CASE 1
MAKING BOOKS, USING BOOKS

        The two books in this case model particular relationships between books and their users. Albrecht Dürer's *Vnderweysung der Messung* (*The Art of Measurement*, Item 1), one of the most celebrated early manuals for artists and craftsmen, imagines readers as users, insofar as it consistently directs them, through illustration and textual narration, to perform tasks and so apprehend theory through practice. The illustration shown demonstrates how to draw a solid object and its shadow. The paper fold-out is required for the representation of perspectival distance. But by placing the human figure, the implied reader or user, outside the book, the illustration is also paradigmatic of how early books imagined their users moving beyond them.
        For a book to be usable, it must of course be legible. Hieronymus Hornschuch's *Orthotypographia* (Item 2) was the first technical manual for printers, specifically for correctors, those hired by the printing house to proofread the individual sheets of a book prior to their mass reproduction. Hornschuch's manual for regularizing production aimed both to eliminate error and make books clearer and thus more usable; at the same time, it demonstrates how a book could be subject to use even during the process of making it. The proofreaders' marks that Hornschuch illustrates are designed, of course, to vanish from the corrected page and the printed book, rendering the process of correction all but invisible in the historical archive of early print. So Hornschuch's printed marks remind us how the corrector's manuscript marks, though seldom preserved, were integral to the making of books: proofreading is on a single continuum with the reading it facilitates, evincing a highly practical (if conventional) engagement, on the part of a specific kind of reader, with an author's text.

Back panel image is a reproduction from Hornschuch, item no. 2

CASE 2
MARKING BOOKS

One way to mark a book is to write one's name in it. This is a mark of identification, ownership, property, but not necessarily use. The three texts in this case carry signs of ownership and also of private and public use. The cover of the small Bible (Item 1) was embroidered, and its front edge elaborately decorated, by the Nuns of Little Gidding in the early seventeenth century. Given that books in this period were often bought unbound, a binding could indicate the owner's economic status and his or her (as opposed to the author's) sense of the book. This binding is unusually expressive of the owner's relation to the book as a precious object for devotional use.

As is true today, early readers wrote in their books by underlining passages of interest, or by adding commentary, queries, objections. The short text edited by Léger Duchenne (Item 2), made up of proverbs and maxims spuriously attributed to the Roman philosopher Seneca, was printed for use at the University of Paris. While marginalia are often a striking index of personal engagement, the manuscript annotations (c. 1560) that fill this book and its margins are probably a student's notes on his professor's lecture, and thus point to a complex negotiation among readers experiencing and using the text collectively.

The writing on the pages of Thomas Lodge's play (Item 3) point even more dramatically toward a collective form of use. These marks tell us that we are looking at a rare early prompt-book, a copy of a play used by a theater company to adapt it for use in dramatic performance. On the page shown, a passage has been cut, stage effects indicated ("musick," "thunder," "Lightening," "Arbor rises"), and a stage direction added to compensate for the cut ("Ent[er] Ras[ni] Lordes & magi not paph[lagonian king])." As with the other two books in this case, use transformed this book by directing it toward a particular end, and by positioning it within a social and institutional practice.

Back panel image is a reproduction from The Holy Bible, item no. 1

CASE 3
SIZE

       Size informs use, a point suggested by the two medical books shown in this case. Johann Wecker's tiny Latin manual (Item 1) for the practice of general medicine is made up mainly of diagnostic guides and suggestions for the cure of specific ailments. A learned if highly compact reference book, it was designed to be carried by physicians, a function indicated both by its size and by the vellum wallet binding designed to protect the book in transit.

       William Cowper's gigantic anatomy (Item 2), a large-paper folio, could not be more different, its size marking it for use within an institutional context. Designed chiefly for collective use in the anatomy theater, it offered the lecturer a set of visual aids (see back panel) that made vivid both the dissected body and the work of dissection. The book demonstrates an acute awareness of its size as a technology, nowhere more clearly than in table 71, which shows an anatomized, life-sized forearm emerging from a folio volume much like Cowper's own. A brilliant visual pun, the image constitutes a theoretical reflection on the use of books for representing the body. The arm and hand of the corpse are aligned with those of the anatomist and the engraver, whose work combined to make the book possible. The image is uncanny: even as the illustration represents a dead and immobilized hand, the index finger seems to separate itself from the rest of the hand in a lively gesture of emphasis through which the book essentially points at itself.

Back panel image is a reproduction from Cowper, item no. 2

CASE 4
TITLE

 Modern transcriptions of early modern titles misrepresent them. Indeed, the standardization of spelling and typography, along with the omission of major portions of a long title (indicated by an ellipsis), makes it harder for readers today to see that titles were a crucial dimension of the early book. Titles often guided readers by laying out the content and parts of the book, and by indicating the book's value for a particular audience, field of knowledge or market sector. For reasons of space, this exhibition, too, uses abbreviated titles. Even in this case, where we have attempted to be more literal in recording the title of Robert Burton's encyclopedic treatise on melancholy (Item 1), we do not approach the visual intricacy of the original title, since we have reproduced neither the engraved letter forms nor the placement of the title on the illustrated page. A further obstacle to clearly representing a title is that features of early modern books like spelling were not always consistent across multiple editions or even within a single edition. Comparing the printed half-title of this edition to its engraved full title, should we call the book an "Anatomy" or an "Anatomie"?

 Burton's title (by no means the longest in the period) is in many ways typical in elaborating its subject matter and indicating the book's internal structure. By referring to the fields of philosophy, medicine and history, Burton's title designates its multiple methodological and market orientations. The illustrations on Burton's title page, so complex as to require a facing-page commentary, include at the bottom center an image of Burton that works as the early modern version of the author photo. In the highly competitive early print market, the title page was a crucial advertising strategy, a site where the author or printer could multiply authorize the contents that followed. By means of the title, the book not only described its uses, but also began to theorize itself by imagining the social and intellectual spheres to which it contributed and belonged. The title, that is, was a central locus for self-reflection, not unlike the searchable disciplinary keywords that appear on the back cover of the modern academic book to identify appropriate or relevant fields. In this sense, it can be said that a book's theoretical dimension was produced partly by the market, even as the market was in turn refined by textual and disciplinary specialization.

Back panel image is a reproduction from Burton, item no. 1

CASE 5   PLATE

 The word "idea" comes from the Greek for "to see," and Robert Hooke's *Micrographia* (Item 1), the first treatise to use the microscope, redefined knowledge by redefining what it meant to see. With the use of scientific technology, to know became a matter of seeing things close up. Such technology subordinated a natural seeing to a new kind of seeing, more specialized and hence more useful in a scientific domain.

 Hooke's text offers new ways of thinking about the relationship between the printed book and the physical world. In one striking instance, he puts books themselves to a new kind of use, literally under the microscope: the mould shown in Scheme 12, he notes, was "found to bespeck & whiten over the red covers of a small book, which, it seems, were of Sheeps-skin, that being more apt to gather mould, even in a dry and clean room, then other leathers." At the same time as he magnifies the physical world external to the book, Hooke again and again draws his readers into the domain of the material book. Although the use of microscope technology everywhere subtends the book, the reader's eye is directed from narrative text to plate and back again, such that the image comes to illustrate the text and not the world. This is no less true for one of the last plates in the book, an illustration of the stars, as viewed through a telescope. The microscopic and macroscopic illustrations are used here to direct the reader into the book as a substitute precisely for the scientific technologies and practices that made them possible.

 As interested as *Micrographia* is in scientific accuracy, in fact, the book seems enthralled by the pleasure of its visual effects. In his description of the flea, for example, Hooke draws a distinction between the "strength and beauty of this small creature." For strength, "the *Microscope* is able to make no greater discoveries of it then the naked eye"; "But, as for the beauty of it," he says, "the *microscope* manifests it to be all over adorn'd with a curiously polish'd suit of *sable*, Armour, neatly jointed, and beset with multitudes of sharp pinns, shap'd almost like Porcupine's Quills, or bright conical Steel-bodkins." The turn here to aesthetic detail and the delight of seeing the world up close suggests how the technology of the book could underscore and even forge relationships between science and pleasure.

Back panel image is a reproduction from Hooke, item no. 1

CASE 6
LAYOUT

Humanists like Erasmus gave the Latin playwright Terence a prominent place in the school curriculum. Schoolboys were encouraged to mine the comedies both for their moral pithiness and for the rhetorical fullness of the Latin. Different as they are, the books in this case all use page layout to encourage specific kinds of reading; three of them convert the plays into a practically useful phrase book.

Cornelius Schryver's 1533 phrase book (Item 2) dramatically abstracts Terence's plays, by digesting them scene by scene into the phrases or verbal *formulae* that a schoolboy might be expected to take away from his reading and commit to memory for later use. As a pedagogical crib, it is a precursor to short-cut guides to literary texts.

Like Schryver's book, Giovanni Fabrini's *Il Terentio Latino* (Item 3) presents Terence as a repository of linguistic knowledge. Indeed, the book is a language textbook, designed to teach Latin to those who know Italian (*Toscano*) and Italian to those who know Latin. Adapting the layout of scholarly editions (like Item 1) to a new end, Fabrini surrounds the Latin text not with interpretive gloss but with a word-for-word translation into the vernacular, interspersed with the Latin text, now reordered to mirror Tuscan syntax. Fabrini's ingenious page thus directs the eye diversely according to the linguistic and textual task at hand.

Richard Bernard's *Terence in English* (Item 4) combines the aims of Schryver's and Fabrini's editions. Each scene is printed in Latin and then in English; and many are followed by a list of usefully colloquial phrases to commit to memory (*formulae loquendi*). Most interestingly, these phrases are given with equally colloquial English equivalents. Like Fabrini's book, Bernard's edition thus had a double aim, since at the same time as it drew attention to instances in Terence of an elegant colloquial Latin it also helped to consolidate or formalize the English vernacular.

Back panel image is a reproduction from Terence, item no. 1

CASE 7
BOOK

    When is a book more than the sum of its parts? This case looks to theology and drama to explore the idea of "the book" as a whole. It is hard to imagine a more imposing and totalizing text than the 1611 Authorized or "King James" Bible (Item 1). The illustrated title page to the New Testament offers a fantasy of textual integrity. Its decorative elements, which resemble the metal clasps on early bindings, bind together times, authors and books, integrating them under the sign of the ultimate author, God, as represented at the top of the page in the form of the living word or Tetragrammaton. The 1611 Bible was of course Protestant. The smaller Bible printed at Douai for the English Catholic community (Item 2) offers a competing version, paradoxically, of the quintessential book. The competition is clear, for example, in the Douai's inclusion of II Machabees as part of the authentic whole; the Protestant Bible, as can be seen on the leaf opposite the title page, has appended it to the Old Testament as mere apocrypha.
    The relationship between the idea of the book and secular authorship was no less complicated. In 1616, Ben Jonson famously gathered his plays, along with his poems, under the name of "Workes" (see back panel), a word then considered more appropriate to classical authors and more serious kinds of writing. In so doing, he transformed himself from playwright to author, not least by publicly asserting his control over the dissemination of works that, as performance, were primarily understood communally. By asking that his plays be read as part of a whole, Jonson was asking to be read in a radically new way. Such a move made available new perspectives through which to construct dramatic authorship. To take an example from later in the century, a Restoration reader gathered toge ther eight separately printed plays of James Shirley in a single volume (Item 3), adding a rudimentary manuscript table of contents on the front flyleaf. However modest this book may seem in comparison to Jonson's, the compiler has articulated a similar sense of the dramatist's literary authority and similarly allowed the individual parts to constitute a new whole.

Right back panel image is a reproduction from The Holy Bible, item no.1

Left back panel image is a reproduction from
Ben Jonson (1572-1637). *The Workes of Beniamin Jonson*. London: by W. Stansby, 1616.
Helen and Ruth Regenstein Collection of Rare Books

CASE 8
BOOKENDS: PREFACE AND ERRATA

Prefaces and errata sheets help us think about book use because they formally encode particular relationships between author and reader. Like the titles, prefaces to the general reader or to a specific patron guided use by highlighting or theorizing the social significance and methodological stakes of the topic. Furthermore, they offered the opportunity for presenting a version of the reader to himself or herself, as a patron worthy to be flattered, or as one of those capable of being educated. The prefaces highlighted in this case offer particularly complex instances of the author-reader relationship. The dedication in Galileo Galilei's *Il saggiatore* (Item 1) to the newly named Pope Urban VIII, functioned as a quasi-imprimatur, not unlike the official permission to print that appears on the opposite page. Interestingly, however, it was Galileo's friends at the Lincean academy in Florence who composed the preface and recommended its inclusion. At the same time as this distanced the author from the direct promotion of his book, it offered a second, collective sanction to mirror the implicit or hoped-for sanction of the Pope.

Addressing a reader in a preface did not necessarily mean that the reader ever read it or the book. In the ingenious preface or "Advertisement" to the reader of his *Pseudomartyr* (Item 3), John Donne plays on this point in order to establish an alternative authority for the reader, one that emerges only through an actual engagement with the book. Writing that he would have preferred to address the reader "by way of Epilogue in the end of the Booke," Donne explains that "I thought not that any man might well and properly be called a Reader, till he were come to the end of the Booke."

The errata sheets often included in books seem to offer a very different kind of paratext from the preface, supplemental rather than essential. Nonetheless they also functioned to establish the book's authority by implying a process of scrupulous proofreading in the final stages of producing the material book. Nearly always, the errata sheet directs the reader, not only to make the noted corrections, but also to become a scrupulous reader by making further corrections, as required, on his or her own. The errata sheet at the end of the University of Chicago's Evans copy of *Il saggiatore* (Item 2) is unusually interesting in that Galileo himself has added, in his own hand, a correction missing on the errata sheet itself. At this moment, he is at once scrupulous author and scrupulous reader.

Back panel image is a reproduction from Donne, item no. 3

CASE 9
INDEX

The index (from the Latin for "forefinger" and "point out") became instrumental to the use of the book, not only by making the contents usefully accessible but also by identifying what were, at least in theory, the book's central subjects. Indexes allowed for non-sequential reading and for accessing information in ways other than those suggested by the book's narrative logic. In fact, it was possible to read an index first, or even instead of the book. Something like this happened in the case of *Histrio-mastix*, a massive anti-theatrical treatise by the Puritan polemicist William Prynne (Item 1). An entry in the concluding index or "table" cost Prynne his ears. Under the heading "*Women-Actors*" Prynne had directed his readers first to "notorious whores. p. 162, 214, 215, 1002, 1003." This entry was taken by King Charles to be an insult against the Queen, Henrietta Maria, who patronized and performed in theatrical masques.

Prynne's fate dramatically shows that indexes are not neutral. This is no less true of the index that concludes *The Temple*, George Herbert's posthumously published collection of poems (Items 2 and 3). This was the first such index to an English book of poems. Although it does nothing more than list the titles of the individual poems in alphabetical order, it was innovative in thus making the book available for a specific, devotional use. A reader, that is, could use the index to find poems on a given religious topic appropriate for meditation: "Avarice," "Self-Condemnation," "Conscience," "The Crosse," "Easter," "Love," "Mortification," "Sunday," "Ungratefulnesse."

Some books, of course, *are* indexes. As familiar as dictionaries now seem, they too are always interpretive, working as they do to constitute (and not simply describe) a field of learning or language use. John Cowell's *The Interpreter* (Item 4), intended as a comprehensive alphabetical guide to the terms of English common law, was burned by royal proclamation for subversively taking up constitutional questions in such entries as "king," "prerogative," "parliament," and "subsidy." Cowell's entries, which invariably promoted the absolute authority of the king, angered members of parliament as being prejudicial to their rights. In the proclamation against the book, however, King James defined Cowell's impudence in different terms, saying that the arbitrary alphabetic form of his book had "placed all kinds of purposes belonging to Government and Monarchie in his way." Cowell's error, in this formulation, was in choosing an indexical form that allowed or required him to list and define matters that, according to the king, were beyond the scope of a subject's natural authority. Cowell's dictionary shows how, in making a field navigable and usable, an index may not only define and theorize the limits of that field but also constitute itself as an authority on it.

Back panel image is a reproduction from Prynne, item no. 1

CASE 10
DIAGRAM

The diagram or graphic table of contents was a guide both to using and to thinking about the book. The visual aids shown in this case organize medical, legal, literary and musical information, transforming narratives apprehended in time into condensed graphic forms comprehended in space. These abstractions of subject matter are closely associated with the pedagogical innovations of Petrus Ramus (Pierre de la Ramée), a philosopher and noted teacher who aimed to update Aristotelian method, partly through the use of such schematic (and, it was sometimes said, reductive) models of thought.

The table shown from Jacobus Sylvius' medical textbook (Item 1) helps a doctor keep in mind a set of possible relationships between breathing and pulse and make different diagnostic inferences based on them. The table is thus both a practical aid and a guide to methodical analysis. Conrad Lagus' textbook on civil law (Item 2) has no such diagram. An early reader, however, responding to the Ramist phenomenon, has composed a table of his own on four blank leaves at the front of the book (see back panel). The pages shown demonstrate both the reader's digestion of Lagus' narrative elaboration of distinct kinds of legal action and his diagrammatic theorization of those distinctions.

Abraham Fraunce's *The Lawiers Logike* (Item 3) was designed to foster methodical thinking among English common lawyers by demonstrating the logical structure of their legal texts and mode of analysis. Fraunce takes his examples from two contemporary sources, one poetic and one legal: Edmund Spenser's 1579 *Shepheardes Calendar* and Edmund Plowden's 1571 *Comentaries*, a collection of reports on recent legal cases (see Case 12). The table shown here reduces one of Spenser's eclogues to a set of spatial dichotomies, this in order to expose the logical structure that, according to Fraunce, already subtended it. In addition to offering a striking example of early literary analysis, the diagram is interesting for aligning poetic and legal analysis, and for serving itself to demonstrate the relationship between the two discourses.

In contrast to these tables, Georg Fabricius's dichotomy of musical harmonies (Item 4) seems, for all its beauty, so elementary as to be of little intellectual use. But the table also demonstrates how even a reductive schematic organization might be pedagogically useful in putting fundamental distinctions in front of a reader, thereby preparing the ground for ever more complex tables.

Back panel image is a reproduction from Lagus, item no. 2

CASE 11
COMMONPLACE THINKING

A commonplace book is at once a book form and a method of reading. Commonplacing was a system of using books in which readers digested them by extracting and ordering particular phrases or passages in notebooks, for later use. This process of textual engagement was personal but also prescribed, "common" in the sense that it filtered one's reading through social norms that determined which textual elements were significant and which were not.

The early pages of Thomas Ducke's ca. 1619 commonplace book (Item 1) digested material under headings related to the Christian universe (God, Christ, Law, etc.), but his interests go beyond the theological to include, for example, a long list of amusing stories. Manuscript commonplace books such are typically most useful to their compiler. An interesting feature of Ducke's book, therefore, is that it was used by a second reader around 1686, one Edward Jones, who supplemented it by adding stories and jokes, mainly of a sexual nature. Most remarkably, he added an index (see back panel) to the pages compiled by Ducke. Jones's appropriation of Ducke's book can be seen as a logical step in a process in which all reading was appropriation.

The early seventeenth-century legal commonplace book (Item 2) was probably compiled by a law student at the Inns of Court in London. Although it had a professional function, the book can also be seen as a personal document in the way Ducke's is, since it was through such books that lawyers made a disciplinary structure their own. Drawing both on written texts and on oral sources, including decisions in the courts and exercises central to legal training, lawyers used commonplacing to synthesize information, thereby helping to constitute the law as a field of textual practice.

Michel de Montaigne's *Essais* (Item 3) famously began as his commonplace book. The topical structure of the book and the individual essays ("De l'amitié," "Des Cannibales" "Du dormir") mirrors the commonplace organization of material. In a nice reversal of that compositional process, an early English reader of John Florio's translation of Montaigne (Item 4) seems to have digested the essays according to headings and topics of his own. His annotations variously underscore Montaigne's text, as when, for example, he makes a generic description of a military hero historical and local, by identifying the type with "Count Mannsfield," a German Protestant leader whose visits to London in 1624 consolidated his English reputation for heroism. Sometimes the reader follows Montaigne's categories, sometimes not. On one page, next to an anecdote about a woman who turned into a man by jumping over a fence, he has written "for wenches lepeing [leaping]." Has he imagined this improbable heading as a category of use or thought?

Back panel image is a reproduction from Ducke and Jones, item no. 1

CASE 12
CASE THINKING

How does one move methodically from part to whole, from particular to general? An individual case can exemplify a rule or provide an exception to it; similar cases might be connected through analogy in order to generalize from them. Because it emerges from circumstance and situation, "case thinking" is based upon a specificity that can seem antithetical to theory. As a result, textual strategies for dealing with the particular instance become unusually important for the constitution of method.

John Foxe's ecclesiastical history (Item 1) catalogs case after case of individual Protestant martyrs. Repetition is of the essence, since it is through repetition that martyrdom could come to constitute national history. Although the individual must have priority in the story Foxe wants to tell, not least because of how he means to affect the reader, it is also true that accumulation and repetition diminished distinctions among cases. The individual case is a form and formula. For this reason the same illustration can function in the book on pages 1528, 1547 and 1833 to represent different martyrs. This use of the woodcut reminds us that early illustrations often worked non-mimetically, simply organizing textual material by offering a symbolic cue to a topic. In the case of Foxe, however, the repeated illustrations speak also to the tension between case and method in the making of history.

English lawyers understood their practice in terms of particular legal cases, turning to them both to learn the skills of courtroom pleading and, increasingly, to isolate the principles of the unwritten law. Edmund Plowden's collection of legal reports (Item 2) was the first to print only cases in which general legal principles had been explicitly stated and could be abstracted as such (and so written into commonplace books like the one shown in Case 11). Plowden thereby provided an important model for reporting the legal case in terms of generalizable law, a textual development that allowed precedent (or "case thinking" in the modern sense) to emerge as the dominant structure of English legal thought. Legal abridgements like Ashe's version of Plowden (Item 3) helped lawyers avoid in another way the difficulties of sifting through particulars in their practical and case-by-case pursuit of method. Notice how early readers of both Ashe and Plowden have left marginalia, the traces of their part in completing the book by synthesizing its particulars. The blank space of the margin is here critical matter for methodical work.

Back panel images are reproduced from Foxe, item no.1

CASE 13
HOW TO EXPRESS YOURSELF

       Rhetoric is a practical art, prescribing the use of language and gesture for particular situations and particular ends. In that sense, all four books in this case can be thought of as rhetorics, how-to books for self-expression at the border between public and private. Like Thomas Wilson's *Arte of Rhetorike*, a vernacular guide to classical oratorical practice (Item 1), John Bulwer's *Chirologia* (Item 2) is a *manual* of expression, in this case a handbook about the hand itself. Although it looks forward to sign language in our sense of the phrase, it is more accurately described as a guide to manual gesture, illustrating and cataloguing the "natural" logic of bodily expression. At the same time, the book offers itself up for an alternative form of use as a system of cryptography, in that the same gestures can "serve for privy ciphers for any secret intimation." The very gestures that Bulwer insisted were "universal" and "natural" were also available, that is, for the construction of covert, private communication.

       Prayer can be experienced as one of the most intimate and immediate forms of self-expression. And yet, publicly or privately, talking with God is also a rhetorical art. A tiny devotional intended for the most intimate use, Ambrosio de Salazar's *Iardin de Flores Santas* (*Garden of Holy Flowers*, Item 3) prescribes times and forms of prayer by which a conventional language (like the language of the penitential psalms) could be internalized and naturalized as one's own. Like Salazar's devotional, *The Booke of Common Prayer* (Item 4) is at once public and private. As the official prayer book for a newly national church, it gave to English Protestantism the language and rhetoric in which public prayers and rituals were to be conducted. In this sense, individual members of the congregation were subjected to authorized forms of expression and so instituted as members of the English church. These how-to books for the arts of expression not only taught readers to speak but also guided them toward complex communal identities.

Back panel image is a reproduction from Bulwer, item no. 2

CASE 14
HOW TO DO THINGS

Books that instructed readers how to do specific tasks in professional, trade or domestic life can seem straightforward, but they are often dense with implication for the relations between persons and practices and practices and professions. The recipes, for example, in Hannah Woolley's cookbook (Item 1) depended upon social and economic norms that the book was partly responsible for creating. To use the book was to educate oneself in dietary norms and in culinary forms of social self-fashioning. Similarly, *De Sectione Mensaria* (Item 2), an anonymous and undated French carving book, guided the user in carving techniques for various kinds of meat and fish, as well as in ornamental food presentation, illustrating, for example, how to cut and serve a lemon in the shape of an insect, turtle, heart or rose. Despite its Latin title, the book is in French, designed specifically for travelers to other countries as a guide to the performance of this particular form of civility. An early modern version of Martha Stewart's *Living*, the book teaches aesthetic appreciation and social affiliation through food preparation, working simultaneously as a how-to-do and a how-to-be book.

The remaining three books in the case are concerned with emergent professional fields and identities: Peter Lowe's surgeon (Item 3), Joseph Moxon's skilled craftsman (Item 4) and William Leybourn's surveyor (Item 5). Because these professions were still in formation, each of the books was useful in two ways, instructing individual practitioners and consolidating the claims of the group as a whole to a field of knowledge or expertise. In other words, at the same time as the books offered general instruction on the practice of an "Art," they laid the groundwork for a series of specialized professional identities capable in theoretical terms of defining the nature of their expertise. In this respect, note how the three titles imply or "invent" a field by foregrounding the relationship between practice and "Doctrine," between a specific "Art" and its totalized "Whole."

Back panel image is a reproduction from Woolley, item no. 1

CASE 15
HOW TO BE SOMEBODY

       The Renaissance conduct manual was a how-to book designed explicitly for the performance of personhood, in terms of categories such as gender, rank, age or national and regional affiliation. To "be someone" in this sense could mean dramatically different things depending on the subject positions idealized in the book or inhabited by actual readers. Richard Brathwaite's *The English Gentleman* (Item 1), for example, aimed to fashion a genteel English identity. The categories displayed on the frontispiece track idealized stages in a man's life, while also identifying the social spheres in which success could be imagined or cultivated (*Edvcation*, *Vocation*, *Recreation*, *Acqvaintance*). The final category, *Perfection*, has a Latin tag ("You seek heaven on this road") that posits a further and final ideal, the divine point at which social practices will find their ultimate use and meaning. This non-social and non-temporal point to which the book conducts its readers adds an additional ideological layer to the book's construction of Englishness.
       John Bulwer's *Anthropometamorphosis* (Item 2) is essentially a how-*not*-to book, guiding the reader toward Englishness by cataloguing, as antitypes, non-English practices involving the manipulation of the body (including tattooing, piercing, tongue-splitting, neck-stretching, and earlobe elongation). The English body that implicitly emerges as normative (because "natural" and untouched) is equally invented as an ethnographic body.
       Julius Casserius's engraving of the human body, as printed in Adriaan van de Spiegel's anatomy (Item 3) may look like a natural body. And yet, like the bodies in Brathwaite's and Bulwer's texts, it emerges within a specific discursive regime with its own orders of representation. Understood this way, the anatomical atlas is also an ideologically charged how-to book, not only for students of anatomy but also for all those learning to imagine and inhabit their own bodies as the objects and subjects of scientific knowledge.

Back panel image is a reproduction from Bulwer, item no. 2

CASE 16
HOW TO LOOK AFTER YOURSELF

Designed to help readers "look after" themselves, self-help books necessitated a process of self-reflection, of moving beyond the self in order to look back at it. If conduct books exposed the outward and theatrical dimensions of personhood, self-help books looked inwards to physiology and psychology, often highlighting the psychological and emotional impact of social situatedness.

Nicholas Culpeper's herbal (Item 1), a compendium of natural cures, gives its reader tools for self-diagnosis and self-healing. The reader of this book looked toward a future self and also measured his or her present self against an implied norm, such that anger, sorrow or melancholy, for example, could be understood as conditions to cure. While books like this allowed readers to be their own physicians, they also subjected them to norms of health that potentially coded everyday emotions and reactions as symptoms of pathology.

Like Culpeper's medical book, William Perkins' religious treatise on "case conscience" (Item 2) offers itself as a vehicle for psychological self-analysis and self-cure, even as it prescribes conventional moral conduct. His book, which does for the soul what Culpeper does for the body, teaches how to guard against despair by looking inward to examine conscience, but also how to prevent self-delusion by looking after conscience and developing it through a continual process of self-reflection.

Throughout his life, the Oxford scholar and librarian Robert Burton added to and revised his *Anatomy of Melancholy* (Item 3), a massive compendium on the social and psychic conditions of melancholia (see Case 4). In the process of writing to look after himself, Burton created a text that conspicuously looks after itself, reflects upon itself, often to its own undoing. Burton thus converted the very idea of self-help into an opportunity for theoretical speculation and textual self-reflection.

Back panel image is a reproduction from Culpeper, item no. 1

CASE 17
HOW TO FIND YOUR WAY

The how-to books in this case aimed to orient their users as they made their way in the world, geographically, culturally, professionally or socially. Willem Lodewycksz's history of Dutch travel to the East Indies (Item 1) combines highly practical geographical information (such as representations of specific islands in the archipelago for the use of sailors navigating dangerous straits) with cultural descriptions useful to both real and armchair travelers.

Making one's way at home also required instruction. An offshoot of the conduct manual (see Case 15), Thomas Powell's early career guide, *Tom of All Trades* (Item 2), maps out a social and economic terrain for the aspiring class. By cataloguing and describing possible occupations and "pathways to preferment," it gives the aspiring outsider an insider's view and a way to imagine social mobility. That said, while the book offers an array of career options, its distinctions also work to re-inscribe the occupational hierarchies that could exclude this or that Tom from the preferment promised.

Devotional manuals are designed, of course, to help readers find their ways to the ultimate reward: God. Jeremy Taylor's immensely popular devotional (Item 3), a late example of the genre, strikingly foregrounds the relationship between theological ideals and quotidian practice: by fitting specific prayers "to the seueral Days of the Week," his readers orient themselves beyond time. Pierre Berault's book (Item 4) moves the reader in the obverse direction. Nominally a devotional, it is also a language manual, printing all of its prayers in English and French on opposing pages. Indeed, Berault uses the book's front flyleaf to advertise his skills as a language tutor, and to provide directions to the house where he gave Latin and French lessons. Readers of his book could orient themselves to the divine, in order then to perfect a worldly skill.

In contrast to how-to manuals that offered particular maps for their readers to follow and perfect through their own experience, the practical experiments proposed in Francis Bacon's posthumously published *Sylva Sylvarum* (Item 5) required his readers to orient themselves epistemologically, exploring precisely the *how* of the how-to book. A methodical reflection on the instructional manual, this is a text that starts in a "heap of particulars" and, through orientation, moves the reader toward scientific theory.

Back panel image is a reproduction from Lodewycksz, item no. 1

CASE 18
MEASURING SPACE

Geometry (from the Greek for "measurement of the earth") exists at the border between theory and practice. Books on geometry are correspondingly attentive to the relationship between abstraction and application as that informs their own usefulness and relevance as text. The three treatises in this case foreground specific instruments of measurement as technologies through which geometry might be practically and theoretically advanced. At the same time, they demonstrate the extent to which the book itself was a technology: in the manner of Dürer's great *Art of Measurement* (see Case 1), all three are in vernacular languages, making them available to a relatively broad range of readers and practitioners, and all combine explanatory narrative and graphic illustration as mutually reinforcing forms of instruction. These are, moreover, small books, easily portable and therefore usable within the actual situations or scenes of measurement that they variously represent.

Ottavio Fabri's beautifully illustrated treatise on the *squadra mobile*, a newly invented adjustable set square (Item 1), promoted the instrument by demonstrating its theory and usefulness to cartographers, surveyors, navigators and others involved in the measurement of distance and depth. The first part of Thomas Digges's *A Geometrical Practise* (Item 2) similarly teaches Euclidean principles through the application of traditional instruments such as the geometrical square, semicircle and planisphere. The illustration shown, on the use of the geometric square for measuring the distance between ships on the sea, underscores Digges's sense that practice perfects knowledge of theoretical principle. This is a point that Digges makes in terms of what it means to apply his own book in situations other than those it has illustrated: by "searching out the reason and demonstration" of the book's basic principles, he notes, "the diligent practizioner" will learn to think for himself and discover or "inuent manifolde meanes to resolue the like or other stranger questions...."

The Greek "Pantometria" of Digges's title promises a measurement useful everywhere; implicit here is a kind of utopian ideal of a fully measurable universe, but such hyperbole can be thought of, too, as masking specific, more worldly uses. Like Fabri's manual, Leonhard Zubler's book (Item 3) was also an advertisement for a new chorographic instrument, usable in a number of contexts for measuring land. The chapter heading to the military illustration shown translates "How to measure the width of a moat and height of a wall to be breached." The picture makes vivid just how important, in an age of militaristic and technological expansion, manuals of measurement were for practicing and perfecting the art of war.

Back panel image is a reproduction from Fabri, item no. 1

CASE 19
COORDINATING TIME

Many early astronomy books included within them paper tools for practicing the theoretical knowledge they taught. Peter Apian's *Astronomicum Caesareum* or "Astronomy of the Caesars" (Item 1) is one of the most remarkable printed works from the sixteenth century. It includes 36 elaborately hand-colored woodcuts, 21 of which included woodcut volvelles, designed to help the reader identify planetary positions and alignments as well as other astronomical phenomena. The volvelle (Latin *volvere*, "to turn") is a paper disc capable of revolving on another paper surface or on multiply layered surfaces. On the page shown, there are in total five separate and movable layers. The weighted threads extending from the circles' centers allowed the user to calculate spatial positions and relations for particular times. The book was useful for making scientific calculations of astronomical phenomena within the Ptolomaic system, and also for making astrological calculations for the creation of horoscopes or the identification of propitious and unpropitious times.

Forty years after publication, this copy of Apian's book was given by the great Danish astronomer Tycho Brahe to a student, a gift recorded in Brahe's hand on the title page. By 1580, the diffusion of Copernicus' theories would have diminished the astronomical value of the book to those like Brahe. So the transaction between teacher and student, which must have been prompted by the book's extraordinary aesthetic beauty and monetary value, can also be seen as putting the book to one further use in consolidating this collegial friendship.

Back panel image is a reproduction from Apian, item no. 1

CASE 20
TOWARD ANOTHER DIMENSION

Geometry tracks the shift from one dimension to another: point to line, line to square, and square to cube. In the move to solid three-dimensional bodies, the material page reaches a material limit. All the books in this case deploy textual strategies to aid the imagination at that limit. In the first English translation of Euclid (Item 1), the eleventh book (on solids) came equipped with a series of paper inserts for the reader to affix to given diagrams, thereby supplementing the space of the page in order literally to project it into a third dimension.

Vincenzo Coronelli's cosmographic atlas (Item 2) came equipped with far more elaborate and geometrically detailed foldouts. These extend the space of the page and of the book, transforming the rectilinear shape of the book into a circle in order to represent the terrestrial and celestial globes. The foldouts allow readers to use the text as a substitute for the scientific instrument (the telescope) that produced them. That said, it is notable how fragile the manipulable pages are as tools, and what a delicate touch is required to unfold them and return them back to the space of the book. Might it be that copies of Coronelli's book in which these maps are so well preserved are those that were, in fact, never used?

In contrast to extendable paper surfaces, the arts of perspective and of chiaroscuro offered ways of representing depth or three-dimensionality using only the flat plane of the page. The engravings in Humphrey Prideaux's guide to the Earl of Arundel's collection of classical marbles (Item 3) represent statues and reliefs through the use of light and shadow (i.e. chiaroscuro). The figures seem to emerge from the page, but less as natural human bodies than as distinctly sculptural form, suggesting the priority of aesthetic self-reflection in these representations of the human. In other words, the reader is guided by means of engraving technology to apprehend a three-dimensional space on the page as sculpture's embodiment of dimension and depth. At the same time as this technology allowed the page to approximate the contours of space in the material world, it also encouraged a more self-conscious attention to the aesthetics of dimensional representation.

Back panel image is a reproduction from Coronelli, item no. 2

CASE 21
REPRESENTING THE UNSEEN

To discover is to uncover: the two books in this case help readers see beneath the surface. The extraordinary interactive flap-anatomies in Johan Remmelin's anatomical atlas (Item 1) allow the reader to replicate the process of dissection by folding back consecutive bodily surfaces: from skin to muscle and organs, to arteries, veins and nerves, to bone. The book invites its user to "practice" anatomical discovery by moving between the facing pages: between image and index, looking and reading, dividing and ordering. The negotiation between text and image involves the reader in a second movement down into the layers of the book and body. This process of uncovering is at once empirical in orientation and symbolic. Notice for example, how the unfolding of the skull transforms a traditionally iconic *memento mori* into physiology, and how the leaves and smoke covering the man's and woman's genitalia invite the reader to find a new kind of scientific knowledge within a symbolics of modesty and immodesty, innocence and shame.

Another early science of discovery is exemplified by Antonio Cospi's *Il Giudice Criminalista* (Item 2), a manual on criminal investigation with sections, for example, on poison, physiognomy, demonology and forensics. In the illustration shown, included in a section on how to investigate a homicide, Cospi is modeling how a notary might help a judge by drawing a plan of a house so as to expose within it possible secret rooms or hiding places. The accompanying text leads the viewer through the home, detailing entries to the concealed spaces A, B, C, D and E through, for example, a small staircase behind a fireplace in room F, a sinkhole (G) in the central courtyard, a wardrobe (H) in room I, and a spiral staircase descending from the roof at E. In the wrong hands, of course, Cospi's architectural scheme could be used for constructing rather than detecting secret spaces. Useful in practical terms, both Cospi's and Remmelin's books give their readers methods for seeing surfaces less as obstacles to knowledge than as starting points for thought.

Left back panel image is reproduced from Cospi, item no. 2
Right back panel image is reproduced from Remmelin, item no. 1

CASE 22
PLACE, TIME, MEMORY

Acts of memory always require a movement of the mind in time. Memory texts aided memorization by locating or anchoring memory, instead, in space, notably in a familiar room or on the human body. The two illustrations from Filippo Gesualdo's *Plutosofia* (Item 1) demonstrate how the art of memory drew on forms of dimensional thinking being perfected in the domains of anatomy and architecture.

Heinrich Döbel's late memory treatise (Item 2) depends on the material dimension of language itself, on words' occupying both space and time as writing, reading and speaking. On the pages shown, Döbel demonstrates his system for remembering historical dates by re-coding them as significant letters (as given in Roman capitals) in a simple verbalization of the event to be remembered. As this system reminds us, one of the oldest mnemonic aids is organized language, especially in the form of poetry. The manuscript poem added to the flyleaf of William West's collection of legal forms and formulae (Item 3) constitutes an art of memory. A popular mnemonic on land conveyance, it lays out a set of simple rules by which a purchaser or attorney could test whether a real estate transaction was secure. In contrast to West's extensive elaboration of prescriptive legal forms, the poem records one reader's attempt to find a simpler and more easily remembered guide to practice.

Christopher Sutton's *Disce Mori* (Item 4) a collection of devotional meditations on death, undoes the art of memory by calling on the reader, paradoxically, to remember his or her own future, "to enter into a serious remembrance of his ende." In the contexts of the Renaissance arts of memory, the survival of this earlier tradition of the *memento mori* can be seen to constitute a kind of anti-technology of memory, with the sacred dimension of memory inverting and trumping the secular.

Back panel images are reproduced from Gesualdo, item no. 1

CASE 23
COLLECTIVE AUTHORITY AND THE ENCYCLOPEDIA

An authoritative source for practical and theoretical information, the encyclopedia offers a paradoxically fluid and communal model of knowing, depending for its currency on continual revision, correction and addition. One of the most important such books in early modern England was *Batman vppon Bartholome* (Item 1), a translation and expansion of an encyclopedia of natural history originally written in Latin and compiled by the thirteenth-century friar Bartholomeus Anglicus. Best known now as "Shakespeare's Encyclopedia" *Batman* was an introduction to theological, physiological, medical and natural scientific knowledge. The book's title, like its prefatory list of "contributing authors" both ancient and modern, makes explicit the accretive nature of encyclopedic knowledge. Unsurprisingly, books like this often offered a model for their readers, too, to add to the book, fashioning them as potential participants in the endless project of making and maintaining the encyclopedia.

This copy of *Batman* is interesting, in fact, for the information added in 1600 and 1605 by one of the book's early owners. Adapting the book to his own needs, the owner used the front flyleaf to record useful practices from other sources, notably local and oral ones. He takes care to authorize these as dependable, either by identifying their source or by giving brief testimony regarding the history of their use. In one dramatic instance, he is able to call a medical remedy "soveraigne" because he notes it was used at court, "proved throughly vppon margarit Homerson, wife to one of the Kings servantes."

The owner's additions were not limited to the categories organizing the encyclopedia, nor were they dependent on only traditional or socially sanctioned authorities. One of his most striking additions, for example, evokes an authority grounded in local practice and communal experience: "Anno 1600 June 6: The miller of the windmill by Henley vppon Thames shewed me how he preserved his apple trees from the Caterpillers: viz: he vsed everie evening late to shake everie bow of the trees first aboue, then below, and so he did shake many down which lay thick on the grownd. And thereby preserved fruite in aboundaunce. Remember to practice the same."

Back panel image is a reproduction from Bartholomæus, item no. 1

CASE 24
USE AND ABUSE: ANATOMY & PORNOGRAPHY

   Readers are not obliged to use books in the way that an author might like. The three books in this case, each at the border of anatomy and pornography, blur the bounds between use and abuse. Some of the illustrations in Charles Estienne's medical text (Item 1) use woodblocks that, in other contexts, had a pornographic function; Estienne adapted these by superimposing on the original image a second plate showing the dissected or anatomized body. Conversely, Helkiah Crooke worries in his *Mikrokosmographia* (Item 2) that a reader might transform his medical text into pornography. In the preface to the fourth book, "Of the Naturall Parts belonging to generation, as well in Men as in Women," he insists that his book has a professional use and is not intended, as some might suppose, to "ensnare men's mindes by sensual demonstrations."

   Crooke's defense of his scientific interests points exactly to the possibility of using texts like this for private pleasure rather than medical or scientific application. The small pseudo-Aristotelian text, Aristotle's *Master-piece* (Item 3) was a practical guide for midwives, introducing them to female anatomy and to the "secrets of generation." As in the case of Crooke, the author declares in the introduction that he fears lest "*this Book should fall into the Hands of any Obscene or Wanton Person, whose Folly or Malice may turn that into Ridicule, that loudly proclaims the Infinite Wisdom of an Omnipotent Creator.*" Interestingly, the book was at the center of a later scandal in New England in which the preacher Jonathan Edwards attempted to punish a number of boys for abusing the text by using it to taunt local girls. Unsurprisingly, by warning against misuse texts like these essentially provided a guide, or at least a spur, to their own abuse.

Back panel image is a reproduction from Estienne, item no.1

CASE 25
BEYOND THE BOOK: AFFECT AND MEDIUM

This exhibit has explored what it means for a book to become useful, and how in that process a book often confronts its own limits as a medium for representing experience or the phenomenal world. Each text in this case is conspicuously inadequate to the task it sets for itself, but through that inadequacy discovers a form of self-reflection, and as such even invents a theory of its own distinctly textual dimensions.

Descartes' treatise on music (Item 1) opens with a sentence— "The object of this Art is a Sound"—that announces both the theorization of his topic and the limitations of the book in respect of its object. The illustration shown here comes from a supplement to the book provided by the English translator. It suggests just how much work needs to be done, in the form of scientific tabulation and division, to approach the acoustical phenomena that are the book's object. It also points, of course, to how Descartes' theoretical explanations of music find their ultimate proof in the practice he himself always had in mind.

In the preface to his play *The Malcontent* (Item 2), John Marston preemptively declares the printed book a failure: "*I would faine leaue the paper; onely one thing afflicts me, to thinke that Scaenes invented, merely to be spoken, should be inforcively published to be read.*" Marston here confronts the impossibility of a play text's ever fully rendering the presence of the human body in performance. Partly in response to the limitation inherent in using one medium to represent another, the text deploys printed marginalia such as "To Maria" and "kicks out Mend" as stage directions, helpful descriptions of action that render the performative dimension of the play more visible to the reader, in effect making the printed text its own promptbook (see Case 2).

Because desire is always in search of something not there, it presents a special problem for representation. The final two books in this case by Otho van Veen (Item 3) and Francesco Pona (Item 4) confront the problem of erotic representation through the use of emblem, a tripartite literary form comprised of motto, image, and an explanatory, usually poetic text. Far from being merely decorative, these emblems, one secular and one divine, can best be thought of as enabling a difficult kind of cognition, whereby the mind's movement across different and incommensurate media enacts an otherwise unrepresentable dimension of the psyche: the unsettling experience of eros.

Case 26
Modern Perspectives: Book Art

This exhibition has examined early forms of use to explore the idea of the book. The three recent works in this case reflect on books in terms of an *aesthetics* of use. Each one, furthermore, foregrounds the relationship between gender and the production of book knowledge.

In *The Anatomy Lesson: Unveiling the Fasciculus Medicinae* (Item 1), artist Joyce Cutler-Shaw and printer-publisher Robin Price reanimate an early medical book. Bringing together the original illustrations and text with Cutler-Shaw's illustrations and poems, the book provides yet further layers in the form of English translations and scholarly essays on aspects of medical history. As the opening suggests, this contemporary collaboration mirrors but also strikingly regenders the collective production of early scientific knowledge.

Susan kae Grant's *Radio-active Substances* (Item 2), a homage to Marie Curie, replicates in its various forms the labor involved in her discovery of radioactivity. Photographs and excerpts from Curie's thesis are printed onto leaves of lead, a material used to protect against radioactive matter. Test tubes, displayed in the book "case" as on a lab shelf, contain paper scrolls with paraphrases from Eve Curie's biography of her mother, a feature that underscores the place of women in the making of knowledge. At once beautiful and surprisingly readable, Grant's work reflects on the material conditions through which books are able to represent lives.

Stephanie Brooks' *Eric's Jane Austen Set* (Item 3) exactly replicates the color and dimension of a set of Austen's novels. Although a minimalist formal abstraction, the piece also implies inner dimension: not, however, the textual content that the object withholds, but the affective relation between an owner and her or his books. What is a book? Is Brooks' object a book? Must a book have an accessible, "readable" interior? Or can it be defined through the relationship between a particular person and the idea of those familiar objects on the shelf?

Case 27
Modern Perspectives: *GOAT*

        Like its subject, this book is larger than life, a heavyweight in the archive. In its physical proportions, *GOAT* is an appropriate homage to the historic presence of Muhammed Ali. The reader who comes to it is likely to feel awe, small in comparison to the object but also amplified by it.

        From the beginning, of course, Ali's charisma was less about his size or strength than his speed and agility, his verbal wit, his cultural and political passions. *GOAT* uses its multiple forms (visual, textual, tactile) to demand from the reader a complex engagement with a complex life. The book is almost unmovable and for that reason moving, in the sense that it transports the reader into the larger-than-life world imagined within it. Calling conspicuous attention to the art and ingenuity of its own making, furthermore, the book mirrors the process of self-fashioning through which Muhammed Ali emerged as the "Greatest Of All Time." Pressing on the limits of usability, *GOAT* begins to do justice to its subject by presenting itself as a monument to the making of cultural memory.