

ESSAY REVIEW

HOW TO SUCCEED IN SCIENCE WHILE REALLY, REALLY TRYING: THE CENTRAL EUROPEAN SAVANT OF THE MID-EIGHTEENTH CENTURY

André Holenstein, Hubert Steinke, and Martin Stuber, eds. *Scholars in Action: The Practice of Knowledge and the Figure of the Savant in the 18th Century*. 2 vols. Leiden: Brill, 2013. Pp. xxx+932. \$318.00 (cloth).

What is the scientist's work? Philosophers may turn to theory and to its relation to observation; historians are more inclined to turn to the scientists themselves and the situation the scientists find themselves in. Why do scientists work as they do, and what effect does the world they inhabit have on their productivity and their product? Those are more the historians' questions. They might appear to converge with the philosophers' own in this: What does it take to be a successful scientist? Yet the question of success also invites answers from a sociological perspective.

The essay collection *Scholars in Action* supports a richly historical sociological foray into identifying and explaining the conditions for success at a particular moment and locus of Enlightenment thinking. It concerns particularly the material and cultural conditions that ground the practices that inform the role of the "savant," a recognizable sort of scholar and scientist for a period centered on the mid-eighteenth century. Its two volumes—the second begins page 502—comprise an introduction and 36 articles developed from presentations delivered at the University of Bern for the 300th anniversary of the birth of Albrecht von Haller (1708–77).

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The editors, André Holenstein, Hubert Steinke, and Martin Stuber, open with a comprehensive essay that introduces Haller as one of the most productive scholars of his time. Just what that entails will become clearer farther below. As the age of the “renaissance man” had passed, Haller is instead described variously in this collection as a “polymath” and “scholar in action” whose foci extended from literature to botany and medicine, to experimental science, to administration. After travels to England, Paris, and Basel that formed his early life’s plans, Haller settled as librarian at Bern for a year, in 1735, the year Carl Linnaeus’s *Systema Naturae* took its first form. His library work was preceded by several false starts in academe, but Haller achieved a professorship in anatomy, botany, and surgery at Göttingen in 1736, in the context of the early development of that university. He rated well enough there to command the construction of a specific facility of two large buildings (a house and a dissection and teaching amphitheater) surrounded by a very large botanical garden (see the engraving in Gunhild Berg’s article, 640). From these commodious environs he taught and studied, developing a natural classification system that differed from Linnaeus’s early on, then working more consistently, and to more effect, on anatomy and on animal sensation and motion. His work on animal “irritations” was plagiarized by la Mettrie to his own great alarm, but as a form of payment for the involuntary contribution, Haller did receive a scurrilous mock dedication in *L’Homme-Machine* (1748; see Rainer Godel’s contribution, 421ff.). Haller returned to Bern in 1753 to assume a position as town hall administrator (*Rathausammann*) and administrator to the salt mine. There he was also a health official (*Sanitätsrat*), a public figure, and president for most of a decade of the Economic Society of Bern. All the while, he continued to develop his writing on Enlightenment knowledge and its application. For a time, from his perch in Bern, Haller remained editor in chief of the learned journal *Göttingischen Gelehrten Anzeigen* and continued to lead the Göttingen Royal Society of Sciences. Martin Giehl notes, in a contribution that considers the dysfunctional organization of this society and its warfare with the parallel Royal Institute of Historical Sciences, that “Münchhausen, the powerful Hanoverian minister and university director, continued to await Haller’s return until he [Münchhausen] died in 1770. The society’s development was blocked” (277). Haller was of significance even in his absence.

Haller rests at the heart of this collection, although his case is not the primary concern for many of the contributors, who generally focus on the culturally engaged savants of central Europe working from about 1700 to 1780. A good portion of the material focuses especially on the cultures of Bern and Göttingen, also with an eye to connections outward from these centers to France and Italy. The greater portion of the content has been professionally and quite

clearly translated into English from the work of central European scholars. These characteristics make it a particularly useful addition to English-language work in the history of ideas (and particularly science) of mid-eighteenth-century Europe, significantly extending our view of the French Enlightenment with a sharp focus at its geographical frontiers and showing French and Italian influences and supports that were in place at the dawn of the Berlin Enlightenment.

The editors indicate that their title is chosen to reflect Bruno Latour's *Science in Action* (1987), implying that the contributors may, somehow, reach across the centuries to observe the savants at work within their intellectual environment. At the very least, they are on target in their indication that these essays provide a detailed, varied, and nuanced examination of the culture of the "bearers and transmitters of knowledge." They explain:

We are concerned with practices that guided the production of knowledge by scholars, the places, spaces and institutions in which they produced knowledge, and the techniques they used to acquire, organize, retain and manage it. . . . We need to gain insight into strategies for staging, presenting, disseminating and publishing scholarly knowledge . . . [and] the different modes of representation and self-staging that served scholars in stylising and legitimising their role and their calling. . . . These questions touch upon the cultural and political conditions which defined the political, social and economic relevance of scholarly knowledge on the one hand and, as a consequence of this, lent respect, prestige, power and status to scholars in their respective societies and cultural contexts. (5)

The final sentence of the characterization is more reminiscent of slightly older styles of intellectual history, those first drawn together as the "New Historicism." The writing of the contributors is, on the whole, less in line with Latour and more in line with the New Historicism and its accompanying trends in history and science studies, in authors such as Shapin, Schaffer, Dear, and Daston, the last of whom has contributed one essay that examines observing practices, particularly within the circle of Charles Bonnet (657–78).

The editors' argument for considering the effects of changing cultural and political conditions on scientific scholarship in the mid-eighteenth century is very effectively supported and displayed in the many essays they have collected. One cultural aspect most in evidence and least studied in previous works on Enlightenment work that pertains to science is the change in the institutions of scholarly publication, aptly introduced by one contributor, Miriam Nicoli, as "the second revolution of the book" (609). Here is the taste of Latour: changes in institutional arrangements, and particularly changes that developed with new

institutional links between publishing and scientific institutions, led to new intellectual conditions for scientific work. Here, especially, the discussion is fresh and interesting.

French intellectual historians, most notably Frédéric Barbier and Jean Sgard, have labored for the past half century to come to grips with the second revolution of the book: a period that, for the history of science, began toward the end of the seventeenth century, when book publication greatly increased and journals, including learned journals, proliferated.¹ As authors within this collection indicate, a period dawned in which there was at last far too much to read, whether or not there was too much to learn. The early eighteenth century began a period in which “compilers” would toss ancient medical sources cheek by jowl with 200-year-old works and with contemporary borrowings (see Simona Bosca Leoni’s contribution, 509). Slapdash translations and pirate editions of profitable works proliferated, and journals, some existing only for months and some for decades, would reproduce writing from other journals verbatim. Large volumes of text, sometimes the full contents of other journals, went from vernacular to Latin and vice versa. Thomas Habel’s contribution sketches such an exchange near the start-up of German journals in the late seventeenth century (289ff.).

Bracing against the flood of content, correspondents who were attempting to remain current in their fields discussed what to read, particularly in order to rule out what not to read. Learned societies with attached journals, like that of Göttingen, were on the increase, as the successful societies of the seventeenth century, especially the Royal Society of London and L’Academie des Sciences, presented models for many new institutions such as the Royal Swedish Academy of Sciences (1739), founded by Carl Linnaeus, engineer Mårten Triewald (who had visited London and gained membership in their Royal Society in 1731), and several officials and civically minded members of Stockholm society. Toward the middle of the century, the pressure on academics to regularize their activities and publish also increased markedly, and the resources were very much available to them, through academic societies and universities that fed the printers. By way of example: nearly 200 dissertations by the students of Linnaeus were published in seven volumes of 500+ pages each, appearing as

1. See esp. the writings of Frédéric Barbier (from whom Nicoli draws the expression “second revolution of the book”) and the remarkable journals database under the direction of Jean Sgard, the *Dictionnaire des journaux* (<http://dictionnaire-journaux.gazettes18e.fr/>) and the *Dictionnaire des journalistes* (<http://dictionnaire-journalistes.gazettes18e.fr/>). For related English-language work, see esp. the writing of Robert Darnton and Adrian Johns.

the series *Amoenitates Academicæ* (Academic pleasantries)—a title that comes as a bit of a surprise when tied to dissertations (1749–69, vols. 1–7 of 10). But paper was cheap enough and publication had become important enough. Linnaeus, too, had become important enough generally, since some among these dissertations were reproduced in the vernacular in other nations.

A boom was on, and scientists across the continent, alongside other intellectuals, had to cope with new conditions and new pressures. Laurence Brockliss, in “Starting-Out, Getting-On, and Becoming Famous in the Eighteenth-Century Republic of Letters,” does a smart job of characterizing the many and varied merit badges that served to establish and increase status about midcentury (71ff.). Not the least among merits was membership in the right societies, and not least among traits was humility. Marion Mücke begins her article on the history of the Leopoldina—founded as *Academia naturæ curiosorum* in 1652 and, since 2008, the *Deutsche Akademie der Naturforscher Leopoldina*—by quoting the scraping thanks to the president from a new initiate of 1750: “you, honored Sir, have chosen to raise a lowly and deflated soul from the dust of contempt, revive it with a new spark, and encourage it to promote the useful and pleasurable sciences” (173). Marian Füssel provides us a look into the inevitable self-help books such souls consulted, with an early manual by Christoph August Heumann, the *Politische Philosophus* of 1714, penned well before his full professorship at Göttingen: “An Academic has to prove his skills by writing books, if he wants to be a V.[ir] C.[larissimus]” (133). And you would need a good portrait to go as a frontispiece for that book, according to the V.C.s: in “Character Masks of Scholarship,” Hole Rößler provides citation of such requirements and notes changing portrait conventions and choice of self-representation by Haller (459). Daniel Fulda notes Heumann once again, wise as Polonius: “Take care to gain the respect of others by virtue of appearing to others both wise, learned, clever and skilled. I say: to others” (396). And Fulda completes the turn to farce, presenting the parodic representation of scholars from within the ranks by Gotthold Lessing, in *Der junge Gelehrte* of 1747 (394–403). Linnaeus, in *Philosophia Botanica* (1751) thoughtfully reestablishes order by classifying into categories and subcategories the types of botanists (botanists, not plants: see René Sigrist’s contribution, 206ff.).

As the above sampling may suggest, these volumes can well serve to fill in a sketch of academic and scientific institutions and of publishing, as well as a portrait of the savant, about midcentury. In this growing economy of letters, Haller claimed more than his share. He was a consistent correspondent who preserved 17,000 letters from 1,200 correspondents across Europe (29). He was responsible for the publication of over 100 volumes, including the eight-

volume quarto format *Elementae physiologiae corporis humani* (1757–66), set at about the price of a year's pay for a common physician; and so, he thoughtfully digested it into a handbook, *Primae lineae physiologiae*, for something more like a week's pay (Nicoli, 621). Among the authors who discuss Haller's remarkable and profitable output, Anne Saada, digesting records of the 1770s, argues that Haller dominated the page count and secured about 1/10 of the full budget of the journal that he had previously edited. Haller effectively cornered the market in the reviews of botanical, medical, and French-language works; he did so to keep current on the literature, as well as for the sake of the authority that came with such capacity and command of the journal's pages, despite that his reviews were published anonymously. He authored half of the reviews (approaching 300 of them, in 1771, which was about his average over a stretch of 30 years), and he remained the leading published author through 1778, the year after his death. Fees surpassing 1/3 of the total paid out for such service by the journal provided him a regular income of about 1/3 of the generous salary he had left behind in Göttingen (319–324, 329).

Haller's portrayal in this collection shows a demonstrably important figure that maintained his eminence, to a significant extent, by his capacity for control and by his ubiquity. He clung to his journal and to his academic role like a limpet, long after he surrendered the editorship and the academic position. He kept connected, he published copiously and strategically, and he lived well on the proceeds (26, 393). This was his particular strategy, a formidable story of how to succeed. Authors in this collection also provide smaller windows onto a few other scholars in action, most of whom were among Haller's circle.

What you can succeed at, and even what you can call yourself, will depend on where you are and when you are there. The established English "Gentlemen" who dominated the early Royal Society of London were carefully characterized by Thomas Sprat, in his *History of the Royal Society* (1667), as both capable of inquiry without diversion of energy to a search for profit, and able and inclined to discuss natural phenomena freely, rather than profess with partiality.² They were clearly models for their eighteenth-century successors, but they would not quite fit that context. Daniel Fulda articulates a central-European intellectual type—of "political-gallant scholarliness"—who, at the opening of the century, is a bit more applied and worldly in character than the Gentleman:

2. See the writing of Steven Shapin and Simon Schaffer, particularly, for analysis referencing Thomas Sprat, *History of the Royal Society of London for the Improving of Knowledge* (London, 1667), 67; pt. 2, sec. 7ff.

In keeping with the Enlightenment ideal of altering everyday life, Christian Thomasius and his followers rejected the “book learning” of “scholasticism” and polyhistorian universalism. In order for the scholar to have an effect on the world (they held) he must know how to make himself understandable to a broader public and also to take account of this public’s needs and its various styles of communication beyond the scholarly world. The scholar too must adhere to the ideal code of “gallant” behaviour according to which one’s reputation in the eyes of others was the measure of one’s conduct. (392)

At first glance, this appears to be much like the ideal that Haller envisions. The difference that Fulda notes, building on Hubert Steinke’s previous work, is that Haller is a new variety of researcher, a *Spezial-Forscher* with more regard for the truth than for reputation and more regard for experiment than for broad scholarly learning—so Haller himself would put it, in poetry he published as well as in the self-presentation contained in his scientific writing (393).

What the intellectual could aspire to in the eighteenth century was in flux, and it was tending toward what we would find to be more recognizable, modern possibilities of specialization and professionalization. Among the specializations cultivated was that of the experienced, or expert, observer. One such budding specialist declared, “Never has so much been observed, as in our century,” in celebration of his 1770 prize as best observer for the Society of Sciences of Holland (658). Such a claim almost begs for parody or at least for the question “to what end?” Lorraine Daston, who provides the quote without a trace of irony, suggests that the end is a turn in science toward the investment of credibility within the skilled or trained observer—no longer the impartial, disinterested Gentleman—who genuinely sees more by attending more and sees more of difference by developing memory and more adequate aids to memory (666–73). The picture of the eighteenth century sketched in these volumes is of a period when the nineteenth-century ideal of objectivity of which Daston also has written is yet inchoate: rather, the capability is celebrated, and there is evidently a discipline to it, but the discipline of the modern professional has yet to form. The new boom in universities and societies, the regular remunerative posts, and the element of service to the community of scholars and to others, all linked to the developing engines of publishing, are discernible traces prefiguring the nineteenth century’s professionalization of science.

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