "En boskapsutsällning i England." *Helsingfors Dagblad* 23 December 1873.

⁴⁴ F. Runeberg, *Brev till sonen Walter*, 3 September 1874.

⁴⁵ On the Helsinki exhibition see Syrjämaa, "Näyttelypaviljonki uudenlaisena kansainvälisenä tilana", 29–46; Syrjämaa, "Merging Peripheries and Centres", 285–302; Röneholm, *Markkinat messut ja näyttelyt*, 41–56.

single event ever to have been organized in Finland. It attracted visitors from all over the country and filled much space in national newspapers.

Runeberg had remained abroad after his visit to Vienna in order to complete his training in a specialist academy. Technological development and engineering were transnational phenomena, but they were not above national interests, jurisdiction and rivalry. Runeberg experienced all these frustrations personally, as he encountered great difficulties in procuring a place at The Royal Naval College in Greenwich. His attempt to enroll in the college was beset by both Russian and British bureaucracy.⁴⁶ A salve to soothe this disappointment was the right to study naval construction at the École d'Application du Genie Maritime in Cherbourg, although this appointment also came with restrictions. Foreign students were not allowed to visit the arsenal or to make construction designs on the school premises. Hence the transnational flow of knowledge was in practice hindered in the educational sector on the basis of nationalistic interests and policies. In a similar vain, the much cherished and trumpeted universal fraternity promoted by exhibitions was in practice overshadowed by internecine national rivalry and outright hostility.⁴⁷

French professional practices in engineering differed from the British ones, and hence Runeberg was able to learn new professional modes and methods.⁴⁸ He also acquired new social skills. Despite his earlier stint in Marseille, he felt himself to be too English when he first arrived. However, he soon embraced the social life of the town and became fluent in French. His time in Cherbourg was also a cosmopolitan experience. A curious trace of transcontinentality during the winter he spent in the academy was when Runeberg needed to have a document witnessed for an application: one of the signers was Quei Han, a 'Chinese engineer'.⁴⁹ For better or worse, technology and the study of naval engineering had attained undeniable global dimensions.

From these spheres Runeberg was not yet willing to return to Finland. During his stay in France he received several job offers from Finland related to mechanical engineering, but he refused them all until he received the invitation to become the commissioner of the Helsinki exhibition.⁵⁰ He returned to Finland in December 1875 and dedicate nearly one year of his life to the national exhibition. His acceptance of the position underlines Runeberg's great interest in the exhibition medium and his confidence in its utility. He must have also considered the position to be useful for his career as an engineer, which he had so attentively constructed over a number of years.

⁴⁶ Runeberg, "In a Circle." *The Times* 27 January 1874.

⁴⁷ On nationalism and exhibitions see, for example, Greenhalgh, *Ephemeral vistas*, 112–141; Syrjämaa, *Edistyksen luvattu maailma*, 103–146. Also see studies on national participation in great exhibitions: Smeds, *Helsingfors–Paris*; Brenna, *Verden som ting*, Tenorio-Trillo, *Mexico at the World's Fairs*.

⁴⁸ Picon, "Engineers and Engineering History", 423.

⁴⁹ A copy of a document from the École d'Application du Genie Maritime attached to Runeberg's grant application, dated 28 August 1875. 1478/176 1875 Economic division of the Senate, National Archives of Finland.

⁵⁰ See, for example, Robert Runeberg to Leo Mechelin, 9 July 1875. Archive of Leo Mechelin. National Archives of Finland.

By the time Runeberg became the commissioner of the Helsinki exhibition he had visited a number of expositions and had gained a good understanding of the many aspects of the medium. Yet, it was quite a different situation that awaited him in Helsinki. In Vienna he had still been a spectator; free to select those objects, categories and events that he, as an engineer, found most interesting and which he deemed to be of interest to the readership of *Helsingfors Dagblad*. He also had the liberty to mock, in a benevolent manner, the organizers for their shortcomings. Instead, in Helsinki he had to deal with numerous things some of which were far from being interesting or pleasant. He had to find solutions to many practical issues, such as the recruitment of workmen, the ordering and arrangement of exhibits, the daily running of the exhibition and, in the end, the safe returning of exhibits to their owners. Moreover, he had to oversee the dismantlement of the temporary pavilion.⁵¹

As an engineer Runeberg was able to handle many tasks, such as estimating the spatial requirements of different exhibits. In fact, many other commissioners also had expertise in technical fields.⁵² Furthermore, Runeberg had useful personal experience and contacts with Finnish industrialists. His job in Vyborg had included dealings with companies around Finland and more recently he had participated in founding a mechanical company in Turku. The various job offers he received also reveal that he was already known in Finland's mechanical industry sector. Furthermore, he personally knew many of the members of the exhibition committee, such as the engineer Endre Lekve, who had taught at his former school, and Leonard Borgström, who was August Borgström's brother and a close collaborator of A. W. Wahren at Forssa Ab.⁵³ His family background also helped to forge links, although their relevance is more difficult to estimate. His father held an exceptional status in Finland and in Scandinavia. Runeberg's family on his mother's side also had connections to academic and ecclesiastical circles.

Runeberg must have been helped in his new post by having personally visited and reported from large exhibitions. Yet, it is also evident that he was quite inexperienced in regard to the practicalities of arranging an exhibition. At the very beginning of the project Runeberg seems to have believed that his role in assisting A. W. Wahren would mean less fame, but would also entail less responsibility. His first expectation was realized, but not the second. Wahren and the organizing committee most likely decided the main features of the event. Many members of this committee had more experience than Runeberg, as their firms had participated in exhibitions

⁵¹ Robert Runeberg to A. W. Wahren, letters between 31 December 1875 and 1 December 1876. F1.30, Correspondence of Axel Wahren, Oy Forssa Ab, Central Archives for Finnish Business Records (ELKA).

⁵²Notably the engineer Frédéric Le Play in Paris in 1867, but also the Finnish commissioners Otto Alfthan (Stockholm 1866 and Paris 1867) and Hjalmar Londén (Paris 1889). Smeds, *Helsingfors–Paris*, 104, 223; Smeds, "Hjalmar Londén," 172–175.

⁵³ On Lekve see *Matrikkeli*, 95, on Leonard Borgström see Ojala, "Borgström, Leonard."

abroad.⁵⁴ But the day-to-day practicalities of running the event relied heavily on Runeberg. Wahren was a busy businessman, who was unable to dedicate a great deal of time to this enterprise, although it was close to his heart.⁵⁵ Moreover, he lived in Forssa, where his company's textile factory was located, which was over 100 kilometres from Helsinki and, during the time of the exhibition, he needed to travel abroad on business.

As a commissioner Runeberg was not able to dedicate much of his time to his favourite categories, such as the display of machinery. Instead, he had to deal with displays promoting a great variety of industrial products, from suger loaves to bottled alcohol, fine arts, handicrafts and schoolchildren's work. When the exhibition was finally drawing to a close, Runeberg remarked that 'It is terrible here and not at all nice. Quite a lot of especially small things have been lost and one is constantly feeling anxious that a lot will go the same way now [that they are being] packed.'⁵⁶ He noted how he not only worried about objects of high value, but about all objects, as damage to a seemingly humble exhibit could constitute a notable loss to their owners, such as an artisan or a peasant.

During the exhibition Runeberg also found himself in the midst of an escalating political dispute between the Fennomans and Svecomans over their respective notions of Finnishness. The organizers of the exhibition were wealthy Swedish speakers, and hence some Finnish-speaking nationalists were unsatisfied with the event. Their criticism was partly directed at the lack of practical arrangements for Finnish language issues, such as the delay in publishing a Finnish edition of the exhibition catalogue. Criticism was also directed towards more abstract issues, as some participants condemned the exhibition for its Swedishness.⁵⁷ Runeberg did not openly comment on his political convictions, but seems to have had a liberal, Scandinavian orientation like his family and the industrialists associated with the exhibition enterprise. For example, British engineers, who constituted a group of peers of great importance to Runeberg, have also been described as preferring to retain a distance from overt political commitment.⁵⁸

Runeberg was not blamed personally, but he could not escape the political dimension inherent in the exhibition medium. Exhibitions were always arenas for political competition, but it had been different when witnessing rivalry and conflict as a visitor rather than working as a commissioner at the very centre of an exhibition.

⁵⁴ For a more detailed study of the Helsinki exhibition and its connections to earlier exhibitions, including the Vienna *Weltausstellung* and especially the Stockholm 1866 Nordic exhibition, see Syrjämaa, "Merging Peripheries and Centres," 285–302.

⁵⁵ On Wahren's fury when he thought he had been ignored at the beginning of the exhibition project in the spring of 1875, see a copy of A. W. Wahren's letter to Leonard Borgström 16 June 1875. F1.6., Correspondence of Axel Wahren, Oy Forssa Ab, Central Archives for Finnish Business Records (ELKA).

⁵⁶ Robert Runeberg to A. W. Wahren 4 October 1876. F1.30, Correspondence of Axel Wahren, Oy Forssa Ab, Central Archives for Finnish Business Records (ELKA).

⁵⁷ Syrjämaa, "Making Difference, Seeking Sameness," 36–37.

⁵⁸ According to Buchanan, British engineers avoided overtly political issues and were mainly conformists. Buchanan *The Engineers*, 180–182. For an opposing example of a Finnish engineer and one-time commissioner see Smeds, "Hjalmar Londén," 173–174.

Despite the troubles, the accomplishment proved to be useful in terms of Runeberg's career. His work as a commissioner was greeted with satisfaction by Finnish industrial and business circles, the instigators and main organizers of the national exhibition. First, he received formal recognition: he was invited to become a member of the Imperial Finnish Society for the Economy.⁵⁹ Secondly, he was soon recruited to be the Finnish commissioner at the upcoming *exposition universelle* in Paris. Thus, at a crossroads in his career, when he had completed his foreign training and was establishing himself as an entrepreneur, Runeberg was becoming increasingly involved in the exhibition medium and his scope of action was simultaneously extending.

In the Helsinki exhibition Runeberg hardly had the opportunity – and probably neither the intention - to embrace grand visions of humankind's better future as he had expressed in his comments on aviation in Vienna. The agenda was different: to strengthen and expedite Finnish industrial development and modernization.⁶⁰ This was not a small or insignificant aim in terms of Finland's burgeoning sense of nationhood and gradual industrialization. Memories of the serious famine of the late 1860s and the vulnerability of the agrarian country were still fresh. Yet, in the years preceding the exhibition, some fields of industry - most notably paper production - had been emerging as strong economic sectors. The Helsinki exhibition, although small in scale, was in full accordance with the ethos of the exhibition medium: it made visible swift changes and by its sheer existence it signaled a readiness for rapid development in the future. In Helsinki, Runeberg orchestrated a spectacle of progress for Finnish society, which was quite a novelty for a country in which poverty and the severe climate were often lamented as being permanent hindrances to beneficial development. When Runeberg took on the task of serving as an exhibition organizer in Helsinki, his perspective shifted from the universal progress of mankind, promised by technological innovation, to national modernization and development. Contemporaneously, many other relevant dimensions present in the exhibition medium, such as school systems and cultural heritage as depicted and explored by ethnography and art, appeared alongside technological interests.

A Finnish Commissioner at International Events in Paris (1878) and Moscow (1882)

Working at the Helsinki exhibition left its mark on Runeberg and he later acknowleged that he and other organizers had had too little experience.⁶¹ Yet, he also found the task rewarding and did not hesitate in once again accepting the post of commissioner, although now in an international

⁵⁹ Robert Runeberg to A. W. Wahren 1 December 1876. F1.30, Correspondence of Axel Wahren, Oy Forssa Ab, Central Archives for Finnish Business Records (ELKA).

⁶⁰ In hist study on the British Empire, Peter Hoffenberg has noted that exhibitions were important in disseminating technological innovations in peripheries. Hoffenberg, *An Empire on Display*, 172–173, 186–191.

⁶¹ R. R[uneberg], "Från verldsutställningnen i Paris." *Helsingfors Dagblad* 24 March 1878.

capacity. First, he worked as the Finnish commissioner at the Paris *exposition universelle* in 1878 and then at the 1882 all-Russian exhibition in Moscow.⁶²

The task of overseeing Finnish participation in the Paris and Moscow exhibitions proved to be rather different than what Runeberg had experienced in Helsinki. Although the number of Finnish participants and exhibits was more restricted, the tasks proved to be challenging. Runeberg not only faced obstacles related to geographical distance and the bureaucracy associated with big events, but he also encountered new diplomatic challenges. First, the opening of the Paris *exposition universelle* was overshadowed by the threat of conflict between Russia and Great Britain. Secondly, Finnish and Russian interests and views on the role of the former clashed. Finns were eager to have their own exhibition, whilst Russians intended to absorb Finnish exhibits within those dedicated to the Russian Empire. Runeberg himself was well aware of Finnish-Russian administrative and diplomatic tensions after his futile attempt to receive the support of the Russian ambassador in London in his endeavour to enroll in the British naval academy.

These controversies took on a practical form at the Paris exhibition in 1878 with disputes surfacing over various issues including the location of the Finnish ethnographic display. From a Finnish perspective it was crucial to present the Grand Duchy in a favourable light to the international audience, as an ethnographic definition of a country's culture was highly esteemed at the time.⁶³ At the Moscow exhibition similar tensions emerged between the desire of Finns to be recognized as a distinct national entity, rather than being absorbed within the Russian displays. Whilst a wider international framework was missing at the Moscow exhibition, the internal political debates and sensibilities of the Empire were very much present. The task of the Finnish commissioner was to strike a balance between the interests of Finnish exhibitors and the demands of various Russian officials, although his room for manoeuvre was quite limited. In Paris, Runeberg eventually succeeded in securing a place for the Finnish ethnographic display in the important Trocadero Palace, next to a very similar Swedish exhibit.⁶⁴ In the case of the Moscow exhibition, Runeberg also pointed to favourable outcomes. He argued that Finland and Finnish industrial products had become more well-known in Russia and that even Slavophile newspapers had written positively about Finland, thereby diverging radically from the common Russian stereotype of poor backward Finns living in seclusion in grim forests.⁶⁵

In addition to diplomatic disputes, the logistics of the exhibition also consumed the time and energy of the commissioner. The growth in the volume of Finnish participation illustrated more widespread enthusiasm and conviction in the utility of the medium. In the Paris exhibition 150 exhibitors

⁶² The Moscow exhibition was due to take place in 1881, but was postponed as a result of the assassination of Emperor Alexander II.

⁶³ On ethnography see Bäckström, *Hjärtats härdar*.

⁶⁴ R. R[uneberg], "Från verldsutställningnen i Paris." *Helsingfors Dagblad* 6 April 1878; Runeberg, *Berättelse med anledning*, 13.

⁶⁵ Runeberg, Berättelse om Finlands deltagande, 5–6.

participated in contrast to only 34 in Vienna. If one measures the transportation capacity required for the Finnish exhibits in these respective events, then Finland's contribution in Moscow was ten times larger than in Paris. Finland's lack of a single exhibition section also complicated matters. In Paris, for example, the Finnish exhibits were scattered across 46 separate locations.

In a letter Runeberg confessed that he had miscalculated how much time he would need to devote to the Paris exhibition. After the hectic construction phase in the spring, the workload had not diminished as much as he had expected. Much of his time had been consumed in presenting Finnish exhibits to numerous juries. Consequently, he had been forced to run back and forth in the large exhibition area 'from morning to evening'.⁶⁶ Prize-giving played a crucial part in the ideology of measuring progress and endowed prizes brought a pride to the national team.⁶⁷ They were also seized upon by companies for their long-lasting promotional value in, among other things, advertisements and headed letters. In practice, the procedure of awarding prizes was dependent on many circumstances and lobbying was unavoidable. Thus, one of the commissioner's important tasks was to represent and advocate Finland and Finnish exhibitors.

Despite his burdensome diplomatic and practical tasks Runeberg did not completely forego his engineering interests and expertise. After the laborious jury procedures in Paris, he had some time for the 'specialized studies' that were closest to his heart. In particular, he was keen to work on an audacious project to resolve aviation issues. Runeberg wrote a lengthy letter to Wilhelm Hackman from Paris in which he discussed technical questions related to 'our flying machine'. He analyzed forces that would affect the machine and presented a hypothesis about how it could preserve its balance. Hackman was also an engineer – although he graduated in chemical engineering – and hence the letter was quite technical. The project was exceptional, yet it was not only a flight of fancy. As a matter of fact, Runeberg experimented the following summer by building a flying boat in Hackman's mechanical company in Vyborg.⁶⁸ The experiment was not successful, but the incident shows how deeply and personally Runeberg embraced the progressive and technological mindset of his age, which expected man to continuously enlarge his sphere of action and to overcome barriers erected by nature.

The attempt to construct a flying machine in the 1870s may appear foolhardy. However, one needs to take into account another successful engineering endeavour undertaken by Runeberg. A year before the Paris exhibition, Runeberg had designed a steamship that was capable of breaking through ice up to 12 centimetres in depth. This was hailed as a major achievement and an important step in making winter navigation possible in the Baltic Sea in the future, which in turn would

⁶⁶ Robert Runeberg to Wilhelm Hackman, 19 June 1878. Hackman trading house, 10, Manuscript collections, Library of Åbo Akademi University.

⁶⁷ Giberti, *Designing the Centennial*, 154–172.

⁶⁸ On the experiment see Kolari, "Robert Runebergin lentokokeet Viipurissa," 43–46.

represent a major boost for Finnish industry.⁶⁹ In this way Runeberg contributed to overcoming the limitations placed on sailing in the Baltic Sea during the long winter months. By attempting to design a means for aerial transport, Runeberg was similarly trying to ovecome the elements.

The question of the utility of electricity in overcoming darkness also fascinated Runeberg during his stay in Paris. In his report he enthusiastically describes electricity and its applications. He delved into the history of electricity and described novel discoveries by referring to current issues of British specialist journals, namely *Engineering* and *Philosophical Magazine*.⁷⁰ The text shows how Runeberg incorporated what he had seen in the exhibition within a more extensive scientific framework, which he was aware of as a keen follower of other media, especially specialized journals. As a matter of fact, the report on the *exposition universelle* extended to an inquiry into electricity that transcended the parameters of the exhibition.

Runeberg published only two newspaper articles at the beginning of the exhibition. Thereafter his collaborator, the architect Jac. Ahrenberg, wrote pieces for a wider audience. Runeberg instead directed his views on the exhibition and progress in general to a more limited and specialist readership: those who could get hold of and would be interested in reading a separate, thirty-page report published the following year. Whilst his activity in divulging information to the wider audience seems to have diminished, his interest in communicating with specialists in order to promote technological knowledge was great. It is also seen in his other activities, such as being a founding member of the Technical Society in Finland between the Paris and Moscow exhibitions.

The emphasis in his Moscow report differed greatly from the enthusiasm evident in his Paris communique. The former was not a description of the latest novelties of the technological world, but rather it concentrated on highlighting the huge potential of the Russian market for the Finnish economy. Runeberg complained that Finnish producers only targeted St. Petersburg as a market and tended to ignore Moscow and other regions of the vast Empire. His own background in shipbuilding and naval engineering can be seen in his interest in discussing the potential of Russian fluvial navigation as well his considerations regarding the transportation needs of the new oil business based in Baku.⁷¹ His own interest in and first-hand knowledge of Russian markets, from the point of view of a Finnish entrepreneur, is apparent in his opinion regarding the difficulty in securing reliable assistance for business transactions in Russia.

Runeberg's case makes visible the flexibility and versatility of the exhibition medium, which enabled divergent agendas. The biographical approach shows how even an individual's interests and modes of involvement could fluctuate over time. Whilst in Paris Runeberg had been an enthusiastic engineer looking for new technological breakthroughs that would benefit mankind,

⁶⁹ Engman, *Lejonet och dubbelörnen*, 179–180.

⁷⁰ Runeberg, *Berättelse med anledning*, 20–35.

⁷¹ Runeberg, Berättelse om Finlands deltagande.

whereas in Moscow he acted as an attentive businessman assessing new markets and potential national economic growth. Altogether Runeberg invested considerable time to exhibitions during these years. As a commissioner he worked on many themes and fields that diverged from the core of an engineer's specialist training. Yet, venturing beyond the field of naval and mechanical engineering turned out to be useful for his career. In Paris, Runeberg was awarded the distinguished title of Légion d'Honneur and in Moscow he had the honour to join the mechanical engineering prize committee.⁷² They were both important professional recognitions that had a bearing beyond the exhibition medium.

Once More: An Established Businessman in a Parisian Storm, 1900

After the Moscow exhibition Runeberg dedicated less time to exhibitions. He was no longer 'young and free', being in his mid-thirties and having a family. His professional life centred on his company, Byrå Vega, based in St. Petersburg. It gradually gained a good reputation in regards to winter navigation by planning and constructing icebreakers. The company also functioned as an agent for Finnish and international companies. Runeberg also had other – less successful – business initiatives, such as overseeing regular steamship traffic and the construction of street paving. ⁷³

Runeberg was still occasionally involved in some exhibition projects. He visited a naval exhibition in London in 1891, for example, and shared his views by writing a description of his visit for the readers of the journal of the Finnish Technical Society. This article shows that Runeberg had not lost either his belief in technological progress or in the exhibition medium. He enthusiastically scrutinized innovations as well as historical items – ranging from a life-size model of the recently built granite lighthouse of Eddystone to another life-size model of Admiral Nelson's *HMS Victory* – that highlighted the rapid changes that had taken place during a 'remarkable century of discoveries'. He anticipated that current ship models and systems would be outdated by the close of the decade and that progress would continue for a long time to come as 'perfection still seems to lie far away'.⁷⁴

Although not openly active in politics, Runeberg was also willing to utilize exhibitions to promote the Finnish national cause. Thanks to his contacts in the Russian and Finnish political elites, he was able to lobby and plan for Finnish participation in an international exhibition of decorative arts in

⁷² Robert Runeberg to A. W. Wahren 24 October 1878. F1.30, Correspondence of Axel Wahren, Oy Forssa Ab, Central Archives for Finnish Business Records (ELKA).

⁷³ A year after the Moscow exhibition Runeberg undertook a long exploration, commissioned by a Russian businessman, to the River Angara in order to inspect potential sites for the development of steamship traffic in the Enisei and Lake Baikal regions. Yet, this trip was an exception to an otherwise more stable life in St. Petersburg. Engman, *Lejonet och dubbelörnen*, 174–179.

⁷⁴ Runeberg, "lakttagelser under ett besök," 75.

Copenhagen in 1887.⁷⁵ His interest in promoting Finnish autonomy was evident also in his involvement in the initiative of the jurist, politician and industrialist Leo Mechelin to establish a newsletter on Finnish issues in Russian.⁷⁶

When Runeberg again took an active role in arranging an exhibition as a commissioner at the turn of the twentieth century, politics greatly complicated his task. In the beginning of 1898 Runeberg was charged with the task of planning the Finnish participation in the forthcoming great exhibition. The fifth Paris *exposition universelle* was a colossal undertaking, which attracted over 50 million visitors in six months in 1900. While the mammoth event was hugely popular, critics lambasted the exhibition for its unwieldly size.⁷⁷ At the same time exhibitions more generally were accused of losing their educational and edifying character: they were said to be too superficial, too commercial and too entertaining. However, the situation was not so clear-cut and the difference between earlier and later exhibitions was not so fundamental. Yet, the general reputation of the medium had suffered a notable devaluation.⁷⁸ Despite the critics, numerous countries and companies still considered participation in the exhibition to be of great importance. The public also voted with their feet in endorsing the exposition in Paris.

Once again the tasks of the commissioner ranged far and wide. The role required handling many different types of exhibits, among which were authentic and facsimile pieces of a meteorite that landed in Finland in March 1899 and made headlines around the world.⁷⁹ It also included coping with new kinds of exhibition aesthetics and display techniques, which highlighted large visual presentations of maps, catalogues and photographs.⁸⁰ Yet, political tensions overshadowed other challenges. In a later report Runeberg emphasized the restrictions that stifled his role: he was an agent whose task should have been to assist the Russian authorities in Finnish correspondence.⁸¹ This was also reflected in the way his position was defined in official correspondence. In 1878 his title had been 'Commissaire du Grand Duché de Finlande', thus emphazing both his status and that of Finland. In 1900, however, the headed letter paper referred first to 'Section Russe' and only then to the 'Agence Finlandaise'. This did not prevent Runeberg from negotiating the acquisition of a plot of land for a Finnish pavilion along the *Rue des Nations*, for which reason he travelled to Paris in March 1898 together with C. G. Sanmark, the administrative head of the Finnish economy and industry.

⁷⁵ Robert Runeberg to Leo Mechelin 27 November/9 December 1887. Archive of Leo Mechelin, National Archives of Finland.

⁷⁶ Engman, Lejonet och dubbelörnen, 185–186. On Mechelin, see Helen, "Mechelin, Leo."

⁷⁷ On the Paris *exposition universelle* in 1900, see Geppert, *Fleeting Cities: imperial expositions*, 62–87.

⁷⁸ Syrjämaa, "*Experiencing Progress*," 169–186.

⁷⁹ Correspondence between Runeberg and the Geological Society of Finland in April 1900. J. J. Sederholm's collection, Manuscript collections. Library of Åbo Akademi University.

⁸⁰ Circular signed by Runberg 4 April 1899. Archive of Leo Mechelin, National Archives of Finland.

⁸¹ Runeberg, "Berättelse öfver Finlands deltagande," 59.

According to Runeberg, their intention was to secure as large a plot as possible so that all Finnish exhibits could be concentrated in one building. He was probably only too well aware of how he had had to dash between forty-six different locations two decades earlier. No doubt he also appreciated the importance of a concentrated display for giving more weight to Finnish participation. Furthermore, Finland had had its own pavilion in the intermediate Paris exhibition in 1889 – when Russia had not participated at all. Thus, there was a precedent for having a national pavilion. However, in 1900 the question of a Finnish pavilion in Paris turned into a decidedly politicized issue. Finnish autonomy had run into difficulties within Russian Empire, with an acute crisis breaking out in 1899 in the midst of the preparations for the Paris exhibition. The intensification of Russification in Finland was also reported abroad, with a thousand influential persons, including Émile Zola and Anatole France, signing a petition in protest. In these circumstances, Russian objections to a separate Finnish pavilion were evident, as well as the conviction of Finnish organizers regarding the crucial importance of pushing for their own pavilion which they hoped would provide more publicity for their national cause.

Runeberg was highly experienced in dealing with Russian authorities and had established notable personal networks in Russia. However, he was almost overwhelmed by the new and unprecedented situation he faced in 1900. He succeeded in getting a proper pavilion for Finland, but it was so small that a significant portion of the Finnish exhibits were displayed as part of Russian sections and the daily management of the exhibition turned out to be like walking on thin ice. Runeberg ended up being embroiled in confrontations with not only Russians, but also with some of his younger Finnish assistants. The Finnish political climate was characterized by disputes about how to react to Russification. These conflicts became evident in the Finnish team in Paris.

Some of Runeberg's assistants demanded explicit and manifest opposition to the Russian authorities. They called for the immediate return, for example, of Russian-language maps of Paris, which had been sent to the Finnish pavilion. Runeberg instead emphasized his wish to act cautiously and to maintain connections to Russian commissioners, as many of them were privately favourable to Finland.⁸² Thus, he acted in accordance with the movement of passive resistance, which was led by his friend Leo Mechelin.⁸³ The situation became so critical that Runeberg dissmissed one of his assistants in October, although the exhibition by this time was already approaching its close. In 1900 Runeberg was a man who had enjoyed a long professional career, of which the last two decades had been spent in St. Petersburg. In the 1870s he had been a young, cosmopolitan engineer, but by 1900 his assistants and critics viewed him as a well-established, elderly Finnish businessman who was too tightly connected to St. Petersburg and Russian circles.

 ⁸²Copies of correspondence between Robert Runeberg, C. G. Sanmark and C. Tudeer in 1900. Political documents (collection). A Letters and telegrams. (10, Nro: 87:5). Digital archive. National Archives of Finland.
⁸³ Helen, "Mechelin, Leo."

Runeberg must have found his last major endeavour in the exhibition medium to be an exhausting undertaking. Moreover, public criticism of his actions was a new, unpleasant experience. He would have not been consoled by the support he received from like-minded friends, including C. G. Sanmark and Senator C. Tudeer, and his nearest colleagues, such as Jac. Ahrenberg. Political controversies and pressures seem to have dominated Runeberg's tasks in Paris as no references to his beloved technological novelties have survived. It is more than probable that during his prolonged stay in Paris he did manage to scrutinise various technical displays – especially as his own company was among the exhibitors. But he no longer communicated his views and experiences to a wider audience. Even the official report—a very brief text published in a series printed by the industrial administration of the State in 1901—was void of any reference to the technical or scientific contents of the exhibition.⁸⁴ The enthusiastic tone of previous reports was missing, whether relating discoveries he had viewed in Paris or regarding the economic assets in Moscow.

The domination of political issues at the Paris exhibition of 1900 seems to have been exceptional when compared to Runeberg's previous exhibition experiences. However, political tensions as such were far from extraordinary in the general exhibition framework. ⁸⁵ Even though the standard rhetoric employed vis-à-vis the promotion of exhibitions emphasized fraternal affection and peaceful competition between various nations, in practice, exhibitions were highly political arenas and events. Many were tempered by international tensions, boycotts and even outright war. In 1900, the Finnish issue, as crucial as it was to the representatives of Finland and the conduct of Finnish attendees, was a minor issue in relation to the Boer War, which overshadowed the *exposition universelle* as it resulted in plenty of criticism of and antagonism towards Great Britain.⁸⁶

National presentations in the international foras of the greatest exhibitions – and the supposed attention they received and success they achieved – were willingly included in nationalistic narratives. However, in the later Finnish national memory, Runeberg's role in Paris has been marginalized. The younger artists and architects who designed and decorated the Finnish pavilion were soon canonized as brave defenders of the Finnish cause at a perilous moment in the grand national story. Runeberg was absent from such stories.

The politicized situation in the Paris exhibition would have surely not been a surprise to Runeberg and his commitment to promote the Finnish cause seems obvious. Yet, he was quite far from his usual sphere of action and his preceding ideals of promoting general technological and technocratic development or the modernization of Finland. The bitter political disputes overshadowed those features that had made exhibitions so inspiring to him and worthy of his investing a great deal of his time and effort over several decades.

⁸⁴ Runeberg, "Berättelse öfver Finlands deltagande," 59–65.

⁸⁵ National political divergences and disputes also engulfed the Finnish team, which had arranged the previous national pavilion eleven years earlier in Paris. Smeds, "Hjalmar Londén," 173–174.

⁸⁶ Syrjämaa, Edistyksen luvattu maailma, 125–136.

Conclusion

Engineers formed a kind of vanguard, in which they were not only developing technology as such, but also spreading information and promoting a modern society. In this context what was needed was the capacity to translate knowledge and visions to society at large. Robert Runeberg contributed in this process via the exhibition medium.

No one else had exactly the same career trajectory as Runeberg. The intensity and durability of his commitment to the exhibition medium may have also been somewhat rare, yet his actions within its framework and his comments on it were far from unique. He shared a similar set of practices and beliefs as numerous others, whose paths are not as fully traceable. In fact, the case of Runeberg is interesting not because of its uniqueness, but as a result of how it echoes those of many others. At the same time, it makes visible a concrete, individual path situated at the intersection of professionalization, transnational mobility and the new mode of mass communication represented by the exhibition medium. It also makes discernible the juxtaposition and co-existence of the individual, national and transnational spheres in these processes of modernization.

Professionalism acquired new shapes in the nineteenth century as disciplines and areas of expertise diversified and formal education was institutionalized in a growing number of fields. The attainment of professional status required a diploma from a specialized academy that offered a combination of theoretical and practical knowledge. Yet, international mobility to centres of advanced knowledge was, in many instances, also considered to be of great value. Travel abroad could even be supported by public funding, such as the grants awarded by the Finnish Senate to engineers, architects and artists. Robert Runeberg's trajectory is a concrete example of transnational mobility. It is well known that aspiring professionals often ventured abroad in order to specialize and to gain merits, but Runeberg's case illustrates how a variety of journeys, destinations and forms of activity could eventually be juxtaposed into one trajectory and how it actually consisted of occasional and fragmentary elements.

Throughout the nineteenth century many aspirant experts set off on their respective journeys, although with changing itineraries and practices. Among the changed circumstances were the ways in which knowledge was produced and consumed. An important and attractive new medium were the exhibitions which can be compared to immersive encyclopedias, in which millions of people could walk in to – presumably – in order to see the state of the art as well as the past and future. Furthermore, the sphere of influence of exhibitions was greatly increased by their connections to other media, such as newspapers, magazines and journals, which allowed a manifold number of people to follow these spectacles of modernity at a considerable geographical distance.

The case of Runeberg shows how his involvement in and gradual mastery of the exhibition medium was embedded in his career development as an engineer and how different kinds of exhibitions were interconnected in his vocational trajectory. His temporal and spatial itinerary is a concrete example of how great and minor exhibitions complemented each other and shared a similar ethos and many practices. It also shows how events that were smaller in size and geographical or thematic coverage were not merely miniature copies of the largest expositions, but formed an essential part of the medium.

The case of Runeberg also shows how even a single person could have fluctuating objectives, as well as variable roles and functions – not to mention success – when attending different exhibitions. In his younger years, exhibitions functioned as a means of personal development for Runeberg, whilst he later adopted a more proactive role. He used his professional insights when selecting and interpreting aspects of modernity and divulged these visions in newspapers and other printed media. As a commissioner Runeberg was eventually charged with overseeing exhibition arrangements, which significantly enlarged his sphere of action beyond technology, as the exhibition media in general juxtaposed with numerous other elements of modern society, such as the arts, school systems and a number of sciences ranging from ethnography to geology. Via the medium of exhibitions Runeberg participated in the production, circulation and consumption of knowledge. This was partly concentrated on his specific field of engineering, but it was also an all-encompassing undertaking that entailed the promotion of a modern, technocratic world.

Acknowledgements: This work was supported by the Research Fund for Industrial Culture, Emil Aaltonen Foundation.

Professor Taina Syrjämaa, Department of European and World History, School of History, Culture and Arts Studies, University of Turku, 20014 Turku, Finland. Tel. +358-2-3335231, email: taina.syrjamaa@utu.fi

Biographical note:

Taina Syrjämaa is Professor of European and World History at the University of Turku, Finland. She has published widely on the history of the exhibition medium, including the monograph *Edistyksen luvattu maailma. Edistysusko maailmannäyttelyissä 1851–1915.* (The Promised Land of Progress. The Belief in Progress at the Great Exhibitions 1851–1915) (Helsinki: Finnish Literature Society, 2007) and the articles "Experiencing Progress. Technology as entertainment in world exhibitions at the turn of the twentieth century" (Lisboa: Edições Colibri, 2010) and "Merging Peripheries and Centres: The Transnational Interconnectedness of the Helsinki National Exhibition of 1876" (Farnham: Ashgate, 2015). Her other research interests include human-animal studies, historical spatiality and urban history.

Manuscript collections

Archive of Leo Mechelin, National Archives of Finland.

Archive of Robert Castrén, Svenska Litteratursällskapet i Finland.

Archive of Walter Runeberg, Svenska Litteratursällskapet i Finland.

Correspondence of Axel Wahren, Oy Forssa Ab, Central Archives for Finnish Business Records (ELKA).

Grant applications, Economic division of the Senate, National Archives of Finland.

Hackman trading house, Manuscript collections, Library of Åbo Akademi University.

Political documents (collection). A, Letters and telegrams. Correspondence between R. Runeberg, C. G. Sanmark and C. Tudeer 1900 (10, Nro: 87:5). Digital archive, National Archives of Finland.

Bibliography

Brendon, Piers. Thomas Cook: 150 Years of Popular Tourism. London: Secker & Warburg, 1991.

Brenna, Brita. Verden som ting og forestilling. Verdensutstillinger og den norske deltakelsen 1851– 1900. Oslo: Unipub As, 2002.

Brenni, Paolo. "Dal Cristal Palace al Palais de l'Optique: la scienza alle esposizioni universali, 1851–1900." *Memoria e ricerca*. n. 17, settembre-dicembre (2004): 35–63.

Buchanan, R. A.. "Gentlemen engineers: The Making of a Profession." *Victorian Studies*. Vol. 26 Issue 4 Summer (1983): 407–429.

Buchanan, R. A.. *The Engineers. A History of the Engineering Profession in Britain, 1750–1914.* London: Jessica Kinglsey Publishers, 1989.

Bäckström, Mattias. *Hjärtats härdar. Folkliv, folkmuseer och minnesmärken in Skandinavien, 1808–1907.* Möklinta: Gidlunds förlag 2012.

Ekström, Anders, "Seeing From Above: A Particular History of the General Observer." *Nineteenth-Century Contexts: An Interdisciplinary Journal*. Vol. 31 Issues 3 (2009): 185–207.

Engman, Max, "Robert Ivanovitj Runeberg – ingenjör." In *Festskrift till Johan Wrede 18.10.1995*, edited by Magnus Pettersson, 75–90. Helsinki: SLS, 1995.

Engman, Max, Lejonet och dubbelörnen: Finlands imperiella decennier 1830–1890. Stockholm: Atlantis, 2000.

Filipová, Marta, "Introduction: The Margins of Exhibitions and Exhibitions Studies." In: *Cultures of International Exhibitions 1840–1940*. Ed. by Marta Filipová, 1–20. Farnham: Ashgate, 2015.

Findling, John E., and Kimberly D. Pelle, *Historical Dictionary of world's fairs and expositions*, 1851–1988. New York: Greenwood Press, 1990.

Geppert, Alexander C. T., *Fleeting cities: imperial expositions in Fin-de-Siècle Europe*. New York: Palgrave Macmillan, 2010.

Giberti, Bruno, *Designing the Centennial*. A History of the 1876 International Exhibition in *Philadelphia*. Lexington: The University Press of Kentucky, 2002.

Greenhalgh, Paul, *Ephemeral vistas: The* expositions universelles, *great exhibitions and world's* fairs, 1851–1939. Manchester: Manchester University Press (1988) 2000.

Helen, Tapio, "Mechelin, Leo (1839 - 1914)." Kansallisbiografia. Accessed October 29, 2015. http://www.kansallisbiografia.fi/kb/artikkeli/3553/

Herranen, Timo, "Wahren, Axel Wilhelm (1814 - 1885). Forssa Oy:n perustaja, kauppaneuvos." *Kansallisbiografia*. Accessed March 25, 2014. http://www.kansallisbiografia.fi/kb/artikkeli/4356/

Hietala, Marjatta, Innovaatioiden ja kansainvälistymisen vuosikymmenet. Tietoa, taitoa, asiantuntemusta. Helsinki eurooppalaisessa kehityksessa 1875–1917, vol I. Helsinki: Suomen Historiallinen Seura, Helsingin kaupungin tietokeskus 1992.

Hoffenberg, Peter H., An Empire on Display. English, Indian and Australian Exhibitions from the Crystal Palace to the Great War. Berkeley, Los Angeles, London: University of California Press, 2001.

Holmberg, John, "Banbrytaren inom vintersjöfarten." In *Finlandssvenska tekniker*. Vol. 4, 8–24. Vasa: Tekniska Föreningen i Finland r.f., s.a.

Jalagin, Seija, "Vieraalla maalla kaukana. Aili Havaksen transnationaali elämä." In: *Historiallinen elämä. Biografia ja historiantutkimus*, edited by Heini Hakosalo, Seija Jalagin, Marianne Junila ja Heidi Kurvinen, 113–131. Helsinki: Suomalaisen kirjallisuuden seura, 2014.

Jäntti, Vesa-Pekka, "Kauppaneuvos August Borgström." Kansallisbiografia. Accessed May 6, 2014. http://www.kansallisbiografia.fi/talousvaikuttajat/?iid=193

Kolari, Pertti, "Robert Runebergin lentokokeet Viipurissa 1879." *Tekniikan vaiheita. Teknologian historian aikakauslehti* 30:3 (2012), 43–46.

Konttinen, Esa, *Perinteisesti moderniin. Professioiden yhteiskunnallinen synty Suomessa*. Tampere: Vastapaino 1991.

Matrikkeli sisältävä elämäkerrallisia tietoja Teknillisen reaalikoulun, Helsingin polyteknillisen koulun ja Suomen polyteknillisen opiston opettajista ja oppilaista 1849–1897 sekä historiikit

oppilaitoksen, Teknoloogisen yhdistyksen ja Polyteknikkojen yhdistyksen toiminnasta. Kotka: Polyteknikkojen yhdistys, 1899.

MacLeod, Christine, *Heroes of Invention: Technology, Liberalism and British Identity, 1750–1914.* Cambridge: Cambridge University Press, 2007.

Michelsen, Karl-Erik, Viides sääty. Insinöörit suomalaisessa yhteiskunnassa. Helsinki: Tekniikan Akateemisten Liitto, Suomen Historiallinen Seura, 1999.

Niemi, Marjaana, "Valtion, ammattikunnan ja oman edun nimissä: suomalaisten opintomatkat ulkomaille 1500-luvulta 1900-luvulle." In: *Matkalla! Suomalaiset arkkitehdit opintiellä*, edited by Timo Tuomi et al., 11–21. [Helsinki]: Suomen rakennustaiteen museo, 1999.

Nykänen, Panu. Käytännön ja teorian välissä: Teknillisen opetuksen alku Suomessa. Jyväskylä: Gummerus Kirjapaino, 1998.

Ojala, Jari. "Borgström, Leonard (1832–1907)." *Kansallisbiografia*. Accessed November 11, 2014. http://www.kansallisbiografia.fi/kb/artikkeli/4244/

Picon, Antoine. "Engineers and Engineering History: Problems and Perspectives." *History and Technology: An International Journal* 20:4 (2004), 421–436. doi: 10.1080/0734151042000304367.

Runeberg, Fredrika. *Brev till sonen Walter 1861–1879*. Inledning och kommentarer av Karin Allardt Ekelund. Helsinki: SLS, 1971.

Runeberg, Rob[ert]. Berättelse med anledning af Finlands deltagande i Pariser verldsutställningen 1878. Helsingfors: Hufvudstadsbladets tryckeri, 1879.

Runeberg, Rob[ert]. Berättelse om Finlands deltagande i allmänna ryska konst- och industriutställningen i Moskva 1882. Helsingfors: J. Simelii arfvingars tryckeri, 1883.

Runeberg, R[obert]. "Iakttagelser under ett besök vid marinexpositionen i London 1891." *Tekniska föreningens i Finland förhandlingar* 11:3, 75–79.

Runeberg, R[obert]. "Berättelse öfver Finlands deltagande i Pariser-verldsutställningen 1900." *Meddelanden från Industristyrelsen i Finland* 34. häftet (1903), 59–65.

Röneholm, Harry. Markkinat messut ja näyttelyt. Helsinki: Suomen Messut osuuskunta, 1945.

Schivelbusch, Wolfgang. Geschichte der Eisenbahnreise: zur Industrialisierung von Raum und Zeit im 19. Jahrhundert. München: Hanser, 1977.

Smeds, Kerstin. *Helsingfors–Paris: Finland på världsutställningarna 1851–1900*. Helsinki: Svenska litteratursällskapet i Finland & Finska Historiska Samfundet, 1996.

Smeds, Kerstin. "Hjalmar Londén: Suomen komissaari Pariisin maailmannäyttelyssä 1889. Hjalmar Londén: finsk kommissarie vid världsutställningen i Paris 1889." In: *Pro Finlandia. Suomen tie itsenäisyyteen 1, Näkökulma: Ranska ja Italia. Pro Finlandia. Finlands väg till självständighet 1, Synvinkel: Frankrike och Italien*, ed. by Jussi Nuorteva and Pertti Hakala, 172–175. Helsinki: Edita, 2014.

Snickars, Pelle. "Mediearkeologi: Om utställningen som mediearkiv." In: *1897 Mediehistorier kring Stockholmsutställningen*, edited by Anders Ekström, Solveig Jülich, and Pelle Snickars, 125–163. Stockholm: Statens ljud- och bildarkiv, 2006.

Syrjämaa, Taina. Edistyksen luvattu maailma. Edistysusko maailmannäyttelyissä 1851–1915. Helsinki: Suomalaisen Kirjallisuuden Seura, 2007.

Syrjämaa, Taina. "Näyttelypaviljonki uudenlaisena kansainvälisenä toiminnan ja tulkinnan tilana Kaivopuistossa vuonna 1876." *Historiallinen Aikakauskirja* 108:1 (2010), 29–46.

Syrjämaa, Taina. "Making Difference, Seeking Sameness. Negotiating Finnishness and Foreignness in an Exhibition." In: *Nordic Perspectives on Encountering Foreignness*, ed. by Anne Folke Henningsen, Leila Koivunen, and Taina Syrjämaa, 27–40. Turku: University of Turku, 2009.

Syrjämaa, Taina. "Merging Peripheries and Centres: The Transnational Interconnectedness of the Helsinki National Exhibition of 1876." *Cultures of International Exhibitions 1840–1940*. Ed. by Marta Filipová, 285–302. Farnham: Ashgate, 2015.

Syrjämaa, Taina. "Experiencing Progress. Technology as entertainment in world exhibitions at the turn of the twentieth century." *World Exhibitions, Technical Museums and Industrial Society / Expositions universelles, musées techniques et societé industrielle*. Ed. by Ana Cardoso de Matos, Irina Gouzévitch et Marta C. Lourenço. Lisboa: Edições Colibri, Centro Interdisciplinar de História, Culturas e Sociedades da Universidade de Évora, Centre Maurice Halbwachs & CIUHCT Centro Interuniversitário de História das Cièncias e da Tecnologia (2010), 169–186.

Tenorio-Trillo, Mauricio. *Mexico at the World's Fairs. Crafting a Modern Nation.* Berkeley, Los Angeles and London: University of California Press, 1996.

van der Vleuten, Erik. "Toward a Transnational History of Technology. Meanings, Promises, Pitfalls." *Technology and Culture* 49:4 (2008), 974–994. doi: 10.1353/tech.0.0144.

Werner, Michael, and Bénédicte Zimmermann. "Beyond Comparison: *histoire croisée* and the challenge of reflexivity." *History and Theory* 45, issue 1 (2006): 30–50. doi: 10.1111/j.1468-2303.2006.00347.x

1897 Mediehistorier kring Stockholmsutställningen, edited by Anders Ekström, Solveig Jülich, and Pelle Snickars, 125–163. Stockholm: Statens ljud- och bildarkiv, 2006.