

LEARNING BY THE BOOK: MANUALS AND HANDBOOKS IN THE HISTORY OF KNOWLEDGE

Conference at Princeton University, June 6-10, 2018. Co-organized by the German Historical Institute Washington (GHI) and Princeton University. Conveners: Angela Creager (Princeton University), Mathias Grote (Humboldt-University Berlin), Elaine Leong (Max Planck Institute for the History of Science, Berlin), and Kerstin von der Krone (GHI). Made possible by grants from the GHI Washington and Princeton University (the Center for Collaborative History, the International Fund, and the David A. Gardner '69 Magic Project in the Humanities Council) with additional travel funding from the Max Planck Institute for the History of Science, Berlin (MPI). Participants: François Allisson (University of Lausanne), Elaine Ayers (Princeton University), Tonny Beentjes (Utrecht University), Marianne Brooker (University of London), Simon Brown (University of California Berkeley), Marcel Bubert (University of Münster), Wilson Chan (University of Hong Kong), Cléo Chassonnery-Zaïgouche (University of Lausanne), Karine Chemla (CNRS/Paris Diderot), William Deringer (MIT/Princeton University), Sven Dupré (Utrecht University), Elisabeth Engel (GHI), Michael Gordin (Princeton University), Thijs Hagendijk (Utrecht University), Marta Hanson (Johns Hopkins University/ Institute for Advanced Study, Princeton University), Evan Hepler-Smith (Harvard University), Florence Hsia (University of Wisconsin), Hansun Hsiung (MPI Axel C. Hüntelmann (Charité Berlin), Susanne Jany (Humboldt University, Berlin), Boris Jardine (University of Cambridge), Evangelos Katsioris (Princeton University), Daniel Kevles (Yale University), Charles Kollmer (Princeton University), Reinhild Kreis (University of Mannheim), Federico Marcon (Princeton University), Matteo Martelli (University of Bologna), Michael McGovern (Princeton University), Anna-Maria Meister (Princeton University), Matthew Melvin-Koushki (University of South Carolina), Staffan Müller-Wille (University of Exeter), Sue Naquin (Princeton University), Jennifer M. Rampling (Princeton University), David Robertson (Princeton University), Alrun Schmidtke (Humboldt University Berlin), Isabelle Schuerch (University of Bern), Nigel Smith (Princeton University), Pamela H. Smith (Columbia University), Liat Spiro (Harvard University), Eveline Szarka (University of Zurich), Umberto Veronesi (University College London), Xue Zhang (Princeton University).

The conference “Learning by the Book: Manuals and Handbooks in the History of Knowledge” spanned five days, twelve panels, a month of publishing 35 blogs in lieu of pre-circulated papers, and the first

public presentation of an early modern manuscript recently acquired by Princeton University's Special Collections. The latter directly corresponded to several of the organizers' pre-posed questions on this type of literature, i.e. how are practices and protocols recorded, distributed or preserved, and how are objects or processes named, registered or classified? What kind of credit accompanies the development or compilation of methods or reference literature? When and why do certain books become commercially successful or canonical, and others obsolete? How does their circulation relate to the commodification of required materials, or to more informal forms of exchange?

By publishing blog posts on the GHI's *History of Knowledge* blog (www.historyofknowledge.net) as well as *The Recipes Project* (recipes.hypotheses.org) in the run-up to the conference, both of which encouraged the use of the hashtag #lbtb18 under which plenty of documentary twitter entries may still be browsed, the event attained an unusual public visibility. The organizers also facilitated remote attendance by video- and audio streaming of all presentations and discussions.

Framed by an introduction from the conveners, a keynote address by Pamela H. Smith and a final commentary by Michael Gordin, the conference was organized around four practices associated with handbooks or manuals, namely "preserving," "revising," "teaching," and "selling." These proved to overlap in many cases and helped to carve out key issues guiding a great variety of distinct material objects. In their introductory remarks, the organizers stressed their common interest in historicizing practices and the codification thereof. Angela Creager referred to formal training, power dynamics and alternatives to hierarchical classroom setups as well as to the fundamental question of "how practices relate to text and knowing to doing." Mathias Grote spoke about the significance of instructional literature and introduced a conceptual history of the manual and the handbook, referring to book formats and efforts to classify texts. Especially the notion of "vademecum science," a translation of Ludwik Fleck's *Handbuchwissenschaft*, was a theme that was frequently referred to in later discussions and had significant bearing on epistemological aspects of communication formats. Elaine Leong invited participants to rethink the temporality of knowledge along with issues of priority, property, secrecy and value of knowledge, which were common themes in the case studies. With reference to her editorship at the

Recipes Project, she highlighted the textual feature of fluidity and corresponding practices of re-writing, re-arranging or re-interpreting recipe knowledge. Historicizing knowledge and bringing together current research from different fields is one of the current core interests of the GHI, as Kerstin von der Krone emphasized.

Pamela H. Smith's keynote, "From Lived Experience to the Written Word: Making, Writing, and Knowing in the Early Modern Workshop," introduced the hands-on research approach practiced at her "The Making and Knowing Project" at Columbia University, which includes laboratory work drawing on early modern recipes. Questioning the extent to which early modern manuals could have been meant as books to be learned from, Smith elaborated on instructional literature as a source for historical research, which might lead to the conclusion that instructional texts were not always meant as helpful "how-to" guides, but were generally considered to raise the status of artisans and of practical experiential knowledge.

While the aforementioned clustering around practices gave each day a practical theme, the panels were organized around focal points such as "improvisation and non-standardization," "devotional and domestic knowledge" or "protocols and recipes," each of which comprised three 20-minute presentations followed by individual Q&A's moderated by a chairperson.

The first panel focused on artisanal knowledge, discussing annotated manuscripts, the textualization of artisanal know-how, and manuals' reputed place in apprenticeship-learning. Presentations ranged from fourteenth-century China (Wilson Chan) to seventeenth-century England (Jenny Boulboulé) to the Netherlands of the eighteenth century (Thijs Hagedijk/Tonny Beentjes).

Collections as institutions and practice were discussed in the second panel featuring Elaine Ayers on nineteenth-century botanical collection manuals as instructions in imperial contexts, Marianne Brooker on virtual museum visits by means of a printed guide to architect John Soane's museum, and Charles Kollmer on collecting practices for pure cultures of algae in the early twentieth century, who discussed the interdependence between researcher E. G. Pringsheim and his research subject, algae.

The next panel was titled "Protocols & Recipes." Matteo Martelli presented late antique and early Byzantine compendia of alchemy

and medicine, for which, he argued, the codex format was of special importance, since it afforded collecting and securing medical practices. Staffan Müller-Wille presented joint research with Giuditta Parolini (Technische Universität Berlin) on textbooks and manuals from the early history of Mendelian genetics in which retracing handwritten calculations and corrections provides insights into the “practice of theory” by geneticists-to-be. Angela Creager concluded the panel with her compelling presentation of a mid-twentieth century laboratory manual, which was one of the few bestsellers in handbook production presented at this conference. It was interesting to note that its material features differed substantially from mid-twentieth century publishing conventions and that this handbook in ring binder-format maintained distinct features of its origins on the laboratory desk.

Lastly, a panel on administration and industry focused on the eighteenth and nineteenth centuries. The panelists elaborated on the transfer of expertise by means of print in Chinese governance (Xue Zhang), on the practice of risk in insurance manuals (Elisabeth Engel) and on manuals’ use for nineteenth-century engineers (Liat Spiro). Elisabeth Engel introduced the perplexing genre of the “complete digest,” whereas Liat Spiro in her account of mechanical drawings conceptualized engineers’ pocket books as almanacs, both of which added to the complexity of handbook and manual production that had previously been established by contributors with ancient, mediaeval and early modern sources. A motif common to all three presentations was the tension between individual and governing, managing or educating bodies.

The day — broadly centered on issues of preserving — concluded with a closing discussion chaired by Mathias Grote. Of the manifold threads that were started here, issues of success versus failure from writers’ and readers’ perspectives, canonization and potential conflicts arising from confronting old and new knowledge were addressed. Rather than understanding manuals as “how-to” guides, some of the presentations suggested an alternative interpretation as “have-to” instructions. Authorship, moreover, could be individual, collective, or anonymous, all of which bore on the texts’ usage, but was never straightforward. Texts could in any case be read as testaments of practice.

With a general focus on practices of revising, the second full day of the conference started off with a panel on improvisation and

non-standardization, whose participants presented diverse approaches from archaeology to philology and book history. Umberto Veronesi explained his archaeological approach to writing a history of artisanal practice in British colonial America by means of analyzing material finds from glaziers' workshops. Jennifer M. Rampling argued how philosophical language allowed alchemical practitioners to keep alchemical works up-to-date in that philosophical, or seemingly obscure, wording might have facilitated fluidity of interpretation. François Allison and Cléo Chassonery-Zaïgouche were the first to prominently feature material from publishers' archives by drawing their audience's attention to the Cambridge Economic Handbooks series published by Cambridge University Press, which despite their titling were intended for undergraduate teaching, again highlighting the fluidity of terminology and the complexities involved in labelling.

The next panel on editions and transmission started with a remote presentation by Karine Chemla from Paris. Her presentation highlighted commentaries to a canonical Chinese mathematical work compiled from the eleventh to the thirteenth century. Hansun Hsiung explored cheap pedagogical prints whose denotation in Chinese-Japanese Kanji script (*bangaku* or "late life learning") alluded to readers' temporal horizons and differing expectations of learning from books. Mathias Grote's take on editions focused on mid-twentieth century "sciences of classification," namely Gmelin's *Handbuch* and Bergey's manual, books on inorganic chemistry and microbiology, respectively, both of which subsequently lost their book status when they were transformed for database use. Although they might have differed in scope initially — one regarded as taxonomic and systematic, the other as practically useful as catalog — both depended on encyclopedic practices, e.g. critical apparatuses.

This panel was followed by a library session held in a special collections room at Princeton University's Firestone Library. Speakers presented physical copies of handbooks or manuals relevant to their respective talks. Concise introductions of each speaker's sources were followed by informal questions and answers. The aforementioned presentation of a spectacular new acquisition by Princeton University, namely a Ripley Scroll dated 1624, concluded this segment of the conference with an insightful and exciting commentary by Jennifer M. Rampling.

Presentations on twentieth-century sources in a panel on classification and cases rounded out the day. Axel Hüntelmann argued that

handwritten case books in the hospital or private medical practices underwent two significant changes throughout the century, namely when casefiles replaced casebooks and when record keeping replaced keeping books, all relevant to paper technologies of bookkeeping. Michael McGovern connected changes in editorial models to material characteristics of information technology with a focus on electronic publishing in biomedicine. Lastly, David Robertson explored the coding of the World Health Organization's "International Classification of Disease," a handbook commonly referred to as ICD-9.

The penultimate day — covering case studies broadly connected by a common interest in teaching — commenced with a panel on devotional and domestic knowledge. Simon Brown analyzed preaching manuals in the context of clerical expertise and the preachers' as well as readers' personae. Elaine Leong showed how sixteenth- and seventeenth-century printed medical books from London were used by their owners, some of which appropriated books by adding recipes or actively rewriting recipes in translation processes. In this sense, appropriating knowledge was closely linked to consuming, and the material remnants of this practice are not solely printed matter, but hybrids of printed book and manuscript. Kerstin von der Krone had already stirred up curiosity at the library session where she had presented examples of the catechisms she is working on, retracing dialogic arrangements and their status within Jewish tradition.

The next panel focused on manuals for calculation. Boris Jardine presented an early modern book that included a paper instrument for calculation. D. Senthil Babu's contribution on handbooks of the mind was limited to his blog post, and Evangelos Kotsioris positioned a twentieth-century paper instrument for calculation within Cold War history as well as within longer traditions of the talismanic use of objects.

A panel on historical "how-to"-accounts of handling animals, plants and people began with Isabelle Schuerch's presentation on two mediaeval riding manuals, which she compellingly connected to aristocratic values. Federico Marcon elaborated on the dual meaning of the study of books in Japan, with the term referring both to the material container as well as to the text itself. He explained how updating texts yielded more prestige than producing new texts in early modern Japan. Anna-Maria Meister highlighted how in twentieth-century architecture, publishing a handbook could enhance an author's status as expert. Connecting Ernst Neufert's printed *Bauentwurfslehre* with

his unpublished *Lebensgestaltungslehre*, she explored the architect's claims to extensive knowledge.

In the panel on wielding power, inquisitors, bureaucrats, emperors and anonymous users of magical handbooks were portrayed. Marcel Bubert explored manuals by Frederick II and Bernard Gui from the thirteenth and fourteenth centuries, Matthew Melvin-Koushki emphasized the quantity and importance of occult-scientific manuals of early modern Persian origins, and Eveline Szarka explored how an early modern Necromancer's handbook might have been used to perform by the book, and was an approach to actively practice religion even if rituals failed.

The last panel grouped talks on codification and commerce, and it distinctly demonstrated how documentation and access to sources, with special emphasis on company archives, shape historical research. Susanne Jany explored from published sources how handbooks in architecture received considerable public support. These were aimed at work processes and buildings' purposes and helped to establish and propagate new approaches in modern architecture. Based on findings from publishers' archives, Alrun Schmidtke argued that a mid-twentieth century physics handbook could be derived from publishing formats as different as monographs and periodicals, an ambiguity that alluded to publishers' business models. Reinhild Kreis connected historical approaches of production and consumer studies and — drawing on company archives as well as more readily accessible printed products — highlighted that advertisement strategies drew on publishing genres such as recipe books or manuals in order to place certain branded products.

In his concise and stimulating commentary, Michael Gordin engaged in what he called an “exercise of categorization,” summing up themes of the conference as well as drawing the attendees' attention to problematic blanks. Elaborating on the reasons why handbooks or manuals might have been written, he distinguished between supply and demand orientation and interests in editorial and authorial status. Although the handbooks and manuals that were touched upon during the conference did not all belong to the same category — either practice or reference — he also noted that each object or venture did in fact belong to a tradition. With regards to practice or implementation of certain processes, Gordin noted the absence of explicit arguments regarding tacit knowledge. Finally, “status” was shown to be a common theme among contributors, either in terms of

authorship, of discipline or of media and materiality more generally. The final question how changes in the status of authorship might again be a specific modern issue was met with applause and in the final discussion, chaired by Angela Creager, all participants seized the eagerly anticipated opportunity to connect five days' worth of presentations. Participants left with a distinct feeling that the last word on the subject of handbooks has yet to be spoken.

Alrun Schmidtke (Humboldt University Berlin)