Structuring the History of Knowledge in an Age of Transition: The Göttingen *Geschichte* between *Historia Literaria* and the Rise of the Disciplines

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ABSTRACT

This article traces the conceptual origins of the famous Göttingen *History of the Arts and Sciences since their Renewal to the end of the eighteenth century, prepared by a company of learned men*, published in 1796–1820 and overseen by Johann Gottfried Eichhorn. In its overall structure and in many of its parts, it was the last representative of the tradition of *historia literaria*. This tradition came to an end around 1800 due to the accumulation and specialization of knowledge rather than because of a new philosophical conception of how to classify knowledge—although there were various proposals for such classifications, primarily in German territories.

istorians agree that the years or even the decades around 1800 mark a phase of transition from the early modern period to modern times. This *Epochenschwelle*, also called the Age of Revolutions (Hobsbawm) or the *Sattelzeit* (Koselleck), witnessed an acceleration of changes in the domains of politics, economics, and culture, as well as in thinking.¹

German idealism, in particular Kant's philosophy, forever changed the agenda of philosophy, but it also marked the first phase of the rise of the disciplines and a recon-

This article was written in the context of the research project "Thinking Classified: Structuring the World of Ideas around 1800" (project no. 360-20-330), which was financed by the Netherlands Organisation for Scientific Research (NWO). I am grateful to the project leader, Paul Ziche (Utrecht University), and to team members Tom Giesbers, Timmy de Goeij, and Peter Sperber, as well as to Floris Solleveld and two reviewers for their comments on earlier versions, and to James Gibbons for editing my English.

1. In discussing the history of literary fiction, Lars-Ulrich Thade has used the term *Achsenzeit* (axial age), adopting the label used by Karl Jaspers denoting the period from the eighth to the second century BCE, as a synonym for Koselleck's term *Sattelzeit*. See Lars-Thade Ulrichs, *Die andere Vernunft: Philosophie und Literatur zwischen Aufklärung und Romantik* (Berlin: Akademie Verlag, 2011).

History of Humanities, Volume 2, Number 2. http://dx.doi.org/10.1086/693321 © 2017 by Society for the History of the Humanities. All rights reserved. 2379-3163/2017/0202-0006\$10.00

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ceptualization of the edifice of learning. Under the influence of Kant, historians of philosophy who lived in this period anachronistically projected certain epistemic labels such as "empiricism" and "rationalism" back onto philosophies of the past to characterize and categorize them and thus to classify different modes of thinking.² This period is now starting to receive more scrutiny in light of new debates about comparative histories of science and the humanities.³

The classification of knowledge merits a prominent place in these debates. Every history of learning in the eighteenth century made use of knowledge classifications. The question is *which* epistemologies informed such classifications. Lorraine Daston and Glenn Most have recently argued for "a history of classifications of the different knowledgemaking disciplines."⁴ Such a history has in fact been on its way for some time; witness the 1977 overview of the subject by Ulrich Dierse, the 1983 work of Wilhelm Schmidt-Biggemann about the relation between the theory of rhetoric and knowledge classification, the 1992 dissertation of Helmut Zedelmaier, the collected articles by Joseph S. Freedman on Ramist knowledge classifications (1999), or the volume published by Theo Stammen and Wolfgang Weber in 2004.⁵ Yet, despite the fact that some of the existing literature treats different models of organizing knowledge, the epistemological foundations underlying these models remain difficult to grasp. Most of the secondary literature that denotes the idea of the ordering of knowledge in their titles devotes attention to the context of production, such as the educational settings, the theological polemics, or the

^{2.} See Peter Sperber, "Empiricism and Rationalism: The Failure of Kant's Synthesis and Its Consequences for German Philosophy around 1800," *Kant Yearbook* 7 (2015): 115–38.

^{3.} Rens Bod, Jaap Maat, and Thijs Weststeijn, eds., *The Making of the Humanities*, 3 vols. (Amsterdam: AUP, 2010–14); Rens Bod and Julia Kursell, "Introduction: The Humanities and the Sciences," *Isis* 106, no. 2 (2015): 337–40. See also Paul Ziche, "'Die Welt der Wissenschaft im Innersten erschüttern': Schellings *Vorlesungen über die Methode des akademischen Studiums* als philosophischen Programm zur Wissenschaftsorganisation," in *Die bessere Richtung der Wissenschaften: Schellings "Vorlesungen über die Methode des akademischen Studiums" als Wissenschafts-und Universitätsprogramm*. Schellingiana, ed. Gian Franco Frigo and Paul Ziche, vol. 25 (Stuttgart-Bad Canstatt: Frommann-Holzboog, 2011), 3–24, at 8 and 20.

Bod and Kursell, "Introduction," 340; Lorraine Daston and Glenn Most, "History of Science and History of Philologies," *Isis* 106, no. 2 (2015): 378–90, at 390.

^{5.} Ulrich Dierse, Enzyklopädie: Zur Geschichte eines philosophischen und wissenschaftshistorischen Begriffs, Archiv für Begriffsgeschichte, Supplementheft 2 (Bonn: Bouvier Verlag Herbert Grundmann, 1977); Wilhelm Schmidt-Biggemann, Topica Universalis: Eine Modellgeschichte humanistischer und barocker Wissenschaft (Hamburg: Felix Meiner, 1983); Helmut Zedelmaier, Bibliotheca universalis und Bibliotheca selecta: Das Problem der Ordnung des gelehrten Wissens in der frühen Neuzeit (Cologne: Böhlau, 1992); Joseph S. Freedman, Philosophy and the Arts in Central Europe, 1500–1700 (Aldershot: Ashgate Variorum, 1999); Theo Stammen and Wolfgang E. J. Weber, eds., Wissenssicherung, Wissensordnung und Wissensverarbeitung: Das europäische Modell der Enzyklopädien (Berlin: Akademie Verlag, 2004); Ulrich Johannes Schneider, Die Erfindung des allgemeinen Wissens: Enzyklopädisches Schreiben im Zeitalter der Aufklärung (Berlin: Akademie Verlag, 2013), 44–88.

philosophical eclecticism, but very few ask after the foundations of these classifications in terms of the epistemological relations between the different fields of knowledge.

The scholar who wants to learn more about the classification of knowledge in the time of Kant can hardly ignore the most impressive narrative history of arts and sciences of the period around 1800: the Göttingen *History of the Arts and Sciences since their Renewal to the end of the eighteenth century, prepared by a company of learned men* (henceforth: Göttingen *Geschichte*).⁶ Considering the fame of this work, there is a surprising dearth of knowledge about its genesis and its system of classification. A pioneer like Dierse does not mention the work in his otherwise complete overview of encyclopedias and other universal histories of learning. Its sheer size is usually mentioned to emphasize its ambition, but it is less often cited that the project remained unfinished. Perhaps this is due to the general consensus that *historia literaria* of a universal type came to an end near the end of the eighteenth century.⁷

This article identifies *historia literaria* or the "history of learning" (in German: *Gelehrte(n-) Geschichte* or *Geschichte der Gelehrsamkeit*) as the historiographical tradition that informed the classification of knowledge underlying the Göttingen *Geschichte*. It does so by comparing this work with the most successful histories of learning published in the eighteenth century. The comparison focuses on three aspects: the nature of the authorship (individual or collective), the general structure of the classification were made explicit. In particular, these last two aspects have been largely ignored in the rich and varied modern historiography of *historia literaria*.⁸

^{6.} Johann Gottfried Eichhorn, ed., Geschichte der Künste und Wissenschaften seit der Wiederherstellung derselben bis an das Ende des achtzehnten Jahrhunderts, von einer Gesellschaft gelehrter Männer ausgearbeitet, 61 vols. (Göttingen: J. G. Rosenbusch & J. F. Röwer, 1797–1820).

^{7.} Martin Gierl, "Historia literaria: Wissenschaft, Wissensordnung und Polemik im 18. Jahrhundert," in *Historia literaria: Neuordnungen des Wissens im 17. und 18. Jahrhundert*, ed. Frank Grunert and Friedrich Vollhardt (Berlin: Akademie Verlag, 2007), 113–29, at 115–16.

^{8.} When Gierl ("Historia literaria," 123) emphasizes the institutional setting of *historia literaria*, as well as its ideal to be complete, he stresses that *historia literaria* is not only a bio-bibliographical enterprise of collecting but also an epistemological prerequisite for a complete understanding of things. But he understands this in terms of empirical knowledge of history rather than in terms of philosophical understanding of the foundations of knowledge. He observes at 126: "Die Ordnung und Anordnung des Wissens, die zwischen den Dingen und den Erkenntnissen liegt, hörte Mitte des 18. Jahrhunderts mehr und mehr auf, thema zu sein." (The order and arrangement of knowledge, which lies between things and cognition of things, gradually ceased to be a theme from the middle of the eighteenth century onward.) In his article, he treats questions of ordering from an externalist perspective, not in terms of the metaphysical principles of classifications within the edifice of learning. Indeed, as it will turn out, most authors who produced *historia literaria* were surprisingly silent about such philosophical principles and followed traditionally accepted hierarchies, usually those institutionalized at universities.

THE GÖTTINGEN GESCHICHTE

It was no coincidence that the plan for an ambitious new universal history of knowledge was born in Göttingen. "There is so much that converges in Göttingen that makes it particularly suitable for such a comprehensive production!", its instigator and editor proclaimed.⁹ Göttingen around 1790 possessed the largest and best organized resources of knowledge in eighteenth-century Germany. The city was famous due to its library, the journal *Göttingischen Gelehrten Anzeigen*, its academy and its university. The library, journal, and academy were connected with the city's university.¹⁰ The aim of allowing students access to the library's vast resources (according to a contemporary witness, some two hundred thousand books in 1791, although in reality less: in 1812, the library counted 160,000 volumes¹¹) necessitated the development of easily negotiable catalogs, and in particular an insightful way of classifying the books. The organization of libraries depended to a certain extent on the spatiality of their buildings and the space between the shelves that held their books—but also on a useful classification of knowledge.¹²

Classifications of knowledge abounded when the University of Göttingen was founded in 1734. Histories of learning, which had been published in large quantities in Germany since the end of the seventeenth century, show an almost obsessive preoccupation with systematizing knowledge on the basis of books. These histories put forth a canonization of authors and their books, structured according to certain knowledge fields. Depending on their ambitions or the purpose and scope of their books, the intellectual historians compiling them had to make conscious choices in classifying and selecting author names and book titles. Often the very titles of the historiographies contain the word "library," assigning their contents the status of a condensed library, or perhaps even the blueprint for a catalog of a basic library of knowledge. The Göttingen

11. Helmut Rohlfing, "Christian Gottlob Heyne und die Göttinger Universitätsbibliothek," in *Christian Gottlob Heyne: Werk und Leistung nach zweihundert Jahren*, ed. Balbina Bäbler and Heinz-Günther Nesselrath (Berlin: De Gruyter, 2014), 145–57, at 150.

12. Pertti Vakkari, "The Roots of Library Science in the Internal and External Discourse of *Historia Literaria* in Germany," *Bibliothek* 18, no. 1 (1994): 68–76.

^{9.} Johann Gottfried Eichhorn, Allgemeine Geschichte der Cultur und Litteratur des neueren Europa, 2 vols. (Göttingen: J. G. Rosenbusch, 1796/1799), 1.1:lxxviii: "Und wie vieles vereinigt sich nicht in Göttingen, was es zu einer so grossen und viel umfassenden Ausführung vorzüglich geschickt macht?"

^{10.} For the connections between journal, university, and library, see Gierl, "Historia literaria," 125, and Anne Saada, "La communication à l'intérieur de la République des Lettres observée à partir de la bibliothèque universitaire de Göttingen," in *Kultur der Kommunikation: Die europäische Gelehrtenrepublik im Zeitalter von Leibniz und Lessing*, ed. Ulrich Johannes Schneider (Wiesbaden: Harrassowitz Verlag, 2005), 243–54, at 243. The number of 200,000 books (cited by Saada) is suspiciously round.

library put precisely these principles of *historia literaria* into practice.¹³ Boasting a strong tradition of collecting, centralizing, and organizing books, it aimed to provide open access to realms of knowledge on the vastest possible scale; witness Johann Christoph Gatterer's many works on universal history and his foundation of an Institute for Historical Sciences in Göttingen. Gatterer himself adopted an existing classification of the institutionalized faculties, for a systematic bibliography of historical works in the last volumes of his *Historical Journal*, subdividing subjects such as history into four different genres or ways of organizing material: systems, lexica, contributions, and translations.¹⁴

Small wonder that the Göttingen *Geschichte* was the initiative of Johann Gottfried Eichhorn (1752–1827), a professor at Göttingen. An astoundingly productive writer, Eichhorn is primarily known as a theologian and biblical historian, and it is in this context that we find most of the literature about him—largely restricted to entries in encyclopedias and dictionaries.¹⁵ But besides his religious-historical work, Eichhorn also authored an ambitious *History of Literature from the Origin to the Newest Times*, which appeared in six double volumes over a period of eight years in Göttingen (1805–13). And he instigated, almost as a side project, the enormous Göttingen *Geschichte*.

The importance of this project lies partly in its impressive scope: even though it remained unfinished, it eventually comprised fifty-six volumes published over a period of twenty-four years (1796–1820), and was coauthored by fourteen specialists, all "outstanding scholars," Eichhorn declared, "with whom I am connected through the close ties of friendship and collegiality."¹⁶

Yet these authors adopted different methods, with some rooting themselves in the tradition of *historia literaria* and others developing new types of history. The first section of part 7, for example, is not actually a history of mathematics, but a *historia literaria* of mathematics. It basically consists of long bibliographies. Most of the mathematical works described by the author, the mathematician Abraham Gotthelf Kästner (1719–1800), were taken from his own library. Kästner completed his fourth volume shortly before he died at age 80 in 1800. How very different are Friedrich Bouterwek's

^{13.} Saada, "La communication," 244.

^{14.} Martin Gierl, Geschichte als präzisierte Wissenschaft: Johann Christoph Gatterer und die Historiographie des 18. Jahrhunderts im ganzen Umfang (Stuttgart-Bad Canstatt: Fromann-Holzboog, 2012), 349–51.

^{15.} A notable exception is Giuseppe D'Alessandro (*L'Illuminismo dimenticato: Johann Gottfried Eichhorn (1752–1827) e il suo tempo* [Napoli: Liguori Editore, 2000]), who devotes the second half of his book to Eichhorn's views of cultural and universal history.

^{16.} Eichhorn, *Allgemeine Geschichte*, 1:lxxviii: "die Unterstützung, welche mir von dem größten Theil der vortrefflichen Gelehrten zugesichert worden, mit welchen ich durch das enge Band der Freundschaft und Collegialität verbunden zu seyn so glücklich bin."

(1766-1828) twelve volumes on the history of literary fiction. Dedicated to the schöne Wissenschaften (part 3 of the Göttingen Geschichte), they constituted not a history of learning (historia literaria) but a literary history in the modern sense of a history of fictional literature. These volumes were the first to cover the entire literature of western Europe.¹⁷ In practice, Bouterwek ignored all Latin and vernacular literatures besides Italian, Spanish, Portuguese, French, English, and of course German, thus constructing a vernacular "European" literature as a western European affair. But he effectively set the stage for a European history of vernacular literature. The volumes on Spanish and Portuguese literature were so novel that they were soon translated into French, Spanish, and English.¹⁸ Likewise, Johann Carl Fischer's (1760–1833) History of Physics (part 8.1 of the Göttingen *Geschichte*) created a blueprint for the writing of physics that held sway over the next two centuries. In his eight volumes (1801–8), Fischer presents a progressive history of great men and their ideas, gradually moving from one peak of perfection to the next. He started with Bernardino Telesio (1509-88) in the sixteenth century, because Francis Bacon had famously called this empirically minded Italian natural scientist the "first of the moderns."

One of the most salient ideas underlying the Göttingen *Geschichte* is that of a complete renewal or restoration (*Wiederherstellung*) of learning. Eichhorn, like all other writers of *historia literaria*, had been inspired by Bacon, and the term *Wiederherstellung* is no doubt a conscious echo of Bacon's *Instauratio magna* (great renewal or great restoration). Eichhorn repeatedly speaks in his preface of a "regeneration" taking place in the sixteenth and seventeenth centuries.¹⁹ This was not the only echo of Bacon in the Göttingen *Geschichte*.

INDIVIDUAL AND COLLECTIVE PROJECTS

Bacon, the founding father of *historia literaria*, coined the term *historia literarum* in the Latin revision (1620) of his *Advancement of Learning* (1605), the first part of his sixpart *Instauratio magna*. In *De augmentis scientiarum*, book 2, chapter 4, there appears a passage that, quoted and discussed by dozens of historians of learning after him, became a signboard identifying a work as belonging to the genre of *historia literaria*. Bacon noted that ecclesiastical and civil history were currently well served, but that the

^{17.} Friedrich Bouterwek, Geschichte der Poesie und Beredsamkeit seit dem Ende des dreizehnten Jahrhunderts, 12 vols. (Göttingen: J. F. Röwer, 1801–19).

^{18.} Friedrich Bouterwek, *Histoire de la littérature espagnole*, 2 parts in 1 vol. (Paris: Renard, 1812), *Historia de la literatura Española*, 1 vol. (Madrid: Imp. de E. Aguado 1829), and *History of Spanish and Portuguese literature*, 2 vols. (London: Boosey & Sons, 1823).

^{19.} Eichhorn, *Allgemeine Geschichte*, 1.1:xxi, xxxii, xxxix, l, lxviii, lxxx (lxx: "Wiedergeburt"). Eichhorn repeatedly also speaks of a "Revolution," e.g., at xliii and lix.

history of learning was still in its infancy. Despite the existence of particular histories on certain subjects, what was needed was (as he wrote in English in the *Advancement of Learning*): "a just story of learning, containing the antiquities and originals of knowledges and their sects, their inventions, their traditions, their diverse administrations and managings, their flourishings, their oppositions, decays, depressions, oblivions, removes, with the causes and occasions of them, and all other events concerning learning, throughout the ages of the world."²⁰ This was not to be a history based on other historical accounts, but a century-for-century synopsis of the content, style, method, and character of books. Bacon wanted learned men to be trained in the use and administration of learning. Just as in ecclesiastical and civil history, scholars ought to learn from good and bad examples in the history of learning.

In his *New Atlantis* (1627; not part of the *Instauratio magna*), Bacon set forth how this should be implemented. Describing a utopian center of learning called Salomon's House, he basically envisioned an entire research institute. The gathering of historical and of new information was to be a highly collective enterprise. His vision inspired the Royal Society, which had evolved from its origins as an informal collective before being institutionalized in the 1660s. Yet, the historiography of learning remained largely a one-man business in the sixteenth and seventeenth centuries, even in the compilation of encyclopedias.

Conrad Gessner's *Bibliotheca universalis* in the sixteenth century, Johann Heinrich Alsted's massive seven-volume *Encyclopaedia* in the seventeenth, and even Ephraim Chambers's *Cyclopaedia* in the eighteenth were each authored and edited by a single person.²¹ Although this continued to be possible for more specialized encyclopedias, such as Johann Georg Walch's *Philosophisches Lexicon* (1726), it must be pointed out that Pierre Bayle had relied on a huge team in compiling his massive *Historical and Critical Dictionary*.²² Bayle, however, still wrote his long entries himself. This was no longer the case with universal dictionaries such as Johann Heinrich Zedler's *Universal Lexicon* (68 vols., 1731–54) and Diderot and d'Alembert's *Encyclopédie* (11 vols., 1751–72). Historians have never been able to determine the identities of the anonymous authors of Zedler's *Lexicon*, but we are much better informed about the *Encyclopédie*, which was advertised in its subtitle as the work *par une Société de Gens de*

^{20.} Francis Bacon, *The Advancement of Learning*, bk. 2, chap. 1, sec. 2. The passage is completely rephrased in *De Augmentis Scientiarum*, lib. 2, chap. 4, sec. 1, which starts with the catchphrase "Ea est historia litterarum" (That is the history of learning).

^{21.} Ephraim Chambers, *Cyclopedia, or An universal dictionary of arts and sciences* (London: Printed for James and John Knapton et al., 1728).

^{22.} Antony McKenna, "Les réseaux au service de l'érudition et l'érudition au service de la vérité de fait: le *Dictionnaire historique et critique* de Pierre Bayle," *La Lettre clandestine* 20 (2012): 165–73.

lettres (by a society of learned men). It was exactly this subtitle that the Göttingen *Geschichte* translated for use in its own title: *von einer Gesellschaft gelehrter Männer*.

So the title of the Göttingen *Geschichte* echoes the two most famous enterprises in the history of learning: Bacon's *Instauratio magna* and the *Encyclopédie*. The collectivity in Bacon's vision was realized by Diderot and d'Alembert, and the Göttingen *Geschichte* hearkened back to it.

The Göttingen Geschichte was, however, no encyclopedia or lexicon, but a narrative history. As such, it was the first in its genre to present itself consciously as a collective enterprise, adopting the subtitle of the Encyclopédie. There were other narrative histories of the arts and sciences at the time: witness Michael Denis's Einleitung in die Bücherkunde (2 vols., 1777–78) or Carl Joseph Bouginé's Handbuch der allgemeinen Litterargeschichte nach Heumanns Grundriss, which appeared in five volumes over the course of thirteen years (1789-1802). Or even take Eichhorn's own twelve-volume History of Literature from the Origin to the Newest Times, mentioned above. But authorship by a single person became increasingly difficult. Petrus Lambeck had already heroically failed with his Prodromus historiae literariae (1659), and Daniel Morhof, who drew his inspiration for his tripartite Polyhistor from Bacon and Lambeck, managed to publish only the first two books of volume 1 (1688); the third book appeared in 1692, a year after his death, and the remainder of volume 1, along with volumes 2 and 3, was completed by Johann Möller (1708). The Göttingen Geschichte was the first general history to acknowledge that a complete history of knowledge could no longer be the work of one author-not even of an Eichhorn.

Of course the Göttingen *Geschichte* itself was no encyclopaedia in the sense of an alphabetically structured work. But early modern encyclopedias were often ordered not only alphabetically but also by subject, as historians of dictionaries well know.²³ When encyclopedias turned entirely alphabetical, often their editors, feeling uncomfortable about the lack of a philosophically grounded order, added tables with knowledge classifications.

Eichhorn also felt that he had to provide the readers of his project with a sense of unity. He did so not through a knowledge tree, but by the "general history of culture and literature" presented at the beginning, in the Göttingen *Geschichte*'s first two volumes, in which he gave an account of medieval learning that all subsequent volumes could draw on. In his preface he not only sketched the cultural "renewal" that had been going on since the fifteenth century, but also gave some outlines of political develop-

^{23.} See the distinction between semasiological (alphabetical) and onomasiological (topical) principles of ordering discussed in Werner Hüllen, *English Dictionaries, 800–1700: The Topical Tradition* (Oxford: Oxford University Press, 1999), 11–15.

ments in Europe, so as to frame the subsequent narratives. These two introductory volumes aimed at providing the link between the history of learning (*Geschichte der Litteratur*) and cultural history (*Culturgeschichte*). "The overview of the whole often yields developments that one cannot expect from the scholar who sticks to one trade only."²⁴

Eichhorn refused to aim at the "moral refinement of man" and to have that aim act as a "general principle" governing his project. This sort of teleological emphasis would lead the historians to bend the facts to fit their moralizing narratives. Eichhorn's aim was to have history speak for itself: "Give the facts as they lie before us,"²⁵ as he put it, anticipating Ranke's famous idea of history "as it actually was": "Historians should merely keep to the facts and have these speak for themselves."²⁶ Yet one page further on, he betrays his own teleology: the individual histories of learning should focus on internal material and formal "changes" (including its downturns), but the endpoint of all of them is the "degree of perfection at which they stand at the end of our century."²⁷ The individual histories should treat not only the ideas themselves, but also the ways they "were discovered, made known, determined, presented, proved, explicated, and applied";²⁸ they should include bibliographies and biographies. Furthermore, Eichhorn's authors had to stick to "the customary [parts of knowledge], of which the boundaries have been established in so many writings" and were not to create new parts.²⁹ Eichhorn planned to have published, after his introduction in part I, the following parts:

- II. Schöne Künste.
- III. Schöne Wissenschaften (Dichtkunst und Beredsamkeit).
- IV. Philologie.

^{24.} Eichhorn, *Allgemeine Geschichte*, 1:lxxxiv: "der Ueberblick des Ganzen giebt oft Aufschlüsse, welche man nicht von dem gelehrten erwarten darft, der sich bey Einem Fache allein verweilt."

^{25.} Ibid., 1:lxxxii: "Facta geben wie sie daliegen."

^{26.} Ibid.: "Der Geschichtsschreiber sollte sich (wie mich dünkt) blos an Facta halten und diese für sich sprechen lassen."

^{27.} Ibid., 1:lxxxv: "die Stufe der Vollkommenheit . . . auf welcher sie am ende unsers Jahrhunderts stehen."

^{28.} Ibid., 1:lxxvi: "entdeckt, bekannt gemacht, bestimmt, berichtiget, erwiesen, erläutert und angewandt worden." The mathematician Kästner in part 7 of the Göttingen *Geschichte* appropriated nearly these exact words. Abraham Gotthelf Kästner, *Geschichte der Mathematik seit der Wiederherstellung der Wissenschaften bis an das Ende des achtzehnten Jahrhunderts*, 4 vols. (Göttingen: J. G. Rosenbusch, 1797–1800), 1:13; see Paul Ziche, "Science and the History of the Sciences: Conceptual Innovations through Historicizing Science in the Eighteenth Century," *Berichte zur Wissenschaftsgeschichte* 35 (2012): 99–112, at 105 and 111 n. 36.

^{29.} Eichhorn, *Allgemeine Geschichte*, 1:lxxxvii: "so durfte keine neue künstliche Abtheilung der Wissenschaften dabey versucht, sondern es mußte die gewöhnliche, deren Gränzen in so vielen Schriften abgesteckt sind, beybehalten werden."

- V. Geschichte.
- VI. Philosophie.
- VII. Mathematik.
- VIII. Physik (Naturgeschichte, Naturlehre, Oekonomie, Technologie, Kameral-, Policey- und Finanzwissenschaften).
 - IX. Medicin.
 - X. Jurisprudenz.
 - XI. Theologie.30

Indeed, the published volumes of the project faithfully followed the classification scheme outlined in table 1. We can guess that part 2.2 was to treat drawings. Part 8.3 was supposed to contain economics. Part 11.3 contains one tome on homiletics (but proceeds no further than 1541!), and it announced histories of catechism, liturgy, and pastoral care; these three tomes never materialized, however.³¹ More dramatically, there are no traces of part 9, scheduled as a history of medicine, or of part 10, for which Eichhorn had envisioned a history of law.³²

The field of knowledge most in flux appears to have been the subject of part 8. Eichhorn had announced this as *Physik*, but in the end its general label was changed to *Naturwissenschaften*. In part 8.1 and 8.1.[2], *Physik* was adopted to describe what Eichhorn had initially labelled *Naturgeschichte*. The "Introduction" to Murhard's first volume opens with the announcement "that the name of *Naturlehre* or *Physik* leads the joint *Lehre* of the properties, forces and workings of bodies."³³ Part 8.2 treats the history

33. Friedrich Murhard, Achte Abtheilung: Geschichte der naturwissenschaften. I. Geschichte der Naturlehre. Erste Band (Göttingen: Rosenbusch, 1798), 1: "Den Namen Physik oder Naturlehre führt die gesammte Lehre von den Eigenschaften, Kräften und Würkungen der Körper."

^{30.} Ibid., lxxxvii.

^{31.} Christoph Friedrich von Ammon, Geschichte der praktischen Theologie oder der Homiletik Katechetik, Liturgik und Pastoral (Göttingen: Johann Friedrich Röwer, 1804).

^{32.} According to Michael C. Carhart, "Historia Literaria and Cultural History," in *Momigliano and Antiquarianism: Foundations of the Modern Cultural Sciences*, ed. Peter N. Miller (Toronto: University of Toronto Press et al., 2007), 184–206, at 194–95, the project was scheduled to comprise ninety-two volumes. (D'Alessandro, *L'Illuminismo dimenticato*, 272, even says that ninety-two volumes *were* published). I have found no source for this figure. Is their number due to a misunderstanding of Eichhorn's promise (*Allgemeine Geschichte*, 1:lxxxviii) to deliver ninety-two "Bogen" (sheets) a year? A sheet represents a quire, and each quire in the Göttingen *Geschichte* consists of sixteen pages (octavo); ninety-two sheets equals 1,472 pages a year, which amounts to four or five volumes. If the gaps in the project, identified above, would have been filled in, for example, by a bulky ten volumes for a history of law, ten volumes for a history of medicine, four more volumes for the history of theology, two volumes. Maybe d'Alessandro based his counting on bindings rather than *Bände*, but in the copy I consulted at Leiden University Library, this would result in seventy-two volumes—still twenty short of ninety-two. Obviously, the bibliographical history of the Göttingen *Geschichte* is still in its infancy.

of *Chemie*, a subject that Eichhorn in his preface had announced as *Naturlehre*. Counterintuitive to modern sensibilities is the subsuming of the two subjects *Oekonomie* and *Kameral-*, *Polizey- und Finanzwissenschaft* under *Naturwissenschaften*. These shifts reflect the highly uncertain status of the natural sciences around 1800, when terms like *Naturwissenschaft*, *Naturlehre*, *Physik*, and even *Naturkunde* were all in use.³⁴

As in almost every other preceding history of learning, this classification is never made the subject of explicit reflection as to its rationale: it merely adopts existing demarcations. Eichhorn and his fellow authors glossed over the uncertainties of such categories as *Naturwissenschaften*, so as not to open a Pandora's box. The novelty of the Göttingen *Geschichte*, then, does not lie in its philosophical conception of how knowledge ought to be classified. So what *were* the "many writings" on whose classifications Eichhorn had modeled the structure of his project? For this, we have to turn to *historia literaria* again.

THE STRUCTURE OF HISTORIOGRAPHY: "ANALYTIC" AND "SYNTHETIC"

Historia literaria aimed at providing students, professors, and other citizens of the Republic of Letters up-to-date compendia, histories, and journals with bio-bibliographical overviews for all domains of knowledge, spanning antiquity, the Middle Ages, and post-medieval thinking.

Two methods were employed in giving such overviews. Some authors used the adjectives "analytical" and "synthetic" to describe these methods. The analytical method took chronology as a structuring principle. The synthetic method, by contrast, was topical: it reviewed the different fields of knowledge one after the other. Yet, as will become clear, the criteria by which these fields of knowledge were defined and the basis for the sequence of their descriptions were never made explicit.

These analytical (chronological) and synthetic (topical) methods had already been employed by Christopher Mylaeus in his 1551 plea for an enumeration of everyone who had excelled in grammar, history, poetry, oratory, philosophy, medicine, law, or theology.³⁵ Mylaeus treated his material in these two different ways and thus established a methodical division that would continue right up to the end of the eighteenth century in the works of Michael Denis (the first volume of whose *Introduction to the Study of*

^{34.} Paul Ziche, "Von der Naturgeschichte zur Naturwissenschaft: Die Naturwissenschaften als eigenes Fachgebiet an der Universität Jena," *Berichte zur Wissenschaftsgeschichte* 21 (1998): 251–63, at 260 and 261 n. 4.

^{35.} Christopher Mylaeus, *De scribenda universitatis rerum historia libri quinque* ([Basle]: ex off. Joan. Oporini, [1551]).

 Abtheilung (Eichhorn: Cultur und Litteratur): Abtheilung (Eiceillo: Zeichnande Künete 		2 Bd. 1796, 1799 (1-1, 1-2, 11-1)
2. MORENARIS (1 MILLO, SCIENCER, MILLOR, MILLOR,	I. Geschichte der Mahlerev)	5 Bd. 1798–1808.
	II. Geschichte der Zeichende Kunst	4 Bd. 1815–1820. ^a
3. Abtheilung (Bouterwek: Schönen wissenschaften;		
Poesie unde Beredsamkeit)		
00		12 Bd. 1801–1819. ^b
4. Abtheilung (Heeren: Studium classischen Literatur)		2 Bd. 1797, 1801.
5. Abtheilung (Wachler: Historische Forschung und Kunst)		2 Bd. 1812, 1820. (I-1, I-2, II-1 II-2, II-3)
6. Abtheilung (Buhle: Philosophie)		6 Bd. (1800–1805) (I, II-1, II-2, III-1,
		III-2, IV, V-1, V-2, VI-1, VI-2).
7. Abtheilung	[1]° (Kästner: Mathematik)	4 Bd. (1797–1800)
	2. (Hoyer: Kriegskunst)	2 Bd. (1797–1800) (I-1, I-2, II-1, II-2).
8. Abtheilung	Naturwissenschaften	
	1. (Murhard: Naturlehre)	1 Bd. (1798 [=1799]-1799) (I-1, I-2)
	1. [2] ^d (Fischer: Physik) ^e	8 Bd. (1801–1808)
	2. (Gmelin: Chemie)	3 Bd. (1797–1799)
	3. — [missing: Oekonomie]	
	4. (Poppe: Technologie)	3 Bd. (1807–1811)
	5 — [missing: Kameralwissenschaft]	

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		ture up to 1850: Eduard <i>t fortgesetzt von Eduard</i> ion to Hoyer's books on ierarchy: Fischer's eight irlehre," and the second
1 Bd. (1808) 1 Bd. (1804) 5 Bd. (1802–1809)	 61 Bd.	update to the Spanish literal uterwek: Bis auf unsere Zei user to understand its relat he user to understand the h titled "Geschichte der Natu er Physik."
9. Abtheilung 10. Abtheilung 11. Abtheilung 11. Abtheilung 12. (Stäudlin: Christliche Moral) 3. (Ammon: Praktische Theologie) 4. (Meyer: Schrifterklärung)		"These four were published in Hanover with Hahn. ⁿ 1850, Eduard Brinckmeier published an additional volume to Bd. III, listing it as [0] III-2. This provided an update to the Spanish literature up to 1850: Eduard Brinckmeier, Geschichte der Poesie und Beredsamkeit seit dem Ende des dreizelmten Jahrhunderts von Friedrich Bouterwek: Bis auf unsere Zeit fortgesetzt von Eduard Brinckmeier (Göttingen: Vandenhoeck & Ruprecht, 1850). ^o The "[1]" is an addition by the catalog of the Berlin State Library; it is not found on any title page, but it helps the user to understand its relation to Hoyer's books on military art, which do have the subnumber 2 on the title page. ^o The "[2]" is an addition by the catalog of the Berlin State Library; it is not found on any title page, but it helps the user to understand its relation to Hoyer's books on military art, which do have the subnumber 2 on the title page. ^o The "[2]" is an addition by the catalog of the Berlin State Library; it is not found on any title page, but it helps the user to understand its relation to Hoyer's books on with an addition by the catalog of the Berlin State Library; it is not found on any title page, but it helps the user to understand its relation to Hoyer's books on with an addition by the catalog of the Berlin State Library; it is not found on any title page, but it helps the user to understand the hierarchy: Fischer's eight volumes are all entitled "Physik" and seem to be subsumed under Naturlehre. ^o Oddly enough, Fischer nowhere refers to Murhard's volume in two parts. The first part of Murhard's Bd. 1 is entitled "Geschichte der Physik." Both parts have the half-page title "Die wichtigsten Lehren der Physik."
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Books [1777] presented a narrative of how the arts developed from antiquity to the European Enlightenment; the second treated each discipline separately).³⁶ Mylaeus is cited as a predecessor by several authors who engaged in *historia literaria*.

One of these authors was the long-lived professor of philosophy Christoph August Heumann (1681–1764), the central figure in *historia literaria*.³⁷ Heumann was the scholar who comprehensively measured his predecessors by using the analytical/synthetic criterion in his *Overview of the Republic of Letters*, published for the first time in 1718 and republished seven times in the eighteenth century, the last time posthumously in 1791.³⁸ Heumann refers to the passage in Bacon (p. 21, note *n*) and to his predecessors. He criticized all of them for two different reasons. Some, such as Gottlieb Stolle and Georg Paschius, had adopted the synthetic method but had done so in an incomplete fashion. Stolle, for instance, treated the histories only of philology and philosophy and had neglected those of theology, law, and medicine, as well as the institutional side of the history of learning: patronage, universities, gymnasia, learned societies, and libraries.³⁹

Others followed the analytical method, but also incompletely. Thus, Petrus Lambeck never proceeded further than the thirteenth century BCE. The efforts of Johann Jakob Frisius, Johannes Jonsius, and Hermann Conring were also incomplete. Conring, for example, presented only an institutional history of learning.⁴⁰

Heumann's list of "analytical" *historiae literariae* seems to end when he starts discussing the *Polyhistor* of Daniel Morhof, the author with whom *historia literaria* had started in earnest.⁴¹ Morhof had lacked a "system." The merits of the *Polyhistor* stood out, and Heumann recommends it for advanced students.⁴² But he thought that the *Polyhistor* privileged the description of the liberal arts. If we look closer at the structure of Morhof's *Polyhistor* and compare it with that of the "synthetic" Stolle, we immedi-

^{36.} Carhart, "Historia Literaria and Cultural History," 189, 193, and 184-85.

^{37.} Sicco Lehmann-Brauns, "Neukonturierung und methodologische Reflexion der Wissenschaftsgeschichte: Heumanns *Conspectus reipublicae literariae* als Lehrbuch der aufgeklärten Historia Literaria," in Grunert and Vollhardt, *Historia literaria: Neuordnungen*, 129–60, esp. 139.

^{38.} Christophorus Augustus Heumannus, *Conspectus reipublicae literariae sive Via ad Historiam literariam iuventuti studiosae aperta* (Hanover: N. Foerster, 1718); the book was reprinted eight times (²1726, ³1733, ⁴1735, ⁵1740, ⁵1746, ⁶1753, ⁷1763). Note that the fifth edition appeared twice (perhaps a title-page edition). The eighth edition was edited by J. N. Eyring (Hanover: Fratres Helweghi, 1791). I refer to the third edition (Hanover: J. J. Foerster, 1733). Even Bouginé in 1791, as mentioned previously, adopted Heumann's structure.

^{39.} Heumann, Conspectus, 1733, second page numbering, 12-13.

^{40.} Ibid., 14-16.

^{41.} On Morhof and his *Polyhistor*, see Françoise Waquet, ed., *Mapping the World of Learning: The Polyhistor of Daniel Georg Morhof* (Wiesbaden: Harrassowitz, 2000).

^{42.} Heumann, Conspectus, 1733, second page numbering, 18.

ately spot the similarities in macro-structure (table 2). Both Morhof and Stolle, in their second and third parts, seem to adopt Aristotle's division into theoretical and practical philosophy. Each let that division be preceded by a less philosophical part dealing with the use of language. But there are numerous small differences in organization: Morhof classifies mathematics as a "philosophical" (perhaps even "theoretical") type of knowledge in his part II, whereas Stolle subsumes it under the heading of "liberal arts" in his first part. Morhof classifies "history" as a practical type of knowledge in his part III; Stolle puts it in the box of the liberal arts as well. Morhof in his last three sections of part III assigns a role to the three higher faculties, and this role seems rather limited. Stolle, however, ignores these faculties altogether. Overall, Stolle adheres more to a medieval classification, which combines the *artes liberales* model with a basic Aristotelian division. Morhof's scheme encompasses more. Both take a comprehensive view of the category "philosophy." But neither can have been the model for the Göttingen *Geschichte*.

The same holds true for another historian of learning mentioned by Heumann: Burchard Gotthelf Struve, author of a concise *Introduction to Knowledge of Literary Matter and the Use of Libraries* (1704). This book covers a rather smaller compass. It is devoted primarily to libraries and books and not to the contents of learning. In many ways, this introduction treats not the history of learning but the *conditions* of pursuing the history of learning: information about libraries, authors of biographies (of scholars), forbidden books, literary societies, and so on.⁴³ In Heumann's view, Struve's book is not a synopsis of or introduction to *historia literaria*, but a library of *historia literaria*.⁴⁴

Heumann bestowed some praise on the project of another German author, Jacob Friedrich Reimmann. Reimmann adopted the elegant format of the dialogue for his universal history of learning and added five volumes of *historia literaria* of the Germans to it. However, Heumann lauded but at the same time dismissed Reimmann's work: it provided no general history of learning.⁴⁵ His finely wrought manual on *historia literaria* was not structured as a compendium, about which Reimmann himself complained, as Heumann points out.⁴⁶

46. Ibid., first page numbering (preface), 14.

^{43.} Introductio ad Notitiam Rei-Litterariae et usum Bibliothecarum (Jena: Bailliar, 1704). Its chapters are: Caput 1: De historia litteraria; Caput 2: De bibliothecis deperditis; Caput 3: De bibliothecis exterorum; Caput 4: De bibliothecis Germanorum; Caput 5: De usu bibliothecarum; Caput 6: De ephemeridibus eruditorum; Caput 7: De scriptoribus vitarum; Caput 8: De scriptoribus iudiciorum; Caput 9: De libris damnatis et prohibitis; Caput 10: De societatibus litterariis; Caput 11: De typographia.

^{44.} Heumann, Conspectus, 1733, second page numbering, 19-20.

^{45.} Ibid., 21, n. (o); first page numbering (preface), 7.

Table 2.	
Morhof	Stolle
Tomus I: LITERARUS: Bibliothecarius Methodicus Paraskeuastikos Grammaticus Criticus Oratorius Poeticus	 Pars I: Historia litteraria generatim et artium liberalium speciatim Praefamen de historia litteraria generatim spectata cap. I: de artibus liberalibus generatim spectatis cap. II: de arte grammatica cap. III: de arte critica cap. III: de arte rhetorica cap. V: de arte poetica cap. VI: de historiarum studio
Tomus II:	cap. VII: de disciplinis mathematicis Pars II:
PHILOSOPHICUS: Philosophico-historicus Physicus Mataióteknos, de artibus divinatoriis et magia Mathematicus Logico-Metaphysicus, de logici et metaphysicis scriptoribus Tomus III: PRACTICUS: Ethicus Policicus Politicus Oeconomicus Historicus Theologicus Juridicus Medicus	Historia litteraria cum generatim philosophiae tum speciatim philosophiae theoreticae cap. I: de philosophia generatim considerata cap. II: de disciplina logica et metaphysica cap. III: de pneumatologia aut de spiritibus doctrinae cap. III: de philosophia naturali Pars III: Historia litteraria philosophiae practicae cap. II: de philosophiae practicae cap. II: de philosophia generatim morali cap. II: de eo quo est decorum cap. III: de disciplina ethica, aut de virtutibus doctrinae cap. V: de prudentia política cap. VI: de arte occonomica

Reimmann did, however, combine the chronological and the analytical approaches. His emphasis lay on philosophy. In an interesting note in volume 3 (which specifically treats German authors; there are no similar volumes on French or Italian authors), Reimmann promises to stick to the faculty structure of theology, law, medicine, and philosophy—not only because there are too many different Wissenschaften but also because they develop, change, and alternate with one another all the time.⁴⁷ Reimmann, then, takes a practical approach and sticks to a traditional classification as established in the institutional structure for higher education. Reimmann's way of organizing his material looks a bit more like that of the Göttingen Geschichte: like Eichhorn in the first part of the Göttingen Geschichte, Reimmann in his second volume gave an overview of the history of learning in antiquity and the Middle Ages.⁴⁸ As Eichhorn had done, the faculty division is maintained, although contrary to the Göttingen Geschichte, Reimmann diverges from its usual order: medicine, law, and theology do not follow one another. There are other differences as well. Philosophy comprises physics but not metaphysics. Eichhorn had it just the other way around. And Eichhorn's subdivisions were much more differentiated. The question that still hung in the air, then, was *how* to organize the field of knowledge.

Heumann aspired to a universal history of all learning across all ages but did not provide an ordering of the disciplines according to a theory of the interrelations among fields of knowledge. He explained also that in this universal history there was not sufficient space to provide more extensive accounts of the fates of single disciplines (not even in the fifth chapter, "The Fate of the Disciplines, or Their Origin and Growth").⁴⁹ For particular histories, he referred his readers to other sources, such as Johann Burkhard Mencke's *Compendiöses Gelehrten-Lexicon* (1715).

The salutary advantage of Heumann's book was its concision and practical orientation, unlike the three heavy tomes of the *Polyhistor*. But for all his critique of earlier writers, his own overview is also a bit of a disappointment due to its lack of philosophical reflection on what a classification of knowledge should be based on. His work offered partly a history of *historia literaria* itself, and a program of what a true *historia literaria* ought to look like. It should have chapters on the art of writing and reading,

^{47.} Jacob Friderich Reimmann, Versuch einer Einleitung in die Historiam literariam derer Teutschen, 7 vols. (Halle: Rengerische Buchhandlung, 1708–13), 3:30.

^{48.} Reimmann's first volume introduces the formalities of *historia literaria* (what it is, why it is important, and how one pursues it), whereas volume 2 gives an overview of the history of learning in antiquity and the Middle Ages. Volume 3 treats the modern age (the "new" *historia literaria*), in particular theology and philosophy (which includes physics). The remaining volumes deal with metaphysics and mathematics (4), politics and history (5), and law and medicine (6).

^{49.} Heumann, Conspectus, first page numbering, 9.

an analytical overview of learning from the earliest to the present times, synthetic histories of single disciplines (Heumann presents all of these but is very brief on their actual histories and limits himself to the bibliographic task of referring to specific histories of individual disciplines), a bibliography, and a collection of author biographies.

BULKY HISTORIA LITERARIA: GUNDLING AND FABRICIUS

The analytical and synthetic modes offered methods for writing the history of learning, but not for classifying knowledge. Still, Heumann's book served as an example for authors who wanted to write learned history in a more structured way than that provided by an exclusively alphabetical arrangement.

The most important author in this regard is no doubt Nicolaus Gundling (1671-1729), who was ten years older than Heumann and died thirty-five years before him. His posthumously published Vollständige Historie der Gelahrheit (1734-36) was explicitly built on Heumann, as its long title made explicitly clear: Complete History of Learning or Elaborate Discourses expounded in various Learned Lessons about both his own thesis as well as primarily about Herr Inspektor Christoph August Heumann's Synopsis of the Republic of Letters. Its five thick tomes come to 7,708 pages, not including the 1,700-odd pages of the index. The ambition of Gundling, who in 1703 had already published an index of subjects categorized into six "chapters" as a memory aid for his lectures in *historia literaria* for students of law,⁵⁰ was to realize Heumann's vision of the history of the Republic of Letters ("die Republique derer Gelehrten"51). Thus, Gundling took the titles of his chapters from Heumann's Conspectus. His first chapter addresses the nature of historia literaria itself, and his second the previous writers and teachers of historia literaria—a lengthy chapter that basically deals with famous polyhistors in general. A third, also lengthy, chapter introduces the history of writing, and it is only then, six hundred pages in, that Gundling starts his chronological narrative of the "origin and progress of learned studies," starting with Moses. From there, Gundling works his way through the Old and New Testaments, rabbinical learning, Egypt, and even Hermes Trismegistus.⁵² This strictly chronological narrative contains subheadings on certain

^{50.} Nicolaus Hieronymus Gundling, *Kurtzer Entwurff eines collegii über die Historiam Literariam vor die Studiosos Juris* ([Halle], 1703). See Carhart, "Historia Literaria and Cultural History," 191 (and 203 n. 22, where the title is confusingly given in Latin, silently following Heumann's text).

^{51.} Nicolaus Hieronymus Gundling, Vollständige Historie der Gelahrheit, oder Ausführliche Discourse, So er in verschiedenen Collegiis Literariis, so wohl über seine eigenen Positiones, als auch vornehmlich über Tit. Herrn Inspectoris D. Christophori Augusti Heumanni Conspectum Reipublicae Literariae gehalten, 5 vols. (Frankfurt, 1734–36), 1:sig. 3)([°].

^{52.} Gundling does not address the spuriousness of Hermes; completeness was perhaps more important than criticism.

disciplines, although these are not systematic. To give an example, Gundling deals with Greek literature by starting with a chronological overview of the philosophical sects, followed by an overview of the authors (occasionally jumping to the seventeenth century, as he does in the chapter "Vom Epicuro und Petro Gassendo"): after treating the Greek philosophers and the playwrights, Gundling reviews the historiographers, the physicians, and the "rest" of the important Greek authors. Then he moves on to Roman literature. This overview of Latin literature begins not with the philosophers but with the poets, continues to cover the historians, then the orators, and then the legal scholars, who are followed by a survey of the evangelists, apostles, and church fathers. A consideration of theology closes his account of Roman authors, not without teasing out their varied contributions to law and medicine. A few closing sections treat grammarians, people forgotten thus far, and "Jews and Barbarians." It would appear that Gundling, within his chronological (or analytical) ordering of learning, gave primacy to the arts and to theology.

The second part of his chapter II describes the literature from the sixth century to the fifteenth. For each century, he treats the theological writers and the "other ones," often lumping the legal and medical writers together in one paragraph. Usually, his treatments consist of a listing of book titles, together with available editions. Meanwhile, he does not fail to also dedicate paragraphs to Maecenases and, from the twelfth century onward, to universities and libraries. When his history moves beyond the fifteenth century, the prominent position of authors who address theology is taken over by the Italian humanists.

It is also from the sixteenth century onward that Gundling's lists of "remaining writers" grow extensively; he gives their names alphabetically, ordered by nation.⁵³ Again, there is no discernible principle of classification, let alone one that has been consciously formulated. Gundling's classifications depend on chronology and on a rudimentary division into arts, theology, law, and medicine, but not necessarily in that order. He also adopts geography as a structuring principle for his narrative, but within these geographies he adopts an alphabetical order.

Whereas Gundling's massive history, despite its long lists of books, does provide a story, any sense of narrative is hard to encounter in a later follower of Heumann: Johann Andreas Fabricius. The title of this author's *Outline of a General History of Learning* (1752–54) suggests that he has provided another traditional example of *historia literaria*. Indeed, in the preface to his last volume, Fabricius refers to the praise his project garnered from "the venerable Nestor who was the first public teacher of learned history and the greatest expert in the subject," namely Christoph August

^{53.} See the rather discouraging lists in Gundling, Vollständige Historie, 2:2564–6204 [sic, pro 2604].

Heumann himself.⁵⁴ But this massive three-volume work is rather more devoted to giving lists of author names without proper bibliographic references, much in the vein of Gundling's long lists of "remaining authors." Fabricius's lists typically cover an entire page or even more, causing his project to collapse under the weight of its uncritical comprehensiveness. The work is set up largely chronologically, with the third volume treating the sixteenth, seventeenth, and eighteenth centuries, and its chapters and paragraphs structured according to geographical and alphabetical principles. Despite Heumann's apparent praise for this exhaustive undertaking, the student who tries to read it quickly realizes it is far removed from a selective and pragmatic overview of the history of learning.⁵⁵ For *historia literaria*, this was a dead end.

While Fabricius was taking his cue from Gundling, others in the meantime had returned to more concise and practically useful handbooks, not by expanding Heumann's structure to govern enormous lists but by taking his scope as an example. They reinvigorated *historia literaria*—and their work is likely the "many writings" that Eichhorn referred to as providing a practical classification of knowledge.⁵⁶

"TO CLASSIFY HISTORICALLY, NOT PHILOSOPHICALLY": DESCRIPTION VERSUS PRESCRIPTION

Returning to a more negotiable format, most of the historians of learning in the second half of the eighteenth century adopted more or less the faculty structure as the basis for their classifications. Authors who did so, such as Johann Georg Sulzer, Johann Joachim Eschenburg, and Johann Christoph Stockhausen, were aware that it was possible to base classifications on philosophical principles, but for various reasons they opted for a "descriptive" approach. Thus Sulzer, eschewing the principle of a metaphorical tree of science, decided to "describe" the subjects of learning according to eight "classes," or, as he also called them, "disciplines."⁵⁷ Sulzer said nothing about the rationale of his classifi-

^{54.} Johann Andreas Fabricius, *Abriß einer allgemeinen Historie der Gelehrsamkeit*, 3 vols. (Leipzig: In der Weidmannischen Buchhandlung, 1752–54), 1:sig. *[6]⁻: "ehrwürdige Greise, dem ersten öffentlichen Lehrer der gelehrten Geschichte und grösten Kenner derselbigen."

^{55.} I was unable to establish a family relation of Fabricius with the more famous historian of literature and bibliographer Johann Albert Fabricius, who published the widely read posthumous second edition of Petrus Lambeck's *Prodromus historiae literariae* (Hamburg: Christianus Liebezeit, 1710), in addition to bibliographies of Greek and Roman authors.

^{56.} Carhart, "Historia Literaria and Cultural History," 193, states (correctly, I think) that after the 1740s *historia literaria* did not become irrelevant.

^{57.} Johann Georg Sulzer, Kurzer Begriff aller Wissenschaften und andern Theile der Gelehrsamkeit, worin jeder nach seinen Inhalt, Nuzen und Vollkommenheit kürzlich beschrieben wird (Frankfurt, 1786), 7–9. The book was reprinted five times through 1786 (²1759, ³1772, ⁴1774, ⁵1778, and ⁶1786). A Russian translation appeared in 1781.

cation or about what he meant by "description" (perhaps the same as Eschenburg; see below), but he did claim that there was a "natural coherence" among the different parts of learning. Although his classification scheme roughly follows that of the faculty structure, he subsumed "medicine" under physics and separated physics from philosophy. His three last subjects were philosophy, law, and theology. Apparently, philosophy replaced medicine in his structure.

Sulzer's classification was largely followed by the Braunschweig professor of *historia literaria* Johann Joachim Eschenburg, who used him in his lectures.⁵⁸ In 1792, Eschenburg published a very successful *Learning Book*.⁵⁹ He consciously avoided philosophical underpinnings for his edifice of knowledge. In a well-known trope of comparing the geographer with the historian, Eschenburg defends an empirical and descriptive model against a prescriptive rational way of classifying knowledge:

I am, incidentally, well aware that the classification of the *Wissenschaften* can be designed philosophically and from better and new perspectives. However, just as the historical geographer is hardly allowed to arbitrarily carve up countries, empires, territories and properties, and just as he cannot divide and determine them in a way which differs from the real political situation in the world, even if they often intersect; likewise, in my opinion, in such design as the present one, the literary geographer cannot permit himself to indicate and draw out the divisions and classifications as would be reasonable, but he should do so as they really are. Therefore I have preferred to eschew novelty and singularity.⁶⁰

And again, in paragraph 20:

Since with every classification of this sort, despite the nature and the close connections of the sciences, much remains which is arbitrary and inadequate and since individual disciplines must necessarily be forced out of their usual compound, it will be perhaps most advantageous for the teaching of encyclopaedia, if we classify them historically rather than philosophically. In this way, I hope to add all the parts of such a wide field of learning, by separating them into the following eight classes: the philological, historical, philosophical, mathematical,

^{58.} Fritz Meyen, Johann Joachim Eschenburg 1743–1820, Professor am Collegium Carolinum zu Braunschweig: Kurzer Abriβ seines Lebens und Schaffens, nebst Bibliographie (Braunschweig: Waisenhaus-Buchdruckerei und Verlag, 1957), 31–32.

^{59.} Johann Joachim Eschenburg, *Lehrbuch der Wissenschaftskunde, ein Grundriss encyklopädischer Vorlesungen von Johann Joachim Eschenburg* (Berlin: Nicoli, 1792). As late as 1825, the book saw its seventh reprint, by then posthumously.

^{60.} Ibid., sig.)(4^r. Also cited by Dierse, Enzyklopädie, 106.

physical, medical, legal and theological sciences. And then within each class I will peruse the disciplines coming under them.⁶¹

The structure of his book therefore follows that of the institutional setting, with the difference that within the domain of the faculty of *artes*, Eschenburg is not necessarily descriptive of a generally accepted division of the domains of knowledge. It is salient here that philosophy is still so comprehensive as to encompass not just logic and metaphysics but also pedagogy and cameralism. As Eschenburg admits, "With the large variety of the destiny of the subjects of this science [philosophy], its size, its way of handling things, and the edifice of learning built from its matter, no overall relevant explanation can be established for Philosophy."⁶² Like Sulzer, Eschenburg set mathematics and physics apart from philosophy, which is symptomatic of an emancipation that had already been underway, although not institutionally, at the beginning of the eighteenth century. The grounding structural assumption seems to be that philology, history, philosophy, mathematics, and physics prepare the way for the three higher faculties of medicine (the lowest of the three), law, and theology (the highest). The way Eschenburg set up his *Learning Book* is very similar to what we find in the Göttingen *Geschichte*.

We can see this arise most clearly in the *historia literaria* of Stockhausen (1725–84). His "critical design for a select library" is written in epistolary form (a bit like the catechetic format of Reimmann) and constitutes an advice on the most important books in philosophy, the fine arts (or "fine sciences": *schöne Wissenschaften*), history (*historische Wissenschaften*), novels (*Romanen*, "the false brothers of history"⁶³), poetry (*Dichtkunst*), rhetoric (*Beredsamkeit*), miscellaneous works of good taste (*vermischten Werken des guten Geschmacks*, in which he praises Sulzer for his educational writing for young children⁶⁴), music, paintings, and engravings. His selection was not based on the faculty structure nor on metaphysical or religious principles. Stockhausen claimed to use pragmatism and taste in his arrangement, but *how* he operationalized these principles remains obscure. His inclusion of fine arts, music, paintings, engravings, and "miscellaneous works of good taste," as well as the explicit mention of women as intended readers, gives his work a gallant flavor. Stockhausen subsumes some theology under the philosophical subheading of metaphysics or under *Naturlehre* (in this case, *physicotheologia*); botany is mentioned under that same subheading, but medicine (physiology,

^{61.} Eschenburg, Lehrbuch, 11.

^{62.} Ibid., 92.

^{63.} Johann Christoph Stockhausen, Critischer Entwurf einer auserlesenen Bibliothek für die Liebhaber der Philosophie und schönen Wissenschaften, 4th ed. (Berlin: Haude & Spener, 1771), 213: "die unächte Brüder der Geschichte."

^{64.} Ibid., 376-77.

anatomy, pharmacology) is entirely absent. Practical philosophy includes some works on natural law, but Roman law is again absent. As far as elements of the three higher faculties are treated at all, they are placed together with other subjects under subheadings that are traditionally unrelated to them. Other nontraditional elements include the grammars and dictionaries of German, French, and English; numismatics; inscriptions; and historiographies of learning ("meta-*Historia Literaria*," as Dirk Werle aptly noted⁶⁵)—all under the heading of *schöne Wissenschaften*. What Stockhausen presents, then, is restricted to the domain of the arts faculty, and when it stretches out beyond this domain it is not to the three higher faculties, but to nonacademic subjects. Stockhausen presents no philosophical or pedagogical rationale for the structure of his scheme and gives no selection criteria for the subjects he chooses to include.

A far more original classification of knowledge was given by the little-known thinker Christian Heinrich Schmid in an article in the *Gotha Magazine for Arts and Sciences* of 1777.⁶⁶ Schmid dismissed as outdated the division of learning into four faculties. He saw in Sulzer's structure a merely pedagogical armature: each subject was to be learned by building up from the easiest and most basic one.⁶⁷ Schmid, on the other hand, proposed a more philosophical ordering, for which he reinstated the notion of the tree of knowledge. He adopted a philosophical model, even an anthropological one. He started from our most important question, "What am I?", and then moved on to "What must I be?" On the basis of these questions he comes to an entirely different organization of a true encyclopedia of the *Wissenschaften*, in which the concepts of body and soul are the organizing principles. Schmid's scheme found no followers. Yet, Dierse (in a chapter on the importance of the encyclopedia in pedagogical settings) has seen it as a sign of new schemes to reorganize encyclopedic systems, presaging Kant's philosophy.⁶⁸

THE GÖTTINGEN GESCHICHTE

If we compare the structure of the Göttingen *Geschichte* with those of other histories of learning, it appears that it is most similar to the structure of Eschenburg's *Learning Book*, but expanded to encompass the visual arts and vernacular "literature," as Stock-

^{65.} Dirk Werle, "Umbau des polyhistorischen Wissensraums: Johann Christoph Stockhausens Critischer Entwurf einer auserlesenen Bibliothek für den Liebhaber der Philosophie und schönen Wissenschaften (1752)," Berichte zur Wissenschaftsgeschichte 34 (2011): 125–38, at 129. "Meta-historia literaria" was not something peculiar to Stockhausen; Morhof had already treated the genre, and so did Heumann.

^{66.} Christian Heinrich Schmid, "Ueber die Klassifikation und Rangordnung der Wissenschaften," *Gothaisches Magazin der Künste und Wissenschaften* 2 (1777): 231–51.

^{67.} Ibid., 232.

^{68.} Dierse, Enzyklopädie, 49.

Tal	Ы	e	3.

1751: Stockhausen	1745: Sulzer	1792: Eschenburg	1796–1820: Eichhorn, Göttingen <i>Geschichte</i>
1. philosophy	1. philology	1. philology	2. Schöne (visual) Künste
2. "schöne Wissenschaften"	2. history	2. history	3. Schöne Wissenschaften (poetry and rhetoric)
3. history	3. the arts	3. philosophy	4. philology
4. novels	4. mathematics	4. mathematics	5. history
5. poetry	5. physics	5. physical sciences	6. philosophy
6. rhetoric	6. philosophy	6. medicine	7. mathematics
7. good taste	7. law	7. law	8. natural science
8. music	8. theology	8. theology	9. medicine
9. paintings and engravings	0.	07	10. law
			11. theology

hausen had done (although there is no music in the Göttingen Geschichte—a unique feature of Stockhausen; see table 3). Eichhorn's Göttingen Geschichte most closely realized the Baconian ideal of historia literaria. The fruit of coordinated cooperation based in the research center of Göttingen, it yielded a full history of knowledge per century, not in alphabetical order but as a narrative, including biographies and bibliographies integrated into its pages. Its classification was not predicated on the Baconian epistemology of reason, imagination, and memory, but none of the authors of *historia* literaria discussed here had followed Bacon's philosophy of mind. In fact, apart from Schmid, none of the authors voiced any explicit epistemological principle of classification at all.⁶⁹ It would appear that eclecticism itself was hailed as a healthy medicine against too much philosophical weight and hence too much partiality: Gierl noted that historia literaria was an eclectic endeavor against polemics70 (and as such, paradoxically, polemical in itself). And Lehmann-Brauns concluded that Heumann's work excluded a large part of the philosophical-theological tradition as well as the complexity of theoretical grounding.⁷¹ In Göttingen, where the Geschichte was conceptualized and written, the justification of the structure of encyclopedia (introduced there as a systematic pedagogy for introducing students into different subjects) was a practical one: it

^{69.} See also what Dierse (ibid., 50–51) notes about encyclopedists such as E. J Koch and J. G. Meusel: they let themselves be informed by the requirements of university teachings and do not address the principles of the sciences and their interrelationships.

^{70.} Gierl, "Historia literaria," 119.

^{71.} Lehmann-Brauns, "Neukonturierung," 139.

simply followed the institutionalized structures of teaching.⁷² In particular, in the second half of the eighteenth century, the aspirations to teach general or universal history of learning had given way to more specialized "encyclopedic" teachings of discrete fields of knowledge.⁷³

This is very striking in a period in which professors of philosophy repeatedly argued for the emancipation of philosophy as the queen, not the handmaiden, of all the sciences.⁷⁴ The Göttingen *Geschichte* was as "descriptive" as Eschenburg's work. Morhof and Stolle had loosely adopted an Aristotelian macro order. Heumann had integrated institutional and material settings as part of its history. But that was left out of the Göttingen *Geschichte*, which focused on the history of ideas. This lack of attention devoted to an overview of institutional history is characteristic of *historia literaria* in the second half of the eighteenth century.

Despite the differences between the Göttingen *Geschichte* and pre-1750 histories of learning, what Eichhorn's project shares with all previous histories of learning is an emphasis on the arts. Medicine, law, and theology always received less attention in *historia literaria* than the *artes* did.⁷⁵ In the Göttingen *Geschichte* the projected volumes on medicine and law never even materialized, and the study of theology was only partly completed. Within the *artes*, the emancipation of mathematics and physical/natural sciences is striking. Even if the natural sciences were very much in flux (Eichhorn had even classified cameralism as a physical science), there appears to have been a consensus that the natural sciences were emancipating themselves from philosophy. A last feature that draws attention is the inclusion of the *schöne Künste* (visual arts) and *schöne Wissenschaften* (poetry, rhetoric, and fictional literature in the vernacular). Several *artes* were creating distinct histories, thus satisfying a precondition for their acceptance as disciplines in the century to come.

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^{72.} Dierse, Enzyklopädie, 75.

^{73.} Gierl, "Historia literaria," 126.

^{74.} Ziche, "Die Welt der Wissenschaft," 10.

^{75.} Already in the sixteenth century it had proven difficult to integrate the three higher faculties into the system of sciences. In fact, theology, law, and medicine occur as subclasses of metaphysics, ethics, and physics, that is, as subdivisions *within* the "lower" arts faculty. See Dierse, *Enzyklopädie*, 13.

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