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Note Taking as an Art of Transmission

Ann Blair

Note taking constitutes a central but often hidden phase in the transmission of knowledge. Notes recorded from reading or experience typically contribute to one's conversation and compositions, from which others can draw in turn in their own thinking and writing, thus perpetuating a cycle of transmission and transformation of knowledge, ideas, and experiences. The transmission served by personal notes most often operates within one individual's experience—from a moment of reading and note taking to a later moment when the notes are read and sometimes rearranged and used in articulating a thought. But personal notes can also be shared with others, on a limited scale with family and friends and on a wider scale through publication, notably in genres that compile useful reading notes for others. A history of note taking has significance beyond the study of individual sets of extant notes by shedding light on aspects of note taking that were widely shared, notably through being taught in schools or used in particular professional contexts.

Notes can take many forms—oral, written, or electronic. At its deepest level, whatever the medium, note taking involves variations on and combinations of a few basic maneuvers, which I propose to identify as the four Ss: storing, sorting, summarizing, and selecting. Human memory is the storage medium with the longest history, and it remains crucial today despite our reliance on other devices, from ink on paper to computers. The range of storage media operative in different historical contexts includes the marked stone token, the clay tablet, the knotted cord or quipu, the pa-

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pyrus scroll, and the sheet of parchment. Each method of storage carries with it constraints of reliability, preservability, and accessibility. The book scores particularly well on all these points compared to the computer, which is now usually reliable but requires a considerable technical infrastructure and generates increased problems of compatibility and accessibility over time.

Storage involves some kind of arrangement or sorting, often designed for ease of retention and retrieval. In oral cultures the sorting function can be performed, for example, by integration into a narrative (storytelling or bardic poetry). In written cultures material is typically sorted alphabetically (or by some other method of linguistic ordering such as the number of strokes in Chinese characters), or systematically, according to various systems that strive to map or hierarchize the relations between the items stored (including those of Google or Yahoo), or miscellaneous. In the case of miscellaneous arrangements, which are increasingly practical in computer files but which were also the order of choice for a variety of reference books in Renaissance Europe, the user requires a finding aid—an electronic search function or, in the case of a printed book, an alphabetical subject index. Both of these finding aids are vulnerable to flaws in the original text such as typographical errors—a mistyped word will escape the search function while an error in pagination will invalidate an alphabetical index entry. Each method of sorting, too, entails constraints and easements in the retrieval of the stored material.

Note taking differs from the transmission of whole texts in that only parts of a whole are selected for transmission. The note taker can process many texts in this way and can integrate the selections from different sources into one set of references. Francis Bacon outlined the two principal methods of note taking in a letter of advice to Fulke Greville, who was seeking to hire one or more research assistants in Cambridge around 1599: “He that shall out of his own Reading gather [notes] for the use of another, must (as I think) do it by Epitome, or Abridgment, or under Heads and Common Places. Epitomes may also be of 2 sorts: of any one Art, or part of Knowledge out of many Books; or of one Book by itself.”¹ The first method, epitome or abridgment, entails summarizing or paraphrasing the original text or

1. Quoted in Vernon F. Snow, “Francis Bacon’s Advice to Fulke Greville on Research Techniques,” *Huntington Library Quarterly* 23, no.4 (1960): 370; hereafter abbreviated “FB.”

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texts. These notes, generally presented in the order of the text from which they were produced, are often called *adversaria*.² The second method is to select passages of interest for their content or their style, which are copied and sorted under a thematic or topical heading to facilitate retrieval. These categories and the notes that correspond to them are usually called commonplaces.³ Bacon favored the latter as “of far more profit, and use” (quoted in “FB,” p. 372). These two basic methods of note taking can be identified throughout the European tradition from the ways in which authors refer to other authors, by quoting them or summarizing their arguments, and from the genres of writing that offer ready-made the results of note taking in order to spare others the effort of taking notes themselves (fig. 1).

The genres that operate by reduction include, for example, epitomes of Livy’s histories and plot summaries of ancient plays, the encyclopedias of the Middle Ages (though the term is anachronistic) from Isidore of Seville to Vincent of Beauvais or Bartholomaeus Anglicus, and the textbook or pedagogical manual—a genre that has flourished since the early modern period under the impact of printing and the expansion of education. Genres that operate by selection include collections of quotations, opinions, or anecdotes, such as those of Valerius Maximus or Diogenes Laertius. The florilegium or collection of flowers (that is, choice passages) originated in the thirteenth century as an aid to preachers seeking to adorn their sermons with authoritative quotations and illustrative examples. The principle behind the florilegium has persisted in a variety of forms down to the encyclopedia of quotations and the anthology of literature current today. Indeed we too continue to take notes primarily by summarizing and selecting, with the main difference being that modern academic conventions call for us to record our sources more consistently and more accurately than medieval or early modern scholars did.

At the deepest level, then, note taking presents some consistent features that are identifiable across many differences of time and place. The long continuities that undergird the Western tradition of note taking and that can be explained in part by cultural inertia also invite comparison with the methods of working in other text-based traditions (for example, Chinese

2. On this term, see Jean-François Chatelain, “Les Recueils d’*adversaria* aux XVIe et XVIIe siècles: Des pratiques de la lecture savante au style de l’érudition,” in *Le Livre et l’historien: Etudes offertes en l’honneur du Professeur Henri-Jean Martin*, ed. Frédéric Barbier (Geneva, 1997), pp. 169–86. In a looser sense the term is also used to designate notes of any kind, as in the *Adv.* shelfmark in the Cambridge University Library reserved for books containing marginal annotations; see William H. Sherman, *John Dee: The Politics of Reading and Writing in the English Renaissance* (Amherst, Mass., 1995), pp. 65–66.

3. For an important recent study of this tradition, see Ann Moss, *Printed commonplace-Books and the Structuring of Renaissance Thought* (Oxford, 1996).

notes have been studied, it has been to recapture the thought processes of famous thinkers or writers. As a result the studies we have of reading notes and compositional drafts, from George Berkeley and Thomas Jefferson to Proust and Flaubert, strive for a deeper understanding of the creative process of a significant individual without attempting to develop any general conclusions.⁶ To the cultural historian, however, note taking is most interesting at a level between that of the universal and that of the individual, where it can shed light on cultural expectations and material practices that are representative of a particular historical context and where methods of note taking can be shown to contribute to shaping the modes of thought and argument characteristic of that milieu.

A spate of recent work has begun to uncover the culturally specific practices of note taking in various European contexts ranging especially from antiquity to the eighteenth century. This historical interest is fueled not only by the rapid growth of the history of reading, of which the study of note taking is an offshoot, but also by our current experience with new technologies and our sense (often more diffuse than articulate) that the computer is changing both the way we take notes and the kinds of notes and writing we produce.⁷ Yet even today note taking generally remains an area of tacit knowledge, acquired by imitation rather than formal instruction, and about which there is little explicit discussion. The field of education generates a literature on note taking that strives to improve the performance of students with and without special needs. Colleges offer support services in the form of handouts and seminars in study skills and what they call *note making* to emphasize the active role the learner plays in making (rather than taking) notes.⁸ But there is little so far that addresses how note taking is changing as new tools have become and continue to become available, from the Post-it and the highlighter to software programs and the Palm Pilot.⁹ Despite the difficulty of finding and interpreting sources, we may be in a better position to analyze past methods of note taking than our own. A historical perspective offers promising grounds for reflection on how dif-

6. For an introduction to recent work of this type, see Pierre-Marc de Biasi et al., *Pourquoi la critique génétique? Méthodes, théories* (Paris, 1998).

7. See, for example, Jay David Bolter, *Writing Space: The Computer, Hypertext, and the History of Writing* (Hillsdale, N.J., 1991); Christina Haas, *Writing Technology: Studies on the Materiality of Literacy* (Mahwah, N.J., 1996); and *Literacy Online: The Promise (and Peril) of Reading and Writing with Computers*, ed. Myron C. Tuman (Pittsburgh, 1992). For a discussion of the impact of linotype, see Hugh Kenner, *The Mechanic Muse* (Oxford, 1987).

8. As produced, for example, by Harvard's Bureau of Study Counsel.

9. Most guides to research devote a few pages to methods of note taking, but they lag behind the new technologies; see, for example, Jacques Barzun and Henry F. Graff, *The Modern Researcher* (1957; Boston, 1992).

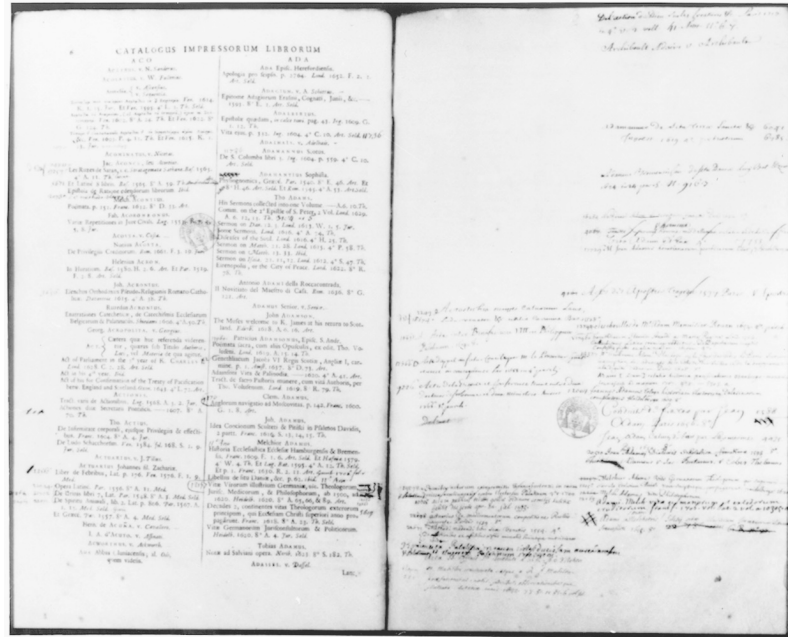


FIGURE 2. Annotations in an interleaved copy of the printed catalog of the Bodleian Library of 1674 are designed to serve as the record of the holdings of the Mazarine Library in Paris in the late seventeenth century. This example of the reuse of another library's cataloging work is comparable to the reuse of electronic library records today. Bibliothèque Mazarine MS 4138–4145, Thomas Hyde, *Catalogus impressorum librorum bibliothecae Bodleiana* (Oxford, 1674), interleaved in 8 volumes. Reproduction by the Bibliothèque Mazarine, Paris.

ferent kinds of note taking can have an impact on the way we think and write.

Kinds of Notes

There are many possible criteria on which to draw up a typology of note taking broadly conceived: by field (commercial, legal, medical, literary, philosophical), by type of source (from listening, from reading, from travel and direct experience, from thinking), by intended audience (for short- or long-term use, for sharing with others or for private use), by general purpose (rhetorical, factual, playful). Some of these kinds of notes are especially distinctive, as I will outline briefly in a few instances (fig. 2). Merchants, for example, were long famous for keeping two separate notebooks: a daybook to record transactions in the order in which they occurred and a second notebook in which these transactions were sorted into categories. References to the merchant's two notebooks as a model for student note taking

was common among early modern authors, and the notion of the merchant as a model to imitate persisted through changes to new techniques. An advocate for the index card in the early twentieth century called for an imitation of “accountants of the modern school.”¹⁰ Most recently, the emergence of the fact has been attributed to methods of commercial record keeping (and double-entry bookkeeping in particular).¹¹ Legal note taking would also warrant study as a distinctive practice, which generated the particularly large accumulations of references characteristic of law books from the middle ages on.¹²

More widespread than techniques associated with particular professions were the note-taking methods taught in schools. From earliest antiquity teaching was mostly oral; what we know of ancient teaching is largely dependent on the notes that listeners took. What we call the works of Aristotle, for example, are thought to be mostly composed from student notes. Different forms of notes would have resulted from different teaching settings: for example, the acroamatic, major works from lecturing, and the *problemata*, with their multiple answers to questions, from a more discussion-oriented kind of teaching. One seventeenth-century teacher concluded that note taking must have been practiced even by the followers of the *prisca sapientia* famous for their reliance on memory and their contempt of writing: “How else would their writings survive to us? . . . They wrote on all kinds of things: they used wax, wood, cloth, bark, tree leaves, lead, skins,

10. Paul Chavigny, *Organisation du travail intellectuel: Recettes pratiques à l'usage des étudiants de toutes les facultés et de tous les travailleurs* (Paris, 1920), p. 16. Francis Bacon compared one of his notebooks to a merchant's wastebook; see Brian Vickers, introduction to Francis Bacon, *Francis Bacon*, ed. Vickers (Oxford, 1996), p. xliii. Francesco Sacchini recommends two notebooks in *De ratione libros cum profectu legendi libellus* (Würzburg, 1614), chap. 13, p. 91: “Not unlike attentive merchants . . . [who] keep two books, one small, the other large: the first you would call *adversaria* or a daybook (*ephemerides*), the second an account book (*calendarium*) and ledger (*codex*).” I am grateful to Helmut Zedelmaier for a copy of this Latin edition. The comparison also occurs in Georg Christoph Lichtenberg, as discussed in Anke te Heesen, “Die doppelte Verzeichnung: Schriftliche und räumliche Aneignungsweisen von Natur im 18. Jahrhundert,” in *Gehäuse der Mnemosyne: Architektur als Schriftform der Erinnerung*, ed. Harald Tausch (Göttingen, 2003), pp. 263–86. Cicero already contrasted the short-lived memoranda of the merchant with the more carefully kept account book designed as a permanent record; see Cicero, “Pro Quinto Roscio comoedo oratio,” *The Speeches*, trans. John Henry Freese (Cambridge, Mass., 1930), 2.7, pp. 278–81.

11. See Mary Poovey, *A History of the Modern Fact: Problems of Knowledge in the Sciences of Wealth and Society* (Chicago, 1998).

12. For an introduction to early modern juridical citations see Michel Reulos, *Comment transcrire et interpréter les références juridiques (droit romain, droit canonique, et droit coutumier) contenues dans les ouvrages du XVIIe siècle* (Geneva, 1985). Medical note taking would also be worth studying; for one example, see Richard J. Durling, “Girolamo Mercuriale's *De modo studendi*,” in *Renaissance Medical Learning: Evolution of a Tradition*, ed. Michael McVaugh and Nancy G. Siraisi (Philadelphia, 1991), pp. 181–95; on the genre of the *consilia*, see Jole Agrimi and Chiara Crisciani, *Consilia médicaux*, trans. Caroline Viola (Turnhout, 1994).

and palimpsests. We most conveniently use paper and rejoice in the printers; this way of writing is so easy that leisure is not more pleasant than work.”¹³ No doubt this rational reconstruction of ancient note taking is a better indicator of attitudes in the seventeenth century than among the Pythagoreans. But the point is well taken: only those teachings that were committed to writing at some point have survived. Historians too might consider the extent to which note taking played a role in the transmission of learning even in a period noted for its cultivation of memory; indeed, note taking was long perceived as a powerful aid to memory.

In general we have insufficient evidence to reconstruct the specifics of the classroom experience from antiquity through the early modern period, and we certainly can expect it to have varied. Medieval lectures were not simply dictations; students came equipped with a manuscript version of the text being discussed and might not always have needed to take notes.¹⁴ From the sixteenth century we have printed school texts abundantly annotated in the margins and on interleaved pages with commentary that was likely dictated in the classroom and copied over neatly after the fact in the printed book (fig. 3). In one example from 1629 students in the same class in Paris came away with full-text notes from a course on geography, identical but for aural mistakes; the entire text of this extracurricular course was evidently provided by dictation.¹⁵ One hundred and fifty years later student notes of Kant’s lectures on anthropology were circulated and sold as complete versions of his lectures. How exactly these notes (now extant only in later copies) were produced by listening students is a matter of some speculation. The students may have used forms of abbreviation and condensing (steno-graphy was only developed for German in 1834); students may also have worked together to each take down successive sentences of the lecture, following a method attributed to the pietistic preacher August Hermann Francke (1663–1727), which he called a *Schreibechor* or writing chorus.¹⁶ In-

13. Jeremias Drexel, *Aurifodina artium et scientiarum omnium: Excerptendi sollertia, omnibus litterarum amantibus monstrata* (Antwerp, 1638), pp. 68–69; hereafter abbreviated A.

14. See Paul Saenger, “Reading in the Later Middle Ages,” in *A History of Reading in the West*, trans. Lydia G. Cochrane, ed. Guglielmo Cavallo and Roger Chartier (Amherst, Mass., 1999), p. 133. Beryl Smalley attributes to the Victorines the innovation of taking down lecture notes, called *reportationes*; see Beryl Smalley, *The Study of the Bible in the Middle Ages* (Oxford, 1952), p. 202.

15. For an example of a *Sammelband* of annotated school texts, see Ann Blair, “*Ovidius Methodizatus*: The *Metamorphoses* of Ovid in a Sixteenth-Century Paris Collège,” *History of Universities* 9 (1990): 73–118; for the geography course, see Blair, “The Teaching of Natural Philosophy in Early Seventeenth-Century Paris: The Case of Jean-Cécile Frey,” *History of Universities* 12 (1993): 96.

16. See Reinhard Brandt and Werner Stark, introduction to Immanuel Kant, *Vorlesungen über Anthropologie*, ed. Brandt and Stark, 2 vols. (Berlin, 1997), 1:lxxi–ii. No original set of notes taken by a group of students has as yet been identified. On the general pedagogical context of these

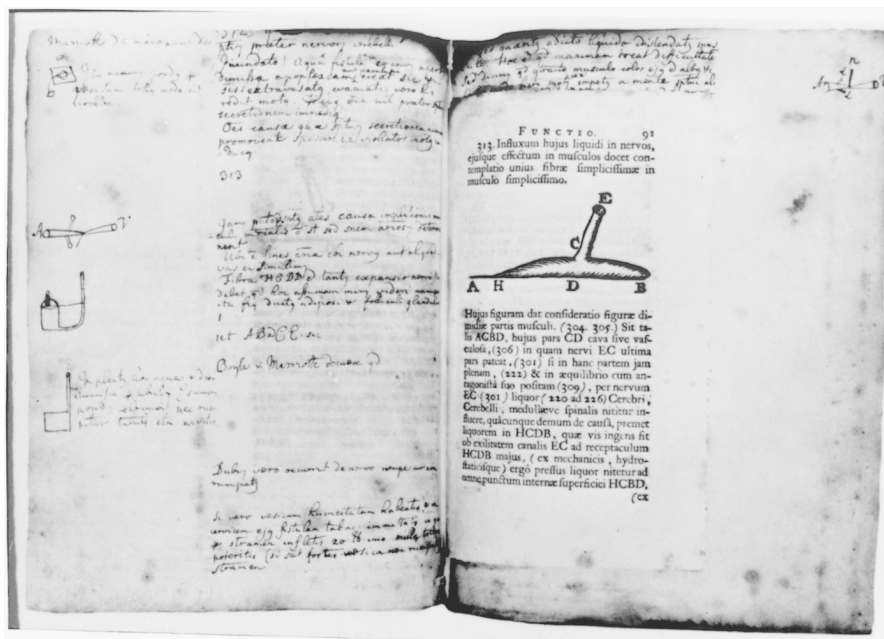


FIGURE 3. Notes by William Logan on the medical lectures of Hermann Boerhaave (1668–1738), on blank pages interleaved for note taking in Boerhaave’s *Institutiones medicae* (Leiden, 1708). Volumes of this kind, which combined a printed textbook with notes taken during lectures, would have been for sale among students. This one stayed in the family until the first owner’s nephew, William Logan of Philadelphia, bequeathed it to the Library Company, Philadelphia. From *Quarter of a Millennium: The Library Company of Philadelphia 1731–1981: A Selection of Books, Maps, Prints, Drawings, and Paintings*, ed. Edwin Wolf and Marie Elena Korey (Philadelphia, 1981), p. 76; reproduction by Harvard University Media Services.

deed, it would be helpful to study as a parallel to note taking in lectures the tradition of note taking during sermons. The written *reportationes* of medieval sermons produced by listeners were not a verbatim transcription of the oral sermon but rather a reconstruction based on schematic notes.¹⁷ Judging from the elaborate solution attributed to Francke, we can surmise that note taking at the Sunday sermon was a common practice centuries later among German pietists.

The notes that are still extant today, saved for later consultation or even for sale or bequest to others, are often quite polished and mask an earlier,

lectures, see Stark, “Historical Notes and Interpretive Questions about Kant’s Lectures on Anthropology,” trans. Patrick Kain, in *Essays on Kant’s Anthropology*, ed. Brian Jacobs and Kain (Cambridge, 2003), pp. 15–37, esp. 15–20.

17. See Nicole Bériou, “La Réportation des sermons parisiens à la fin du XIIIe siècle,” *Medioevo e rinascimento* 3 (1989): 87–123.

messier stage of notes long since discarded. The vast majority of notes are designed for short-term use and do not survive at all for lack of any desire to preserve them. Just as we generate Post-its and notes on scraps of paper soon to be discarded and we overwrite computer files regularly, destroying previous versions even though it would be perfectly feasible to save them, so too note takers from antiquity to the early modern period relied on temporary writing surfaces for much of their note taking.¹⁸ These short-term notes would be copied over onto a more permanent medium and typically sorted or integrated into preexisting notes in the process. The best-known temporary writing surface is the wax tablet, easily erased and reused, which Pliny is described as always keeping on hand in order to record an observation (usually by dictation to a slave); wax tablets were the medium on which ancient texts were typically first composed, too, and Quintilian thought it best that they not be too large, to restrain copiousness.¹⁹ New technologies of the early modern period included erasable tablets made of specially treated paper from which marks could be wiped off with a little moisture; these were likely used for quick note taking, for example, while away from one's quill, ink, and desk, pending the opportunity to enter the material into a more permanent and systematic record.²⁰

As this brief sampling from the wide range of note types suggests, gathering evidence for a history of note taking is not easy. From antiquity when papyrus was the permanent medium of choice, with a typical life expectancy of around 300 years, the notes survive only in small fragments or under special conditions. We have, for example, some notes and drafts of the Epicurean philosopher Philodemus that were found among the charred remains of scrolls preserved under seventy feet of volcanic ash at Herculaneum.²¹ While many ancient texts were copied from papyrus onto parchment in order to ensure their preservation and transmission, no sets of notes were copied in this way, however voluminous or historically significant they may have been (Pliny the Younger, for example, inherited from his uncle 160 scrolls of notes written on both sides). From the Middle Ages the first autograph manuscripts date from the twelfth century, but these author's

18. Forgetting is also an important aspect of remembering; see Harald Weinrich, *Gibt es eine Kunst des Vergessens?* (Basel, 1996).

19. For the most recent study of ancient working methods, see Tiziano Dorandi, *Le Stylet et la tablette: Dans le secret des auteurs antiques* (Paris, 2000). For Pliny the Younger's famous description of his uncle's working methods, see Pliny, *Letters and "Panegyricus,"* trans. Betty Radice, 2 vols. (Cambridge, Mass., 1969), 3.5, 1:172–79. See also Quintilian, *The Orator's Education*, trans. and ed. Donald A. Russell, 5 vols. (Cambridge, Mass., 2001), 10.3.32, 4:351.

20. As studied by Peter Stallybrass in joint work with Frank Mowery, Roger Chartier, and Heather Wolfe, entitled "Hamlet's Tablets and the Technologies of Writing in Renaissance England," forthcoming in *The Tables of Memory: Technologies of Reading and Writing in Early Modern England and America*.

21. See Marcello Gigante, *Philodemus in Italy: The Books from Herculaneum*, trans. Dirk Obbink (Ann Arbor, Mich., 1995), p. 16.

books are fairly finished works rather than notes or drafts.²² Medieval notes are best preserved in the margins of manuscripts, whether made by the reader directly or by a professional reader to aid the reading of another. They served primarily as mnemonic or meditative aids or to enhance the *ordinatio* of the text, but occasionally they also took a self-reflexive or potentially dissenting tone.²³ We can catch glimpses of systems of note taking that made possible the scholastic practice of extensive citation. Robert Grosseteste, for example, drew up a topical index to his readings using 217 symbols that linked collections of citations kept in a separate manuscript to the corresponding passages in the books he owned in his library.²⁴ An alternative kind of note taking was encouraged in the late Middle Ages among members of new lay spiritual movements such as the Brethren of the Common Life, who would keep a diary of their thoughts and readings;²⁵ the trajectory of the diary is distinct from, but often intersects with, that of the commonplace book of notes sorted topically.²⁶

Note taking is easier to document from direct evidence in the early modern period. We have the notebooks of a number of famous scholars (for example, seven volumes of notes by Guillaume Budé, just a fraction of his original output, and a few dozen by Joseph Justus Scaliger), preserved by their families and then in continuously existing libraries down to the present.²⁷ The preservation of early modern printed books has also kept intact (but for the unfortunate cleaning and cropping of pages during rebinding) many handwritten marginal annotations (fig. 4). But even when they are preserved in greater abundance, extant notes do not represent all of the various stages of reading, note taking, and composing. Intermediate notes and drafts were never meant to be kept; we may have the reading notes of one scholar and the compositional notes of another. Therefore another method of analysis (and the principal one for earlier periods) is to hypothesize from finished texts about the methods of note taking from which they were composed. This kind of rational reconstruction is typically supported

22. See Armando Petrucci, *Writers and Readers in Medieval Italy: Studies in the History of Written Culture*, trans. Charles M. Radding (New Haven, Conn., 1995), chap. 8.

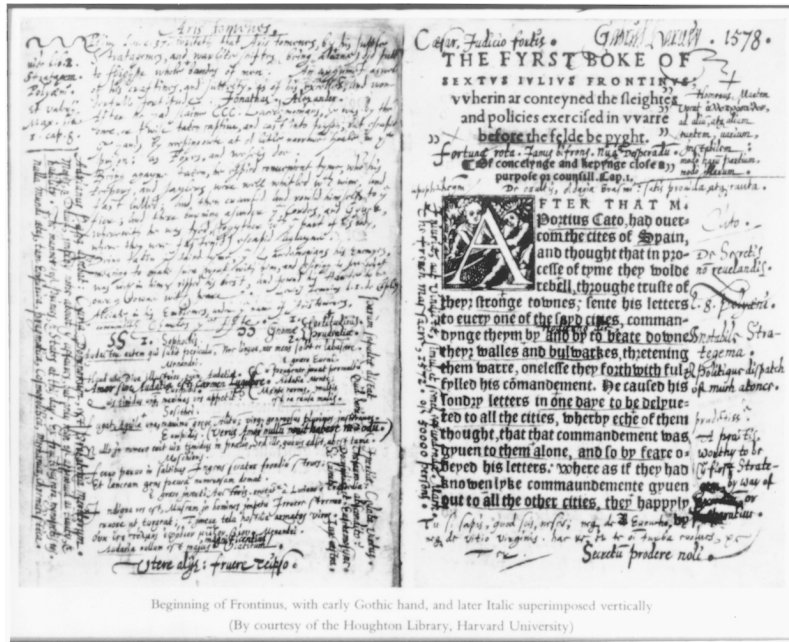
23. See *The Medieval Professional Reader at Work: Evidence from Manuscripts of Chaucer, Langland, Kempe, and Gower*, ed. Kathryn Kerby-Fulton and Maidie Hilmo (Victoria, 2001).

24. This tabula is edited by Philipp W. Rosemann in *Opera Roberti Grosseteste Lincolnensis*, ed. J. J. McEvoy, 1 vol. to date (Turnhout, 1995–), 1:235–320, esp. p. 236. I am grateful to John Flood for this reference.

25. See John van Engen, “The Work of Gerlach Peters (d. 1411), Spiritual Diarist and Letter-Writer, a Mystic among the Devout,” *Ons geestlike erf73* (1999): 150–77.

26. On the diary and its origins in different kinds of writing, see Robert A. Fothergill, *Private Chronicles: A Study of English Diaries* (Oxford, 1974).

27. See Anthony Grafton, “How Guillaume Budé Read his Homer,” *Commerce with the Classics: Ancient Books and Renaissance Readers* (Ann Arbor, Mich., 1997), p. 169 and the list of manuscripts in *Joseph Scaliger: A Study in the History of Classical Scholarship*, 2 vols. (Oxford, 1983–93), 2:753–55.



Beginning of Frontinus, with early Gothic hand, and later Italic superimposed vertically
(By courtesy of the Houghton Library, Harvard University)

FIGURE 4. Gabriel Harvey (c. 1550–1631) was an abundant annotator of printed books. These notes of his on an English edition of Frontinus’s *Stratagems* include highlighting (in English, Latin, and Greek) proper names cited and examples of interest and adding proverbial maxims and parallel reflections from other authors (such as Aristotle on the top of the left page). From Virginia F. Stern, *Gabriel Harvey: His Life, Marginalia, and Library* (Oxford, 1979), following p. 148; reproduction by Harvard University Media Services.

by other evidence, notably comments about working methods that can be analyzed for context and nuances of meaning.

The early modern period offers yet another type of source for the first time: manuals of advice about how to take notes. More detailed than the precepts of fifteenth-century humanist pedagogues like Guarino da Verona are entire treatises on the subject produced in the Jesuit and the German academic contexts of the seventeenth century. The longest running of these is Francesco Sacchini, *De ratione libros cum profectu legendi libellus* (On How to Read Books with Profit) first published in Latin in 1614 and as late as 1786 in French and 1832 in German; the most influential may be Jeremias Drexel’s *Aurifodina*, or *The Mine of All Arts and Sciences, or the Habit of Excerpting* (1638), in fourteen editions to 1695, followed by abridgments, imitations, and responses.²⁸ These manuals emphasized notes taken from reading,

28. See Sacchini, *Moyens de lire avec fruit*, trans. Durey de Morsan (The Hague, 1786) and *Über die Lektüre, ihren Nutzen und die Vortheile sie gehörig anzuwenden, nach dem Lateinischen des P. Sachini teutsch bearbeitet und mit einem Anhang begleitet von Herrmann Walchner* (Karlsruhe, 1832)—I am grateful to Helmut Zedelmaier for the information about the German

though they also recommended including items of note that are “heard and seen” (A, p. 83; see also A, sig. A7v). In turning now to a sketch of some of the consequences of early modern excerpting, I will use Drexel’s treatise as representative of the basic principles of note taking that were widely shared in sixteenth- and seventeenth-century Europe across national and religious divides.²⁹

Some Consequences of Early Modern Note Taking

Attention to note taking can shed new light on the mnemonic abilities for which scholars were so widely praised in the early modern period. One of the most frequent ways of praising a scholar was to praise his memory. Jean Bodin, to name but one example, was praised by Henry III for his ability to pour out on any topic of conversation “an abundance of most beautiful things from his excellent memory.”³⁰ As in antiquity and the Middle Ages, a capacious and prompt memory was highly regarded as a sign of both intellectual ability and moral worth.³¹ Frances Yates has made historians aware of the arts of memory and the amazing feats performed by using vivid place imagery,³² but note taking is another way of aiding the memory, particularly for long-term as opposed to short-term retention, with an equally long pedigree and greater representation among scholars. Early modern scholars praised for their memories generally did not rely on the techniques attributed to Simonides but rather on abundant note taking; indeed, pedagogues in the humanist tradition, from Erasmus to Drexel, were routinely hostile to the arts of memory.³³

edition, which I have not seen. See also A, as discussed in Helmut Zedelmaier, “Johann Jakob Moser et l’organisation érudite du savoir à l’époque moderne,” in *Lire, copier, écrire: Les Bibliothèques manuscrites et leurs usages au XVIIIe siècle*, ed. Elisabeth Décultot (Paris, 2003), p. 54. Spin-offs from Drexel include Kergerus, *Methodus drexeliana succinctior* (1658) and P. Philomusus [Johannis Jacobus Labhart], *Industria excerptendi brevis, facilis, amoena* (Konstanz, 1684). Other works in the genre include Johann Petrus Titius, *Manuductio ad excerptendum* (Danzig, 1676); Just. Christoph. Udenius [Michael Kirsten], *Excerptendi ratio nova* (Nordhausen, 1684); Vincent Placcius, *De arte excerptendi vom gelehrten Buchhalten liber singularis: Quo genera et praecepta excerptendi* (Stockholm, 1689); Fridericus Sidelius, *De studio excerptendi* (Jena, 1713); and Daniel Georg Morhof, *Polyhistor, literarius, philosophicus, et practicus: Cum accessionibus virorum clarissimorum Ioannis Frickii et Iohannis Molleri* (Lübeck, 1732), bk.1, tome 3, chap. 1.

29. It would be another project, intriguing but difficult, to try to identify variations in note taking that correspond to different religious, national and institutional contexts.

30. From the words of de Thou, quoted in Pierre Bayle, *Dictionnaire historique et critique* (Basel, 1738), s.v. “Bodin,” n. E.

31. See Jocelyn Penny Small, *Wax Tablets of the Mind: Cognitive Studies of Memory and Literacy in Classical Antiquity* (London, 1997), p. 130, and Mary Carruthers, *The Book of Memory: A Study of Memory in Medieval Culture* (Cambridge, 1990), p. 13.

32. See Frances A. Yates, *The Art of Memory* (Chicago, 1966).

33. On Erasmus’s preference for “study, order and care” over places and images, see Erasmus, *De ratione studii* (1512), quoted in Yates, *The Art of Memory*, p. 127. Conversely, authors in the arts of memory tradition make no mention of note taking: see Christoph Meinel, “Enzyklopädie der

Drexel begins his manual on excerpting by debunking the notion that memory can suffice to retain the fruits of one's reading. He relates various feats of memory—from the great men of antiquity to the recent case of a Corsican law student who could recite 36,000 names in order—but he notes that such gifts are not widespread nor are their results long-lived. Instead he concludes that “human memory is slow, narrow, volatile and unfaithful unless it is strengthened with memory aids” (A, p. 3). Drexel emphasizes the difficulty of image-based arts of memory and how short-lived are their results: “Great labor places so many images of things in this treasury of memory; but no amount of labor has managed to preserve them there for long without excerpts” (A, p. 3). Instead, for Drexel excerpting is the only sure way to retain material for the long term. Drexel insists too that, far from detracting from memory, note taking is the best aid to memory. The act of copying out a passage helps to read it more slowly and retain it in memory, and the notes collected in this way should be the object of focused study, even to the point of memorization. “It is not enough to excerpt, without remembering what you excerpted” (A, p. 56; see also A, pp. 67, 84–85).

A good memory remains for Drexel a sign of moral worth and virtuous hard work. Excerpting requires effort and thus combats natural laziness; in his regimen there is no reading without taking notes, which would be idle and vain, and no time wasted because every free moment can be put to use reading over one's notes (see A, p. 84). The association of note taking with moral worth has proved persistent. Many a self-improvement program in the eighteenth century and beyond involved the promise to keep one's diary or reading notes more religiously. Note taking was a warrant of the utility of one's reading and kept the reader suitably busy, safe from the risk of idleness.³⁴

The kinds of notes that Drexel and other pedagogues recommended also account for a number of peculiarities of early modern treatises, from their clusters of references to their copious strings of examples. Drexel calls for three kinds of notes. The first are lemmata that record under topical headings of the note taker's choosing relevant bibliographical references. Lemmata may include only the briefest comment about a book (for example, “this author writes copiously on the subject”), but no text is actually copied

Welt und Verzettelung des Wissens: Aporien der Empirie bei Joachim Jungius,” in *Enzyklopädien der frühen Neuzeit: Beiträge zu ihrer Erforschung*, ed. Franz Eybl et al. (Tübingen, 1995), p. 186.

34. See, for example, Benjamin Franklin's record keeping about his behavior in Benjamin Franklin, *Autobiography*, ed. J. A. Leo Lemay and P. M. Zall (New York, 1986), p. 70. On the importance of making reading seem morally useful, particularly in the eighteenth century, when reading was spreading to new social groups, see Reinhard Wittmann, “Was There a Reading Revolution at the End of the Eighteenth Century?” in *A History of Reading in the West*, pp. 292–93.

out from the source; the reference is simply recorded alongside other sources on the topic. These bibliographical notes may be useful as a guide to books in one's own collection to which one can easily refer back, but I suspect that they were used mostly without further reference to the original source to create those abundant strings of references placed in notes in the margin or at the bottom of the page that were meant to impress the reader with one's erudition. Drexel describes creating such clusters through accumulated attentive reading and shows off from his own collection of notes an impressive string of references on unusual themes that one would not find in a printed commonplace book, like his seven pages of references to tears or the shorter entries for dance and bacchanalia (see *A*, pp. 88–101).³⁵ In addition to constructing clusters of references, this method can also be used to lift citations from one work to reuse them in one's own and can account for the movement of clusters of citations from one book to another that is a feature of early modern scholarship.³⁶ Contemporaries were aware too of the risks of this practice, and commonplace note taking was blamed for fostering plagiarism and encouraging the excessive publication of tralatitious works, as early as the sixteenth century and down to the eighteenth.³⁷

Drexel's second type of note (which he calls *adversaria*, adding another meaning to an already polysemous term) involves copying out from the source (complete with bibliographical citation) such items as "ancient rituals, epitaphs, notable descriptions, sententiae, and longer sayings that are rare, admirable, new, or old." Drexel emphasizes the need to select the unusual: "One may without blame pass over what is obvious, ordinary, very trite, and said a thousand times" (*A*, pp. 86, 83). This category of material is mostly rhetorical in nature and useful for quoting explicitly or for integrating silently into one's prose. Modern scholars will never be able to identify all the allusions to classical authors that litter humanist writing. Some cases of intertextuality may result from unintentional echoes of texts studied so thoroughly that they recur in later patterns of thought and expression. But one of the acknowledged purposes of note taking was to collect apt

35. Tears, pp. 88–95; resurrection, pp. 95–96; love of enemies, pp. 96–98; dance and jumping, pp. 98–99; and bacchanalia and their origin, pp. 99–101.

36. For one example, see how Jean Bodin lifts a set of references from Pico della Mirandola, as discussed in Blair, *The Theater of Nature: Jean Bodin and Renaissance Science* (Princeton, N.J., 1997), p. 76. More generally on footnoting, see Grafton, *The Footnote: A Curious History* (Cambridge, Mass., 1997).

37. For critiques of commonplacing, see Meinel, "Enzyklopädie der Welt und Verzettlung des Wissens," p. 57; Grafton, "Les Lieux communs par les humanistes," in *Lire, copier, écrire*, p. 39; and Déculot, "L'Art de l'extrait: Définition, évolution, enjeux" and "L'Art winckelmannien de la lecture: Reprise et subversion d'une pratique érudite," in *Lire, copier, écrire*, pp. 23, 93.

phrases for reuse, not only in composing books, Drexel emphasizes, but “also for orations or whatever you must compose” (A, p. 66). The manuscripts of hastily abandoned commonplace books especially contain expressions useful for letter writing: elegant ways of saying thank you, of apologizing for the tardy reply, of asking for money, and so on.³⁸

Drexel’s third class of notes (*historica* or *exempla*) comprises anecdotes of human behavior taken from human history of all places and periods. Drexel notes that the historical passages may be “noted briefly or described in their entirety,” but he does not call for a distinction to be made between an exact quotation and a summary or paraphrase (A, p. 126). The habit of citing inaccurately but as if with precision may be explained by this way of combining quotations with paraphrases in one’s notes without signaling the difference. Inaccurate quotations have often been attributed to citations from memory, but they can equally well be the result of following a method of note taking like Drexel’s. Some early modern note takers were consistent in copying out whole passages accurately, while others combined excerpts with paraphrases, even interspersed with personal judgment and commentary.³⁹ Once taken, the notes generally served in lieu of further reference to the original source; indeed, their purpose was to substitute for all those books one did not have money to buy or time to read.⁴⁰ Thanks to recent studies of his abundant manuscripts, we can witness Montesquieu, for example, claiming to quote directly from the original source in response to a query when in fact he only referred back to his notes, in which he had hastily paraphrased and somewhat distorted the original.⁴¹

As the reader heaped *historica* under topical headings in a notebook, he or she accumulated material from which to write. Young, student readers were encouraged to take notes with no specific purpose. Older, savvier readers and authors tended to take notes targeted to specific projects.⁴² Thus the

38. See, for example, Bibliothèque Nationale MS Fr 1015 and 1016.

39. For example, Johann Joachim Winckelmann copied passages out faithfully while Montesquieu did not distinguish between quotation and paraphrase, though he did designate with an asterisk his own commentary interspersed in his excerpting; see Décultot, “L’Art winckelmannien de la lecture,” pp. 97–98, and Catherine Volpilhac-Auger, “L’Ombre d’une bibliothèque: Les Cahiers d’extraits de Montesquieu,” in *Lire, copier, écrire*, p. 83.

40. Winckelmann excerpted even from books he owned; see Décultot, “L’Art winckelmannien de la lecture,” p. 98. Jean Paul owned few books and excerpting was a way of getting the most out of those he could access; see Christian Helmreich, “Du discours érudit à l’écriture romanesque: Recherches sur les cahiers d’extraits de Jean Paul,” in *Lire, copier, écrire*, p. 185.

41. See Volpilhac-Auger, “L’Ombre d’une bibliothèque,” pp. 88–89.

42. In his early years Winckelmann took notes on everything, including 1,400 pages of excerpts from dictionaries like Zedler and Bayle; during his years in Italy his notes became narrower in scope; see Décultot, “L’Art winckelmannien de la lecture,” pp. 93–96. Many entries in Locke’s commonplace books relate directly to topics treated in his published works, as discussed by Richard Yeo, “John Locke’s ‘New Method’ of Commonplacing: Managing Memory and Information,” *Eighteenth-Century Thought* 2 (2004): 33–69.

only notebooks of Pierre Bayle that survive date from before he started publishing; after that Bayle is presumed to have taken notes that were directly integrated into a text for publication—possibly by cutting and pasting them into a text for the printer or by marking them up directly for publication, as he did with letters he received from which he wanted to quote.⁴³ A notebook well stocked in examples targeted to the topic of a book can explain the copiousness of many an early modern text. Bodin's *Six Books of a Commonweale* accumulates examples in such abundance that his argumentative points are at times obscured; in his *Theatrum* Bodin considers different aspects of a question in separate places and offers explanations that contradict one another without realizing the tensions within his abundant material.⁴⁴ It is likely that Bodin had followed his own advice on how to take notes on history and had accumulated this material under topical headings along with cursory moral judgments (good and bad, useful and useless behaviors).⁴⁵ The copiousness of Montaigne's *Essays* is similarly due to the numerous examples he strings together; in successive revisions Montaigne typically added more examples without removing any. Montaigne's choices of theme and example often seem startling and strikingly original, but his working method is not fundamentally different from Bodin's. As Francis Goyet has shown, Montaigne has assigned his examples to topical headings very thoughtfully, often revising the assignments in a later reading.⁴⁶ A few of Montaigne's examples have been convincingly traced to a printed collection of exempla, Theodor Zwinger's *Theatrum humanae vitae*, and many of them were available from more than one source to which he would have had access.⁴⁷ But commonplace note taking does not imply a commonplace product; Montaigne certainly avoided the trite and oft-repeated, both in his choice of examples and in his use of them, precisely as Drexel recommended.

Finally, Drexel explains how to index one's notes. Each of the three kinds of notes is kept in a quarto-sized notebook and indexed in a separate octavo-sized notebook in an alphabetical list of headings. Most heavy note takers

43. See Elisabeth Labrousse, *Pierre Bayle*, 2 vols. (The Hague, 1963), 1:47–48 n. 97.

44. For example, in the *Universae naturae theatrum*, as discussed in Blair, *The Theater of Nature*, pp. 72–75.

45. See Jean Bodin, *Method for the Easy Comprehension of History*, trans. Beatrice Reynolds (1572; New York, 1945), chap. 2; for more development of this point, see Blair, *The Theater of Nature*, pp. 65–77.

46. See Francis Goyet, "A propos de 'ces pastissages de lieux communs' (le rôle des notes de lecture dans la genèse des *Essais*)," *Bulletin de la Société des Amis de Montaigne* 5–6 (1986): 11–26 and 7–8 (1987): 9–30.

47. See Fausta Garavini, "Montaigne et le *Theatrum humanae vitae*," in *Montaigne et l'Europe: Actes du colloque international de Bordeaux* (Mont-de-Marsan, 1992), pp. 31–45.

devised some form of finding device, from the method of drawing up an alphabetized index that Locke was proud to share with readers of the *Bibliothèque universelle* of 1686 to the index of special symbols with which George Berkeley annotated his notes.⁴⁸ Drexel's discussion of finding devices indicates that even as he calls for the study and memorization of one's notes, he expects that the bulk accumulated will surpass the note taker's ability to recall his material directly, especially over long periods. The note taker will therefore need to consult his notes, accumulated over a lifetime, and consult the index to locate them, perhaps even to recall the topics on which he had notes available.

After Drexel

A recent volume on note taking in the eighteenth century has argued for various gradual shifts of emphasis away from the dominant mode of note taking in the sixteenth and seventeenth centuries—a greater emphasis on things not read but heard and seen; toward the diary based on personal experience and away from notes primarily based on the reading of authoritative sources; a greater and more original choice of headings under which to collect notes; a shift away from faithful transcription toward a paraphrase of the source, often including a personal or critical assessment.⁴⁹ Practices varied considerably in Drexel's time as well as in the eighteenth century. It is hard to find a more original use of notes than Montaigne's, while Winckelmann or, even much later, W. H. Auden continued to take faithful excerpts from readings in a traditional manner. Berkeley's commonplace book contains only personal reflections, questions, and comments, with no excerpts, while Jefferson's contains only excerpts, but not the obvious ones.⁵⁰ Note taking always was and still is very personal, as Drexel himself acknowledged. Readers should devise the method of note taking best suited to them and

48. See John Locke, "Nouvelle Méthode pour dresser des recueils," *Bibliothèque universelle et historique* 2 (1687): 315–39, and George Berkeley, *Philosophical Commentaries*, ed. George H. Thomas and A. A. Luce (New York, 1989); these notebooks are often called Berkeley's commonplace books. On Berkeley's use of signs, see Luce, "Berkeley's Commonplace Book: Its Date, Purpose, Structure, and Marginal Signs," *Hermathena* 22 (1932): 99–131. John Evelyn used a combination of keywords and symbols to arrange his notebooks and provided an index volume to accompany his three folio volumes of commonplace books, as described in Theodore Hofmann et al., "John Evelyn's Archive at the British Library," in Anthony Kenny et al., *John Evelyn in the British Library* (London, 1995), pp. 32–43. For a case of a scholar who devoted so much effort to indexing his notes that he never produced a book from them, see Klaus Weimar, "Les Comptes savants de Johann Caspar Hagenbuch," in *Lire, copier, écrire*, pp. 65–78.

49. See *Lire, copier, écrire*, esp. Décultot's introduction.

50. See Thomas Jefferson, *Jefferson's Literary Commonplace Books*, ed. Douglas L. Wilson (Princeton, N.J., 1989), pp. 13–14. On Auden, among other modern keepers of commonplace books, see Earle Havens, *Commonplace Books: A History of Manuscripts and Printed Books from Antiquity to the Twentieth Century* (New Haven, Conn., 2001), p. 61.

their interests: "You will call yours what you have excerpted with judgment in your activity" (A, sig. A7v). Drexel also emphasized repeatedly the need to exercise judgment in selecting what to excerpt: "with judgment" comes even before "with assiduity" in Drexel's seven rules for excerpting. "It is a vice to excerpt everything," though a lesser vice in Drexel's view than not to take notes at all.⁵¹ Although there were standard headings often repeated in printed commonplace books, Drexel complained that in those ready-made trots one was least able to find what one was most looking for (see A, pp. 39–40). Instead the pedagogues advocated devising one's own headings according to one's own purposes and judgment.

The most generalized change over time may lie less in the method of note taking itself or in the place of individual judgment and idiosyncrasy than in the role ascribed to the note in relation to memory.⁵² On Drexel's account the note is an aid to memory because it triggers recall of the reading or experience recorded, and one should study one's notes in order to remember them. "One seeks from excerpts aids, not to exercise one's memory less, but in order to help memory more happily in its activity" (A, p. 67). But already there are signs in Drexel's account of an alternative conception of the note, as something that relieves the memory and frees up the mind, perhaps even as a quasi-mechanical process that might be best delegated to someone else. Firstly, indexing one's notes, as Drexel advocates, made them available for consultation without requiring one to remember the note itself. Secondly, Drexel and his contemporaries protested against the use of notes taken by another person. Francis Bacon, for example, denounced the hiring of gatherers who would take notes in one's stead: "I think . . . that in general one Man's Notes will little profit another, because one man's Conceit doth so much differ from another's; and also because the bare Note itself is nothing so much worth, as the suggestion it gives the Reader" (quoted in "FB," p. 374). Drexel even puts numbers on the much greater value he assigns to one's own notes: "One's own notes are the best notes. One page of excerpts written by your own labor will be of greater use to you

51. These rules (which often overlap) are: to excerpt with maturity, judgment, assiduity, to select items worthy of note, to read one's notes during idle time, to learn not just copy, and to attend to the purpose of one's studies; see A, p. 82. Drexel comments that taking notes with discernment presents the advantage of not accumulating too much bulk so that the notes may be carried easily from one place to another; see A, pp. 70–71. Drexel cites as an example of "learned vanity and otiose diligence" one Thomas Haselbach who reportedly spent twenty-two years commenting on the first chapter of Isaiah (A, p. 105).

52. Notwithstanding the late publication (down to 1832) of Sacchini's manual, which advocates memorizing one's notes. On the transition from the commonplace book as a method of study to aid the memory to a research tool that serves to relieve the memory, see Yeo, "John Locke's 'New Method' of Commonplacing" and "John Locke's 'Of Study' (1677): Interpreting an Unpublished Essay," *Locke Studies* 3 (2003): 147–65.

than ten, even twenty or one hundred pages made by the diligence of another” (A, p. 58). But these protests themselves are evidence that relying on notes taken by another was not uncommon in this period.

Professional readers like Gabriel Harvey were hired to select the most interesting parts of a book according to precise instructions for the use of high-ranking officials.⁵³ Bequests of personal notes were explicitly included in wills and even fought over in cases of disputed legacy.⁵⁴ The notes of highly regarded scholars were especially valued. I surmise that the sons and nephews who inherited them and pursued learned careers of their own may have put these notes to good use in their own work; there were even attempts made to purchase such notes.⁵⁵ In all these cases notes taken by another were presumed to be of use. They could be consulted in a predictable way and applied to one’s own purposes, even though there would be no personal memory of the initial reading that triggered the note, and it seems unlikely that the new owner intended to memorize the notes acquired from another scholar. Through the spread of systematic methods of note taking like that described by Drexel, note taking could be more easily delegated to others and almost mechanized—books processed for their passages according to explicit criteria that others could follow. By the late seventeenth century some pedagogues actively recommended the practice of delegating note taking. Morhof concludes that if you can afford it, you should employ “learned amanuenses, who use your judgment in collecting, as Saumaise and other very eminent men have done.”⁵⁶ Vincent Placcius boasted of the special utility of his chest of notes taken on slips of paper because it enabled groups of students or members of a literary society to work together on different aspects of a common task by pooling their notes (figs. 5 and 6).⁵⁷ Already in

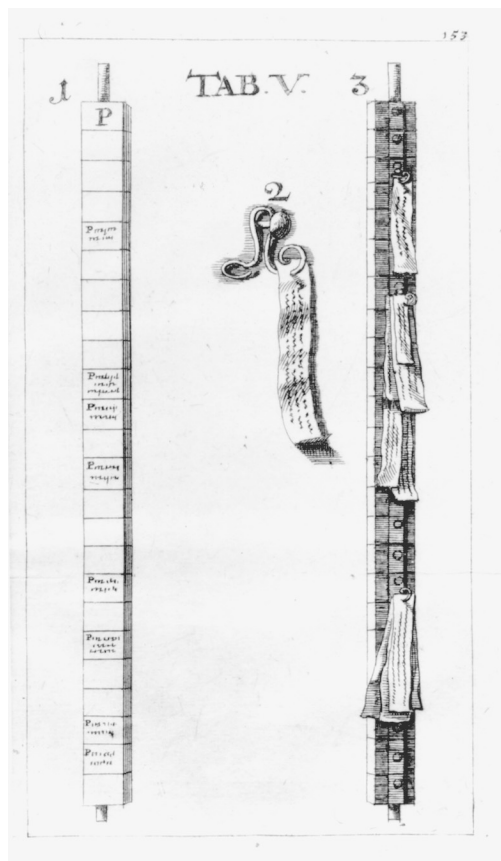
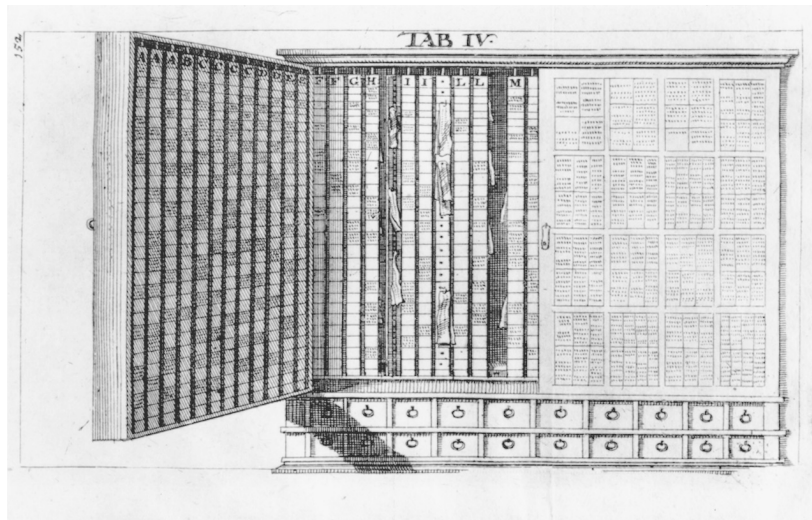
53. See Lisa Jardine and Grafton, “‘Studied for Action’: How Gabriel Harvey Read His Livy,” *Past and Present*, no. 129 (1990): 30–78.

54. See Peter Beal, “Notions in Garrison: The Seventeenth-Century Commonplace Book,” in *New Ways of Looking at Old Texts: Papers of the Renaissance English Text Society, 1985–1991*, ed. W. Speed Hill (Binghamton, N.Y., 1993), p. 134. On disputes over the legacy of the sixteenth-century Italian naturalist Luca Ghini, see Paula Findlen, “The Death of a Naturalist: Knowledge and Community in Late Renaissance Italy,” paper delivered at the Renaissance Society of America, Toronto, 2003; related research on the bequests of Renaissance naturalists is forthcoming in Findlen, *A Fragmentary Past: The Making of Museums and the Making of the Renaissance*.

55. Families with multiple generations of scholars include the Vossii, Scaligers, Casaubons, Estiennes, and Zwingers. For a report that someone attempted to purchase at no small cost the notes of famous legal scholar Hermann Conring, see Placcius, *De arte excerpendi vom gelehrten Buchhalten liber singularis*, p. 185. Already in antiquity Pliny the Younger reports an attempt to buy his uncle’s notes for 400,000 sesterces; see Pliny, *Letters and “Panegyricus,”* 3.5, 1:179. For some discussion, see Jens Erik Skydsgaard, *Varro the Scholar: Studies in the First Book of Varro’s “De re rustica”* (Copenhagen, 1968), p. 102.

56. Morhof, *Polyhistor, literarius, philosophicus, et practicus*, p. 239.

57. See Placcius, *De arte excerpendi vom gelehrten Buchhalten liber singularis*, pp. 146, 161–62. Placcius mentions Keckermann as the first to write “de excerptis socialibus.”



FIGURES 5 and 6. Vincent Placcius's note closet (*scrinium literatum*), as depicted in print in 1689. Placcius improved on a design described in an anonymous manuscript by someone who describes himself as a friend of Samuel Hartlib, c. 1637, currently accessible as British Library MS Add 41,846 (Kenelm Digby Papers). The closet consists of dozens of moveable slats labeled with topical headings, which swivel to access note slips for each heading kept on hooks on the reverse. When open, the closet reveals under one gaze all the headings on which notes are available. From Vincent Placcius, *De arte excerpenti* (Stockholm, 1689), pp. 152–53; reproduction by Houghton Library, Harvard University.

the 1560s the team of scholars working on the massive ecclesiastical history project of the Magdeburg Centuries worked in just such a collaborative way.⁵⁸

In the late seventeenth century Leibniz explicitly spoke of mechanizing intellectual work so as to free astronomers from the “servile labor of calculating.” The crucial device was a calculating machine that made it possible to delegate complex calculations to the lowest-ranking assistant: “It is unworthy of excellent men to lose hours like slaves in the labor of calculation, which could safely be relegated to anyone else if the machine were used.”⁵⁹ Just as the calculating machine could relieve the mind for higher tasks, so too, I would suggest, the note became increasingly used, under the pressures of overabundance, to relieve the memory.⁶⁰ Whereas Drexel and his contemporaries saw no harm in memorizing one’s notes as much as possible, by the early twentieth century memorizing was even seen as a hindrance to more complex reasoning. In a manual of 1920 that promised, as Drexel had three hundred years earlier, to teach more efficient study habits to students and professionals, the medical doctor P. Chavigny advocated using calculating machines so as not to “waste the intellectual force” of men of high intellectual caliber and advocated taking notes on index cards to constitute a “personal memory on paper.” The memory function was explicitly delegated to paper because, according to Chavigny, “too much memorizing can be harmful to the higher intellectual qualities.”⁶¹ This transformation, which I am not yet able to trace in detail, strikes me as one of the most significant in the history of note taking.

Today we delegate to sources that we consider authoritative the extraction of information on all but a few carefully specialized areas in which we cultivate direct experience and original research. New technologies increasingly enable us to delegate more tasks of remembering to the computer, in that shifting division of labor between human and thing.⁶² We have thus

58. See Grafton, “Where Was Solomon’s House? Ecclesiastical History and the Intellectual Origins of Bacon’s *New Atlantis*,” in *Die europäische Gelehrtenrepublik im Zeitalter des Konfessionalismus/The European Republic of Letters in the Age of Confessionalism*, ed. Herbert Jaumann (Wiesbaden, 2001), pp. 21–38.

59. Gottfried Wilhelm Leibniz, “Leibniz on His Calculating Machine,” trans. Mark Kormes, in *A Source Book in Mathematics*, ed. David Eugene Smith (New York, 1959), p. 181. This passage from a Leibniz manuscript in Hannover was first published by W. Jordan, “Die Leibniz’sche Rechenmaschine,” *Zeitschrift für Vermessungswesen* 26 (1897): 307.

60. On the phenomenon of information overload in early modern Europe, see the papers by Daniel Rosenberg, Blair, Brian Ogilvie, Jonathan Sheehan, and Yeo in *Journal of the History of Ideas* 64 (Jan. 2003): 1–72.

61. Chavigny, *Organisation du travail intellectuel*, p. 35.

62. See David M. Levy, *Scrolling Forward: Making Sense of Documents in the Digital Age* (New York, 2001), pp. 26–38.

mechanized many research tasks. It is possible that further changes could affect even the existence of note taking. At a theoretical extreme, for example, if every text one wanted were constantly available for searching anew, perhaps the note itself, the selection made for later reuse, might play a less prominent role. Already some kinds of information, notably websites, are more easily searched for every time one needs them than retained in a form of memory—human, as marked on paper or even as recorded in electronic bookmarks. The web is constantly changing and a bookmark can become a broken link at any point. We have particularly delegated long-term memory to media outside the mind. Nonetheless, we still rely on human memory and human judgment at the center of intellectual achievement. Notes must be rememorated or brought back into active memory at least enough to be intelligently integrated into an argument; judgment can only be applied to experiences that are present to the mind. As the quantity of material to master even in a specialized field becomes ever more abundant, we will no doubt continue to rely ever more heavily on a variety of aids in the tasks of storing, sorting, selecting, and summarizing material on a given subject so that we can maximize our ability to discriminate, synthesize, and make sense of a complex and changing world. In this task the early modern theorists and practitioners of excerpting were already very thoughtfully engaged.