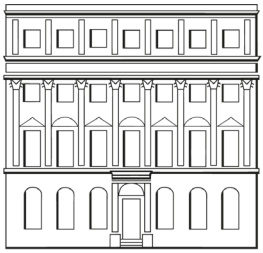

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Review of Wolfgang König, *Sir William Siemens, 1823–1883: Eine Biografie*
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WOLFGANG KÖNIG, *Sir William Siemens, 1823–1883: Eine Biografie* (Munich: C. H. Beck, 2020), 270 pp. ISBN 978 3 406 75133 2 (hardback). €29.95

There are many reasons why a new and substantial biography of William Siemens is welcome. As Wolfgang König persuasively reminds us, Siemens was a highly significant figure in Victorian Britain in terms of the history of manufacturing and technology. He was a prominent player particularly in the development of steam engines, steel production, and, most spectacularly, telegraphy. Siemens was also, however, hyperactively and obsessively committed to experimentation in connection with mechanical enhancements and, as König makes clear, far more widely. He became a ubiquitous and leading figure across the many scientific and cultural societies that lay at the heart of Victorian (and global) endeavour, was extensively networked, and was particularly important in the professionalization and co-ordination of the British engineering sector. William Siemens was the main representative in Britain of the astoundingly successful Siemens *Geschwisterbund*, a network of siblings based and operating across Europe (and, as König hints, perhaps to an extent consciously inspired by and constructed on the model established by the Rothschilds). Taken altogether, Siemens is a fascinating and important figure for anyone interested in the history of technology, corporate history, and Anglo-German economic and cultural relations. On his death, a window was dedicated to him in Westminster Abbey, paid for by subscriptions organized by many engineering societies, and symbolizing the high esteem felt for him. As König argues persuasively, historical awareness of him has, however, become unfocused over time, given his cross-cultural context and uncertainty about his position within the wider family network.

This biography constitutes a detailed and direct reassessment of William Siemens's life and work. It makes use of a wealth of archival materials across the UK and Germany—most prominently those of the Siemens Historical Institute in Berlin, as well as copious printed primary sources. Many of these are by William himself—the biography contains a valuable comprehensive bibliography of William Siemens's publications—or by other members of his family or vast network of

acquaintances. Given the subject focus, the research has necessarily ranged across biographical and corporate history, the political histories of Britain and Germany, and cultural history, including the history of German immigration to Britain. It has also required detailed study of specific areas of technical development. The volume contains many fascinating and thought-provoking images, including of family, context, and inventions.

Born in 1823 in Mecklenburg-Strelitz near Lübeck, Wilhelm Siemens was the seventh of fourteen children (four of whom died early). After his father's death, Wilhelm came under the guidance of his older brother Werner, the leading player in the family. While Werner's studies and work focused increasingly on science and electronics, Wilhelm was drawn to the practical applications of scientific research, particularly to industry. After studying at Göttingen and completing an apprenticeship in Magdeburg, Wilhelm travelled to the UK for the first time in 1843 in order to arrange and sell the patents for Werner's inventions in the field of galvanic metal production. After further visits, he based himself there from 1847, taking British nationality in 1858. As König shows, William—as he then became known—started out in a somewhat subordinate role in the family firm as a salesman and proponent of technology developed by his brother Werner. This included the financially successful galvanic patent, as well as the less successful steam engine regulator and printing process. In 1847 Werner Siemens joined with Johann Georg Halske in the production of telegraphic equipment. William worked to promote the Siemens & Halske company's activities in Britain too. He was, however, increasingly making his own way.

Striking narrative dynamics within König's volume are William Siemens's astoundingly rapid and successful integration into British economic, scientific, and cultural life and his growing independence from Werner and the family firm. König traces the complex relationship between these aspects, which were interwoven—sometimes mutually supporting, but often in tension with each other. In addition to working for Werner, William worked independently for numerous British companies as an engineering adviser. He became increasingly interested in pursuing, promoting, selling, and applying the results of his own experiments—again with variable success. An area in which

William would take the leading role was the laying of telegraph cables beneath the sea, a technology first successfully applied with the cable laid between Britain and France in 1850–1. William directed the Siemens brothers' collaboration with British engineering companies such as R. S. Newall & Co. and would become independently involved in the sector as technical adviser, innovator, and entrepreneur. König provides dramatic illustration of the sometimes gargantuan scale of William Siemens's activities in this area, with his leading role in cables laid across the Mediterranean and the Atlantic, his designs for and application of enhanced (and again monstrous) cable-laying equipment, and the enormous ship *Faraday*, specially commissioned by William Siemens from Mitchell & Co. in Newcastle and visited by Queen Victoria and the German Empress Augusta in 1876.

As the latter detail suggests, within three decades William had also gone from being a relatively unknown Germanic salesman to one of the most prominent, visible, and well-connected figures on the British national stage. König provides a wealth of detail and contemporary observation regarding William's personal characteristics. These played a significant part in his ability to form long-lasting and intimate friendships and technical and commercial collaborations. For those interested in the history of networks, König's account provides a wealth of information. William's entry to and relations with numerous leading societies are described, including the Royal Society, the British Association, the (Royal) Society of Arts, the Institutions of Civil Engineers, of Mechanical Engineers, of Electrical Engineers, of Naval Architects, and so on. With astounding and sustained energy, he devoted himself to giving presentations, building up connections, founding new establishments, and occupying leadership roles.

Not insignificantly in the context of his career, William married a cultured Scottish woman—Anne Gordon—who supported her husband domestically, through personal engagement, and by active participation. He also set up constructive and useful accommodation, with a town residence in Kensington enabling ease of access to the multitude of contacts and societies in London and a country seat at Sherwood in Kent, where he could conduct his experiments and receive guests. As König suggests, an invitation to stay at the latter could be an effective way of supporting and deepening friendships. Among William and

Anne's guests would be the Emperor of Brazil, the Crown Prince of Germany (future Emperor William II), and countless industrialists, musicians, and artists. König also describes how Sherwood became a showcase for electric power, with its own electricity generator powering water pumps, sawmills, greenhouses, and more.

König provides a convincing understanding of the evolution of the Siemens family network. Werner shaped William's early career and work. While Werner would remain the centre point for the family business, however, William would become in many ways an equal player, complementing Werner's science-based approach with his more technical, applied, and commercially minded activities. König also points out that the opportunities for impact were in some respects more conducive in Britain than in the German states. In addition to Werner and William, brother Carl looked after business affairs in Russia. Carl and his brother Friedrich also intermittently assisted William in Britain. The *Geschwisterbund* is revealed as not unproblematic. Werner and William were often not in agreement. Their intensive correspondence, however, reveals that they sustained throughout a positive, critical, and transparent discourse that possibly lay at the heart of the Siemens family's success. William's relationship with Carl and Friedrich, meanwhile, was more strained, with differences over commercial approach, attitudes to risk, and personality.

This volume contains excellent discussions in many respects. While necessarily focusing on the brothers, the account is gender-conscious in its description of the limitations of society life and the role of women in sustaining and enabling industrial and social interaction. There is an interesting and welcome acknowledgement of antisemitism among the brothers, which is depicted as to some extent typical, but also shown to vary in strength between them and, in William's case at least, is partly redeemed by a late rejection of such prejudices. There is a focused exploration of the role of intellectual and professional societies in Victorian life, and of William's significance generally in this respect as well as with reference to the professionalization of engineering, telegraphy, and electronic technology.

König provides highly useful information regarding William's—and his brothers'—involvement in German politics as their homeland passed through revolution, war, and unification. There are surprises,

such as the actual participation of the Siemens brothers on the ground in the First Schleswig War of 1848–9. William's connections with German emigrants in the UK are explored in some depth, focusing particularly on his close relations with J. G. Kinkel, Gottfried Semper, Richard Wagner, and Lothar Bucher. This account simply corroborates and underpins the allocation of William Siemens to the liberal camp. Though perhaps less enthusiastically than Kinkel and Bucher, William Siemens accommodated himself to German unification and shared patriotic, anti-French views after 1871.

König takes great care to explain and illustrate the scientific and technical findings at the heart of the Siemens brothers' work. As an exercise in publicly accessible science, this volume is excellent. As König shows, William Siemens's experiments, writing, and lectures were extensive and far-reaching. For this reader, the volume helps place William Siemens alongside the many other notable polymath Germans present in Victorian Britain, including figures such as Prince Albert, Baron von Bunsen, and Friedrich Max Müller. König's volume—presumably picking up on current trends—pays special attention to William Siemens's work in relation to environmentalism. This included, for example, innovations to reduce inefficiencies in coal burning, to support electricity as a more environmentally friendly mode of power and transport, and to capture hydro-electric power. But it is interesting that König devotes a chapter to William Siemens's work and publication on the power and life of the sun. Here, the reviewer is reminded of Max Müller's contemporaneous reflections on solar mythology.

The structure of the volume produces no little amount of repetition. It is highly irritating that no systematic distinction is made between 'England' and 'Britain', not least given, for example, the significance of Scottish scientific and cultural life with which William Siemens is linked. The treatment of societies is methodical and revealing, but also somewhat plodding. Discussion of the Siemens brothers' position on German politics is valuable, but it is also superficial and requires far more investigation. Werner's role as an MP for the *Fortschrittspartei* between 1862 and 1866 is mentioned. So, too, is the presence of Werner, William, and his wife Anne at the great meeting of German liberals in Coburg in 1860. These latter points, however,

might be placed under the heading of the reviewer's wish list. Taken as a whole, this is a fascinating and valuable addition to knowledge regarding the Siemens family, industrial history, and the history of Anglo-German relations. It provides much useful information for those working across a wide range of associated areas.

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