Gustav Magnus und sein Haus: Im Auftrag der Deutschen Physikalischen Gesellschaft

Edited by Dieter Hoffmann. Stuttgart: Verlag für Geschichte der Naturwissenschaften und der Technik, 1995. Pp. 135. DM 50.

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Since World War II, experimental physics has entered public consciousness as a large, expensive, technical enterprise. Yet at some point between the cabinets of the eighteenth century and the industries of the twentieth, the laboratory of physics had its start. One place where that occurred was in Berlin, in 1842, at the address Kupfergraben 7, an elegant, two-story house with a slate mansard roof that overlooked an island in the Spree River and gardens beyond. The story of this rococo building and its owner is the subject of the collection of essays under review.

In commissioning this volume on its 150th anniversary, the German Physical Society has made a deliberate nod to history. During the cold war, this scientific organization found itself split in two: one part stayed in the East, another moved to the West. That distinction vanished in the wake of German reunification, at least for the organization. With help from the Siemens Corporation, the German Physical Society returned to its roots. It repossessed and refurbished its original home, the Magnus House. Eager to be rid of what had become an eyesore after four decades of Communist neglect, the Berlin Senate supported the takeover. If this was not exactly a changing of the guard, one could call it a changing of the ghosts.

But ghosts haunt even in a Festschrift. We discover that the Magnus House served as an institute of Nazi ideology and as an NKVD (People's Commissariat of Internal Affairs) detention center, that the popular ascription of the building's design to Knobelsdorff is in error, and that Lagrange was thoroughly miserable as a tenant. Gustav Magnus does not come off much better. In the first sentence of the book, editor Dieter Hoffmann feels compelled to inform us that Magnus was a Jew, although this plight, or honor, apparently made no difference to either his science or his career. Magnus does seem to have been a horribly jealous person, though, refusing his colleagues access to his collection of instruments and only grudgingly recognizing his students as independent scientists. All this is told without the least irony.

Magnus worked in a variety of scientific fields throughout his life, his best achievements being his investigation of specific heats, his measurement of dissolved blood gases, and his analysis of the aerodynamics of spinning bodies. He also contributed to the development of Prussian technology beyond his own work, serving as a judge at industrial exhibitions and as an adviser in the fields of agricultural chemistry, mining, weights and measures, and technical education. This aspect of his career is mentioned in passing.

More attention is devoted to Magnus's role as teacher. Perhaps this focus is justified. Most historians remember him for having trained an entire generation of Berlin scientists in the art of physical experiment. The best pieces in the volume cover this part of his life, though they might have made more reference to relevant literature, for example, Wolfgang Schreier and Martin Franke's history of the Physical Society (in yet another Festschrift commemorating the 150th anniversary of the organization).

The essays draw attention to a figure often overlooked. Their quality, however, is uneven at best. Their failure to treat technology is especially regrettable, as it is the thread that runs through most of Magnus's scientific research. Readers of this journal, therefore, will probably find the book disappointing and may want to refer to traditional accounts by August Wilhem von Hofmann and Hermann von Helmholtz.

GABRIEL FINKELSTEIN

Dr. Finkelstein, a lecturer at UCLA's Center for Cultural Studies of Science, Technology, and Medicine, recently completed a dissertation on Emil du Bois-Reymond, a student of Magnus's and the founder of the Berlin Physical Society.

Industrialisering av älvar: Studier kring svensk vattenkraftutbyggnad 1900–1918

By Eva Jakobsson. Gothenburg, Sweden: Avhandlingar från historiska institutionen i Göteborg, 1996. Pp. 302; illustrations, tables, appendices, notes, bibliography, English summary.

The English translation of the title of Eva Jakobsson's book is "The industrialization of rivers." The author argues that when the emerging power companies in the beginning of this century built power stations and dams to harness hydropower, they fundamentally transformed the character of the Swedish rivers. The dams made it possible to control the water flow to adjust to variations in the electricity demand in distant industries and towns. This management of water flows to regulate available water resources is the essence of an "industrialized river." Jakobsson's aim is to analyze the preconditions for, and the conflicts over, this fundamental transformation of Swedish rivers. Her approach has been inspired both by environmental historians such as Theodor Steinberg and Donald Worster and by historians of technology such as Thomas P. Hughes.

Worster has pointed out that "it is not 'man' who has achieved mastery of western American rivers, but *some men,* while the rest of us have looked on in passive wonder" (*Under Western Skies: Nature and History in the American West* [Oxford: Oxford University Press, 1992], p. 73). More or less the same holds for Sweden, even if some of the rest actively resisted the development taking place. Jakobsson's starting point is to analyze the actions of a small group of men, whom she calls the hydropower develop-