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How the Page Matters

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Introduction

This book is about how the page matters. To matter is not only to be of importance, to signify, to mean, but also to claim a certain physical space, to have a particular presence, to be uniquely embodied. The matter and mattering of the page are entangled in complicated ways as they reconfigure each other iteratively through time.[1] Across cultural boundaries and through centuries of change, the page has emerged as a safeguard for intellectual and artistic achievement. It has been used to share knowledge and communicate ideas from those of Sappho to those of William Shakespeare to our own. Much of what we have learned has been transmitted to us on the page; much of what we have wished to remind ourselves and others of has been broadcast in the same way. The page is a powerful interface between designer and reader, flexible enough to respond to a variety of demands while remaining comprehensible and communicative. The page is now ubiquitous – we flip absently through the pages of a magazine, scribble down notes on a pad of paper, and surf web pages on our laptops, PDAs, or mobile phones – but this ubiquity has led to present-day assumptions about the page and its operation. *How the Page Matters* re-examines these assumptions and focuses attention on the page by tracking the dynamic relationship of material and meaning in the medieval manuscript, printed book, and computational device. The following investigation will thus explore the significance of the page in the development of Western civilization and consider why the interface continues to play such an important role in the transmission of thought.

Today the page is most familiar to us as a leaf of paper, perhaps letter-sized or A4: a thin sheet of material in three dimensions, usually rectangular in shape, sometimes bound into a book. Each page has a *recto* and a *verso*, a front and back side. The height and width of the material regulate the space that may be allotted to text and image on these two sides, and the thickness determines the possibility of inscription upon its edges. From a young age, we are trained to believe that the boundaries of the interface are always identical to the edges of the material platform of the page – namely, that the cognitive space and the physical dimensions of the page are necessarily conterminous.

But the page has not always been circumscribed in this way. Before its emergence as a discrete piece of writing material, the page had an organizational function in the scroll. The Egyptians, Greeks, and Romans of antiquity arranged text and image into columns called *paginae*, or pages, on long rolls of papyrus.[2] The conceptual structure of the page was thus used by scribes to organize ideas graphically, and readers correspondingly developed the manual, visual, and cognitive skills with which to navigate the serial *paginae* of the scroll. Meanwhile, other initiatives in writing technology sought to match the dimensions of the physical material with the dimensions of the *pagina*. These developments made the platform and the conceptual space of the *pagina* coextensive, examples of which may be seen in the rectangular frame of the wax tablet and, later, the folio of the codex or what is now called the page of the book. Although the scroll and the tablet continued to be used in special situations, the codex with its bound pages was adopted as the favoured vehicle for the transmission of thought by the early Middle Ages.

The codex quickly became the customary method for the graphic communication of ideas after the first century AD, and was employed without hesitation through the greater part of the medieval and modern periods. Two millennia later, the codex continues to hold a central place in the transmission of knowledge, and its particular formulation of the page has become embedded as a default in our cultural imaginary. Because of this practical and conceptual longevity, the term 'page' is now commonly used to refer to the simultaneous and coextensive embodiment of the *pagina* with its material platform in the book. But the page need not exclusively be the page of the book. The page can and has existed outside its unique configuration in the codex, and these alternative incarnations have been sites of important developments in writing technology. This study reconsiders the habituated conflation between the page and the page of the codex; the page, I argue, is not always what we may think it is.

How the Page Matters offers a comparative and historical analysis that challenges present-day assumptions about reading, writing, and the production of texts. Chief among these suppositions is the simple coordination between physical platform, mode of production, and historical period: that is, that pages were written by hand on parchment in the Middle Ages, were printed with moveable type on paper after 1455, and are encoded for digital display in the twenty-first century. As the following study will show, these relationships of materiality, temporality, and context operate in creative and dynamic tension. The strategies of the page may be simultaneous, overlapping, mutually responsive, complementary, and even contradictory, and have been domesticated over a period of centuries, not tied exclusively to one particular platform or mode of production. For instance, parchment is still used by printers today; readers decorate the margins of printed pages with notes and drawings; we increasingly write by hand on digital tablets, pads, and other portable devices; and 'born-digital' documents are printed from our computers onto paper. Even as we innovate now in the twenty-first century, we are

drawing upon rich traditions in the design of our scripts and typefaces, the layout of text, image, space, and the paratextual devices of title pages, headings, tables, and indices.

The page transmits ideas, of course, but more significantly influences meaning by its distinctive embodiment of those ideas.[3] Discernible in this embodiment is an ongoing conversation between designers and readers. As writers, artists, translators, scribes, printers, booksellers, librarians, and readers configure and revise the page, in each case they leave redolent clues about how the page matters to them and how they wish it to matter to others. The architecture of the page is thus a complex and responsive entanglement of platform, text, image, graphic markings, and blank space. The page hosts a changing interplay of form and content, of message and medium, of the conceptual and physical, and this shifting tension is vital to the ability of the page to remain persuasive through time.

As a foil for exploring the material and the mattering of the page, this study uses a treatise from the fifteenth century entitled the *Controversia de nobilitate*. The *Controversia* is a debate about the origins of nobility, written around 1428 in Latin by the Florentine humanist Buonaccorso da Montemagno. Within two decades of its composition, the text was circulating in manuscript and print, in Italian, French, German, and English translation on both sides of the Alps. More recently, digital versions of the French and English translations have been released on CD-ROM and the Internet. Because the treatise still survives today in these different iterations from the fifteenth to the twenty-first century – on parchment, paper, and computer, and in manuscript, print, and digital forms – it possesses an ideal material history for our examination of the page.

Tracing the development of the page will allow us to see the extent to which many recent explorations of writing technologies have been circumscribed variously by formal, national, or temporal divides. At present, the study of books continues to be enriched with a plethora of detailed analyses of manuscripts to 1450, meticulous investigations of early modern printed texts, careful assessments of digital informational resources, and introspective ruminations about the future of reading. Much of this research is organized by the boundaries of material and time, despite early efforts by James J. O'Donnell and Roger Chartier to show how these divisions might be traversed.[4] The fragmentation of the history of books was encouraged by the work of Lucien Febvre, Henri-Jean Martin, and Elizabeth Eisenstein, which cast the printing press as a major force of change in the development of Western civilization.[5] These scholars created a rift in the traditional landscape of the study of books by characterizing the age of print as a discrete period in history with its own particular culture of readers and writers. For Eisenstein, the advent of the printing press heralded a new epoch in the diffusion of knowledge because a text could apparently be 'fixed' and replicated with no degradation.[6] The era of print was thus distinguished by the circulation of stable and identical texts in contrast to the earlier age of manuscript, which Eisenstein imagined to have suffered from an uneven transmission of progressively corrupt texts. It was contended that the arrival of the printing press

freed Western society from the fallibility of hand-copied books and initiated the next phase in communication. Moreover, Eisenstein argued that the standardization of texts that was engendered by printing technology in turn gave rise to a new social order. This order, a specialized group of writers, readers, and artisans, came to understand books in a fundamentally different way from their predecessors, whose intellectual activities, it was believed, had been encumbered by the inconsistencies and deficiencies of manuscripts.

Owing to the labours of Eisenstein and others, the printed book emerged as a cultural artefact that was fit for historical analysis. Bibliographers and textual editors such as D.F. McKenzie and Jerome McGann further constituted the printed book as material evidence of the past by encouraging the exploration of 'bibliographic codes' of particular editions and the investigation of social histories or 'sociologies' of printed texts that identified the particular circumstances of their production, circulation, and reception.[7] Moreover, the complementary notion of a 'print culture' was introduced to define a community that could be studied for its habits of reading and writing. The 'printed book' and 'print culture' were thus circumscribed as approved entities for scholarly investigation; disciplinary recognition enabled historians and literary scholars to understand the printed book as a site for explorations of the use and reception of a text, and also provided warrant for the examination of specific readers and their activities.

But these efforts to demarcate the printed book as a locus for the investigation of reading and writing practices have also fractured the broader history of the codex and communication technologies. The favour shown to the printed book has quietly eroded the significance of its manuscript counterpart, and the privileging of a print culture has likewise diverted attention from earlier developments in the transmission of ideas. More than three decades after its publication, Eisenstein's thesis continues to shape discussions about the history of the writing technologies, with much attention being given to supporting, elaborating, and even refuting the idea of a print revolution.[8] Scholars in the late twentieth century found Eisenstein's correlation of technological change and socio-cultural revolution especially attractive as they struggled to gain perspective on the contemporary shifts in communication that they were themselves experiencing. Like the introduction of the printing press before it, the advent of digital media was thought to signal the beginning of a new age that was to experience similarly profound changes in reading and writing. The death of the printed book was proclaimed as an imminent and inevitable conclusion, with print culture soon to be supplanted by a digital successor. The 'print revolution' and the 'digital revolution' were quickly constituted as comparable if not equivalent discontinuities in the history of books and reading.[9] The reiteration of these notions in both scholarly literature and popular culture established the two 'revolutions' as major signposts in the cultural imagination, and guided the direction of future research by indicating that the history of textual transmission should be viewed in terms of a material or technological division.

In order to examine the traditions of graphic communication across these discontinuities, *How the Page Matters* proposes an alternative history that is organized around the page. Despite its key role in the codex, the page has not yet been analysed in detail,[10] and has therefore escaped being scored by the conventional divisions of medium, language, and geographical area. Reappearing in different contexts through time, the page invites us to bridge these boundaries and explore how and why its communicative space continues to matter, both within and without the codex. The next chapters explore the ways in which the materiality of the page influences its own reception across technology, language, geography, and time by using examples drawn from the *Controversia de nobilitate* and its translations. To establish a footing for this investigation, chapter 1, 'Architectures of the Page,' surveys the different kinds of material platform that have been used in the construction of the page over the past two millennia, as well as the different rhetorical strategies that have been deployed in the layout of text and image. By identifying and examining the functions of different components of the page, the discussion shows how these routinely overlooked elements are critical in the expression of ideas and are indeed an important part of the signifying strategies of the page. Chapter 1 thus begins to uncover the dynamic relationship between the material embodiment of the page and its mattering, and furthermore proposes a way in which to investigate the complex expression of the page which is constituted of both – and more than – form and content.

With the foundations for a historical and theoretical analysis of the page thus established, chapter 2 investigates a range of examples that have been selected from the surviving manuscripts and printed books of the *Controversia de nobilitate* and its translations. The chapter considers how certain elements of the pages of Buonaccorso's text, such as the choice of script, type, image, and physical platform, may be interpreted by different audiences. Although these aspects of the page are often deemed inconsequential or even accidental, the examination reveals how one arrangement of material elements can associate the *Controversia* with a particular tradition at the same time that a different configuration can identify the treatise as a participant in another. By studying the ways in which the construction of the page has influenced the transmission of the *Controversia de nobilitate*, chapter 2 brings to light the fundamental role of the materiality of the page in its meaning and mattering.

Chapter 3, 'The Paratext and the Page,' explores the impact of title pages, dedications, and other paratextual mechanisms upon the trajectory of the *Controversia*. The chapter examines how designers used these devices to consolidate their own reputations, customize the treatise for new audiences, and otherwise direct the reception of the *Controversia de nobilitate*. Paratexts shape the page graphically and cognitively, and chapter 3 tracks the ways in which these devices have exerted pressure on the treatment of the *Controversia*. Building upon the previous chapter, 'The Paratext and the Page' demonstrates that ostensibly minor features of the pages of the *Controversia* can significantly affect the interpretation of the treatise.

Chapter 4 shows that the materiality of the page can be entangled in meanings which

resonate far beyond a localized study of a particular text or codex. This chapter explicitly addresses the mattering of the page by examining how the books of the *Controversia de nobilitate* and its translations become implicated in the longer trails of the production and representation of knowledge as they are catalogued and stored in the library. The exploration first raises questions about the function of the library by analysing the description of the book collection in the text of the *Controversia* as a phenotypic response to, and contemporary critique of, fifteenth-century notions of spaces of study. These questions are further pursued in an interrogation of the arrangement of the books of the *Controversia* in the intellectual and architectural spaces of the modern library, specifically, those of the Bibliothèque nationale de France. 'Reading the Library' considers how the principles that govern the library of the twenty-first century can shape the presentation and reception of a late medieval treatise, and thus contribute to a further dynamic of meaning and mattering in the pages of the *Controversia de nobilitate*.

Lastly, chapter 5 offers an investigation of the relationship between materiality and meaning in the newest versions of the *Controversia de nobilitate*. The page in its digital instantiation is yet another phase in the long history of graphic transmission and therefore shares the same lineage as its counterparts in the scroll and the codex. This chapter finds that the latest pages of the *Controversia* are imbricated with multiple strategies of expression. The digitized pages are configured by both traditional and emergent approaches, and informed by both cultural and computational codes. The approaches and codes that underpin Buonaccorso's treatise in the digital environment determine which pages have been made available, how, and why, and together constitute a system that influences the ways in which the *Controversia de nobilitate* now matters.

In our haste to establish a history of the book, we have read the page too quickly. The page has remained a favoured space and metaphor for the graphic communication of ideas over the span of centuries and across different cultural milieux. Handwritten, printed, and digital pages – as well as their hybrid combinations – continue to be generated, circulated, and read today.[11] Yet the page has become transparent, 'disappearing in its very function.'[12] So accustomed to its form, we no longer notice how the page is fundamental to the transmission of ideas and that it shapes our interpretation of those ideas. *How the Page Matters* seeks to remedy this oversight by examining the page as a cultural phenomenon, the product of local circumstances as well as participant in a long tradition of graphic communication and knowledge production. More than a diachronic exploration of the interface, then, this study argues that each page facilitates, circumscribes, and even checks the transmission of thought. The next chapters investigate the dynamic relationship between the materiality and meaning in the *Controversia de nobilitate*, and in so doing will at last draw attention to the significance of the page in the intellectual and artistic traditions of the West.

1

Architectures of the Page

The page has played a central role in preserving the intellectual and artistic traditions of the West for over two millennia. In its long service to the graphic communication of thought, the page has crucially influenced how ideas matter. The page is more than a simple vehicle or container for the transmission of ideas; it is a part of those ideas, entangled in the story itself. The platform of the page, the markings inscribed upon it, and the odours that issue from it together constitute a message. As Don McKenzie has observed, these non-verbal elements have 'an expressive function in conveying meaning.'[1] Yet despite its central role in the transmission of thought, the page often passes without registration or remark. So habituated to its operation, we often overlook how the page sets the parameters for our engagement with ideas.

As interest in the printed book has grown over the last fifty years, so too has interest in its particular version of the page. Much of this research was conducted at the turn of the twenty-first century in response to the prophesies about an imminent 'digital revolution' that was to bring about the demise of the codex. In an attempt to gain perspective on the cultural importance of the book, scholars posited an analogous social transformation in the fifteenth century that they called a 'print revolution.' A discrete era was thus created that began with the arrival of the printing press in the West and, arguably, ended with the universal adoption of computational technologies for the transmission of knowledge. The introduction of the printing press in late medieval Europe and the advent of digital technologies some five centuries later were characterized as profound turning points in history, equally credited with instigating new periods in the production and transmission of information. The reiteration of a print and digital 'revolution' in both scholarly and popular venues etched the paired notion in the cultural imaginary, and furthermore signalled that the history of writing technologies – and the book in particular – was to be understood in terms of technological supersession.

The adoption of a model of supersession allowed the codex to be uncritically divid-

ed according to time and manner of production. Intellectual rifts were drawn between manuscripts, printed books, and their digital counterparts, with scholars from different disciplines formulating their own methods of analysis. The physical platform of the codex has consequently been apportioned out for exploration; alternately, in its early instantiations to classical scholars, in its parchment embodiment to codicologists, and in its printed paper form to bibliographers.[2] Thus, how a message has been transmitted in the codex might be investigated by palaeographers who study script and layout in manuscripts, or by graphic artists who study the same in print.[3] If transmitting text, the book might be considered the domain of historians and literary scholars; if transmitting image or notation, the domain of art historians or musicologists.[4] Meanwhile, the examination of digitally encoded texts and online resources has been identified as the field of scholars of new media, information specialists, coders, and the next generation of textual editors.[5]

The page has been explored to some degree in the peripheries of these investigations of the book, but a critical analysis of its role in the transmission and preservation of knowledge – both within and without the codex – is still wanting. By bringing together relevant discussions from across the disciplines, the present chapter seeks to build a foundation for examining the dynamic relationship of materiality and mattering in the page. This particular history bridges the traditional divisions of time, mode of production, and media, as well as the intellectual boundaries that have separated text from image and form from content. To permit an analysis of matter and meaning, the physical and rhetorical strategies of the page must first be identified and disambiguated, although they work together in practice to communicate ideas . For the purposes of clarity, then, the ensuing discussion of the page will be roughly divided into two sections, the first dealing with the broader issues of material and construction, and the second with the more specific issues of *mise en page* or layout, encompassing letter forms, blank space, images, and decoration.

Whether thick, thin, brittle, smooth, dog-eared, or stained, every page discloses a unique identity that has been shaped by cultural forces over time. This identity is susceptible to change across different reading communities, but the material cues provided by the page perdure and are always present in the transmission of ideas. Designers make calculated decisions regarding the size, shape, colour, and quality of the material to suggest to readers what kind of page it is and how they wish it to be treated. Although a handwritten folio of animal skin in a medieval manuscript is as much a page as the leaf of a mass-produced paperback, the characteristics of each communicate vastly different messages about their respective manufacture, circulation, and cultural value. In this way, the construction of the page can be read as evidence of its social history.

The scrolls of antiquity are of particular interest because they show that the page need not always be physically circumscribed as it is in the codex, thus challenging the notion

that the page is unique to one particular form. In the classical period, scrolls were made from papyrus, a plant that grew in abundance along the Nile River.[6] The stems of the papyrus reeds could be made into a pliable material for writing, while other parts of the plant were harvested for food and medicine, or used in clothing, baskets, ropes, boats, and sails. Because papyrus was an important resource for communities living around the Mediterranean, changes in the manufacture of papyrus-based products can be considered indications of broader social change. Indeed, E.G. Turner observed a shift in writing material of the first century AD, when the papyrus sheets became larger but were of lesser quality than their forebears: stalks that would previously have been discarded were beginning to be used for writing material in the later period.[7] The use of stems that had once been regarded as substandard suggests that manufacturers were responding to the economic climate of the Mediterranean basin, where the cultivation of papyrus could not keep up with growing demand.

Writing material is constructed from the papyrus plant by gluing long, thin strips of the stem together in two layers, one at right angles to the other. As the strips are pounded together, the papyrus secretes a naturally sticky residue that acts as an adhesive. The individual pieces are thus pasted into a single sheet that is composed of two layers of strips; the fibres run horizontally on one side and vertically on the other. Extant sheets of papyrus are generally of slightly smaller proportions than the modern letter-sized (8½ by 11 inches) page, 25 by 19 centimetres compared with 21.6 by 28 centimetres. The height of the sheet was in part restricted by the natural limitations of the papyrus plant, the usable stems of which rarely exceeded 40 centimetres in length. To create a longer roll of writing material, twenty or more of these sheets would be lined up, one slightly overlapping the next, and pasted together. Egyptian scrolls could be as long as 20 or 30 metres, although their Greek counterparts were more often around 10 metres in length.[8] Additional sheets were appended to accommodate longer texts, and the roll was easily trimmed of excess if necessary. Using a brush to glide over the fibres of the papyrus, scribes painted text and image in columns that were laid out from left to right across the length of the scroll. The columns were usually oriented in a series, sometimes running over the joins of the individual sheets, so that the length of the scroll would be held horizontally and unfurled section by section.[9] Once written or read, the columns disappeared from view as the scroll was rolled up with the left hand and more papyrus was unrolled with the right.

The columns were called *paginae*, or pages, and constituted the chief method of organizing information on the scroll. Although often narrower in breadth, a single *pagina* measures about the same as the text block of a modern letter-sized page. Surviving *paginae* are composed of between twenty-five and forty-five lines, the spacing of which was calculated in accordance with the dimensions of the particular papyrus sheets.[10] For instance, the *paginae* of a small scroll only twelve centimetres high, half the size of an

average roll, may still transmit around twenty-five lines. Differences in the layout of the *paginae* appear to be related to the kind of text being transmitted. For verse, many extant scrolls display columns that measure around fifteen centimetres wide, set apart from each other by a margin of about one centimetre. By contrast, prose texts are arranged in narrower *paginae*, about six or seven centimetres in width, separated by a margin of one to one-and-one-half centimetres.[11] In addition to being customized according to the genre of text being transmitted, the design of columns was also influenced by the intended quality of the product. Deluxe scrolls exhibit *paginae* of smaller dimensions that are bounded by wider margins. Furthermore, some *paginae* were executed with a forward-sloping angle, each line of the column inscribed slightly to the left of its predecessor.[12] The overarching commonalities in the disposition of columns suggest that designers understood the *pagina* as an organizational device that set important controls on the transmission of ideas and facilitated successful communication. At the same time, graphic conventions were established to distinguish the luxury product from its more utilitarian counterpart, and this aesthetic variation indicates that the *pagina* was understood as a flexible interface that could be tailored in size, shape, and layout according to the requirements and sensibilities of designer and reader. .

The *pagina* thus emerges in the scroll as a conceptual structure by which information could be organized; it visually divides the long roll of writing material into shorter sections for the effective transmission of ideas. The *pagina* does not necessarily rely on a physical distinction to communicate its boundaries to readers. Instead, the careful arrangement of text and space graphically shows readers where they should read and indicates where they should stop. Designers craft the 'page' of the scroll by juxtaposing text with the absence of text, or image with the absence of image. As the scroll shows, the *pagina* need not be accompanied by an attendant material division. Nevertheless, each *pagina* in the roll possesses its own physicality – one that places it in close proximity to other *paginae*, requires a slow unfurling of the scroll, and encourages a practice of continuous reading.[13]

The scroll could also be configured in a number of ways that allowed its *paginae* to be articulated physically. The concertina-style scroll, for instance, is a long roll that is folded like an accordion, with one *pagina* doubled behind the next. The boundaries of individual *paginae* are reinforced with creases and folds of the material platform; a reader may decide to unfold the entire scroll, thus revealing all the *paginae* at once, or view the columns sequentially, with subsequent *paginae* hidden from view until unfolded. The scroll can also be bound whirlwind-style, a technique in which the roll is cut into pieces of increasing length that are then stacked together and secured along one edge.[14] The early *pagina* was thus circumscribed in different kinds of scrolls as well as in the discrete writing surfaces fashioned from bits of leaf or bark or shards of pottery.

It was, however, in the wax tablet that a physical structure was devised to match and

help circumscribe the intellectual unit of the *pagina* materially. The tablet is composed of a wooden rectangular frame, the hollow of which is designed to be filled with a thin layer of tinted wax.[15] The tablet was particularly useful in the drafting of letters, musical notation, and school exercises; letter forms could be inscribed into the yielding wax with a stylus and subsequently smoothed over and erased with the blunt end of the tool. Because only one face of the tablet could be filled with wax, multiple frames were often hinged together with a strip of leather or ring to increase the usable writing surface. This arrangement permitted the transmission of more text, and also allowed the two panels of wax to be closed in upon each other for protection during transportation. The edges of the wax and the frame of the tablet circumscribe the approved space of reading and writing in unambiguous physical terms, and these borders were acknowledged and respected by readers and writers alike. Even when the wax had expired, the depression in the frame was nevertheless recognized as the conventional space of writing; inscriptions can still be seen scratched or written in ink directly in the hollow of the tablet. Like its more familiar modern versions in the tablet computer, PDA, and mobile phone, the frame of the wax tablet marks the edges of the cognitive space of the page, providing clear direction about where information should be written and read.

A similar dynamic is enacted by the page of the codex, a format that began to be adopted in the West around the first century AD. Based on the hinged design of the wax tablet, the codex uses a central spine to bind multiple sheets of writing material together. Whereas the wax tablet only explicitly supports a single *pagina* on one of its faces, the folio of the codex offers space for the graphic transmission of ideas on its *recto* and *verso* – both the front and back sides. Alternative sources for the material of the page soon began to be sought out as the skills of reading and writing spread to areas outside the Mediterranean basin and away from regions that cultivated the papyrus plant.[16] Sheep and goats could be raised throughout most of Europe, and the skins of such animals made for a sturdy support for writing called parchment that was soon widely embraced in the medieval West.[17] Thinner, smoother, and whiter parchments were considered better writing material, as were those produced from the skins of calves or kids. Parchments destined for special products could be coloured with dyes or other pigments, such as those from which the purple pages of the sixth-century *Codex Argenteus* were made.[18]

Although paper had been used as writing material in China almost a millennium earlier, it was not taken up for the construction of the page in the West until the eleventh century.[19] Higher grades of paper were made from crushed and fermented white linen rags; meanwhile, coloured linen, scraps of canvas, or bits of rope were used for products of lesser quality. But even after the introduction of paper, parchment continued to be used for the production of many books and documentary sources throughout the medieval and early modern periods. As shall be explored in the next chapters, the choice

to use parchment or paper – when both are available – conveys important information about the history of that particular page, the environment in which it was constructed, and the purpose and audience for which it was intended.

The page as it is now commonly understood may be a single sheet of writing material that physically reinforces the boundaries of the *pagina*. The four edges of the page, perhaps papyrus, parchment, or paper, tell both the designer and reader where the space of communication begins and ends. As a single sheet, the page may stand free of an obvious attachment with others of its kind. The material boundaries of the solitary page not only circumscribe the space of communication, they also circumscribe the message itself; there is nothing more to be read than what is on the page.

Most of the pages that now appear as singletons were once a part of a larger piece of writing material. This larger sheet would have been folded into a booklet, called a gathering or quire.[20] The folds of the quire would subsequently have been cut apart to generate loose-leaf pages, perhaps for maps, calendars, or bills. If the pages are destined for the codex, however, the central fold of the quire is retained while the others are cut open to make – most commonly – eight folia, or sixteen pages. Any number of these gatherings can then be collected, placed in a stack, and sewn together under a binding. In this arrangement, the page is not encountered as an isolated phenomenon. Two facing pages are presented simultaneously in the codex, the back of one folio, or the *verso*, on the left side, and the front of the next folio, the *recto*, on the right. These two facing pages are not part of the same folio and may not necessarily have been part of the same sheet or the same quire; nevertheless, they have an important contiguous relationship.[21] Adjacent and conjoined, they are perceived together by the reader, even if only read one at a time. With each turn of the page, a new pair of facing pages is unveiled at the same time that the previous couple is obscured from view. As a consequence, the recto and verso of the same folio are in close conversation with their facing counterparts, often depending upon this proximal relationship to sustain the rhetorical coherence of their message.

A quire can be prepared with its pages folded and cut before accruing text or image. The designer is, in this case, confronted with the unambiguous physical arrangement of two blank facing pages. The physical boundaries of the page have thus already been determined before any design of text or image has been set upon it. This particular method of book-making was exploited in the Middle Ages, when the copying of a single manuscript was often shared among multiple skilled hands. Quires intended for the same codex could be doled out for different specialized tasks; some workers would write text upon selected pages at the same time that their colleagues were illustrating others.[22] After the pages had been filled with text and decoration, the quires were collected and sewn together under a binding to form the codex.

The disposition of text and image can also occur before the folding and cutting of the quire. In this approach, the *paginae* do not consistently face the same way on the large

sheet of material and do not follow in sequential order.[23] In contrast to the previous technique, the *paginae* here are first graphically expressed in ink on the writing material. Only subsequently will each be given its own physical division. The imposition of individual *paginae* on the writing material must be carefully calculated so that text and image will eventually follow on consecutive folia, right-side-up, after the sheet has proceeded through the final stages of being folded and cut. The design of such pages can be challenging for the under-experienced, and quires from the Middle Ages to the modern day show evidence of errors of imposition.[24] The use of these two methods of preparing quires for the codex means that the visualization of the *pagina* can occur in different ways. Products with similar appearances can have significantly different pedigrees, and by attending to their circumstances of manufacture, the genealogies of diverse pages may begin to be laid bare.

The history of the page is one of overlapping methods, materials, and means; the *paginae* of scrolls and codices have worked concurrently for millennia to organize information and facilitate the transmission of ideas, sometimes on papyrus, sometimes on parchment, and sometimes on paper. For instance, the *paginae* of both scrolls and codices were employed in the communication of literary and Christian writing through the first three centuries AD.[25] Although longer texts, especially those of a literary character, were increasingly transmitted via the codex in the early medieval period, the scroll remained the form preferred for the copying of documents by local, imperial, and papal administrations, as well as by communities involved in trade. Letters, contracts, and bills of sale survive on papyrus rolls from the Middle Ages, and the papal chancery continued to use scrolls to issue official documents and bulls.[26] Meanwhile, the exchequer of England adopted animal skin for its scrolls, detailing the royal accounts on rolls of parchment until the nineteenth century. As these different ways of constructing the page developed, so too did the strategies for arranging text and image on the interface. Complex visual patterns of letter-form, space, and image were cultivated in the *paginae* of scrolls, tablets, and codices.[27] But these patterns remained fluid as readers-cum-designers marked up their pages as they were inclined. Thus revised and augmented by different hands over time, the page emerges as evidence of its own production, performance, and consumption. The markings on the page are a part of the 'cultural residue' left by a battery of authors, scribes, artists, booksellers, book owners, and readers, and can be read as a compelling narrative about the social history of thought.[28]

Words on the page are regularly understood to transmit information through language, but they can convey meaning in other ways. Scholars such as Johanna Drucker, Armando Petrucci, and Stanley Morison have explored the visual dynamic of writing in a variety of contexts, from its epigraphic manifestations on monumental architecture to its typographic instantiations on paper.[29] They found that specific letter forms can infuse a text with social or political suggestion. By generating a particular visual expression, the

shapes of letters may, for instance, exploit the authority of an established tradition or diverge self-consciously from conventional patterns.[30] Because the decisions surrounding the deployment of one style of script over another are influenced by social, political, and economic forces, letter forms can be considered part of a broader cultural discourse about the production and transmission of ideas. The disposition of letter shapes may thus be used as a way to explore reading and writing communities.

Likewise, the structures for arranging these letter forms in manuscripts and printed books are graphic indications of how designers visualized ideas and organized them for themselves and other readers. The processes of thinking and reading, then, may be discerned in part from the clues offered by the page. For instance, early Christian copyists and readers developed a method of dividing their texts into paragraphs and chapters to facilitate the consultation of passages from scripture. These designers of the early page also split long lines of prose text into shorter units, arranged as lines of poetry – *per cola et commata* – to aid reading and understanding.[31] Meanwhile, the canon table correlated similar passages of different Gospel texts, and headings helped the readers navigate the codex. These developments indicate shifts, perhaps in reading practices or in readership. When books began to be employed in great numbers by university communities in the twelfth century, designers reallocated their attention to the systematic ordering of information on the page.[32] Scholarly readers often needed to refer to multiple texts at once, and therefore demanded an organizational apparatus in support of their particular reading activities. Sophisticated patterns of ruling were developed to divide the page into units that were conceptually and graphically distinct. This layout permitted designers to set commentaries and glosses adjacent to the passage that was being explicated, and thus transmit a number of different texts in a single *pagina*. The page became an intricate weaving of narratives as scholars and students read their standard texts while consulting the accompanying marginal and interlinear glosses. In the thirteenth century, Vincent of Beauvais discussed the importance of arranging and organizing information on the page in the *apologia* to his compendium, the *Speculum maius*. Vincent explains that he hopes to aid his readers by dividing the *Speculum* into shorter, labelled sections. As Malcolm Parkes has noted, many of the surviving manuscripts of the *Speculum maius* preserve the same pattern of disposition, suggesting that Vincent and his copyists recognized the headings, running titles, and tables to be a critical part of the work that contributed importantly to its transmission.[33] From early Christian manuscripts, to glossed university texts, to liturgical books with illustration and music, the rich variations of the medieval *mise en page* indicate that the interface was understood and exploited as a field of engagement that could be reconfigured as needed.

Although the study of the word is central to many current explorations of books and their materiality, a consideration of its absence is equally valuable. Unmarked zones of the page are purposeful, and participate critically in the communication of ideas.[34]

Blank space is crucial to the activity of reading, and especially silent reading, because it enhances the legibility and comprehensibility of the page.[35] Without these saccadic pauses that allow the eye to skip quickly across a line of text, the process of reading can take more than twice as long. The broader significance of space on the page has been explored by Paul Saenger, who observed that the separation of words in the seventh century was a visible manifestation of the shift from oral reading practices to silent ones.[36] Furthermore, the spaces between words, between lines, and around the text block can be understood as visual and cognitive breaks, employed by designers and readers as a way to moderate the pace of engagement with the page. By leaving space on the page unfilled, designers provide openings for readers to pause and consider the thoughts that they have encountered. Readers are given the opportunity in these zones to contemplate, consider, and question ideas, and may even be encouraged by the empty spaces to add their own thoughts to the page.

Like blank space, image and decoration also work as visual avenues of exchange with readers.[37] The placement of images on the page, for example, is a sign from designers about the value of the illustrations and how they are meant to be read. Illustrations may be designed to displace or replace letter forms, especially if they have been positioned in the centre of the page. In the marginal zones of the page or woven into the letter forms themselves, images can propose an interpretation that is complementary, supplementary, or even contradictory. Meanwhile, images may have no explicit connection with a particular text when isolated on their own pages. Bound in the codex, however, images are placed in proximity to other elements – perhaps letter forms or decorations – and are perceived by readers in terms of this relationship. Moreover, illustrations can refer to the world beyond the page and participate in a wider conversation about the book that involves the social status of the particular codex, its designers, and its owners.[38] For instance, the inclusion of more images in religious books of the later Middle Ages has been identified by scholars as an indication of the emergent practice of private devotion.[39] The designers of Books of Hours catered to their growing audience with a *mise en page* that complemented the activity of personal prayer. Accommodating different reading abilities in the lay population and various methods of devotion, the pages of these customized and portable manuscripts feature rich illustrations, as well as special rubrics, instructions, and prayers.

The layout of printed text has similarly been theorized in the last decades by Gérard Genette and D.F. McKenzie.[40] By analysing the material and graphic elements of the printed book, both scholars sought to develop an understanding of these materials that took into account the circumstances of their production. The scholars identified different visual and verbal cues for critical examination, calling them paratexts and bibliographic signs. These signs include typefaces, title pages, prologues, epilogues, dedications, and chapter headings. The visual and verbal cues are manifest inside, outside, and around

the text proper, appearing simultaneously with the text and configuring the reading experience in fundamental ways. Because writing is designed to 'produce effects, dictate a posture, and oblige the reader,' its examination – and the investigation of paratextual devices in particular – can serve to supplement broader explorations of the communication of knowledge.[41]

Similarly, the use of digital technologies in the transmission of ideas has led scholars to begin considering algorithmic code as a culturally pregnant means of shaping the display of text and image. Studies in the areas of new media and digital humanities have shown that the computational code enabling our interaction with information is not neutral, but instead constitutes an intellectual system.[42] This cognitive system establishes patterns in which ideas are presented, organized, and accessed in the digital environment. The entire expression of the digital page is built upon relationships that are both created and concealed by computational code. As Adrian Mackenzie has characterized it, the algorithms underpinning the digital transmission of ideas 'concatenate different regions and neighbourhoods of relations' and hide 'unexpected complexities and inconsistencies.'[43] Understood in this way, the digital page – much like pages in other media – becomes evidence in the longer history of the transmission of thought.

The page is an expressive space for text, space, and image; it is a cultural artefact; it is a technological device. But it is also all of these at once. The ensuing chapters will explore the page as a careful integration of physical and cognitive architectures by using a hybrid approach adapted from methods that have already been established in different disciplines to study the book and book-related issues. The following discussion therefore combines the tools of palaeographers, codicologists, art historians, literary critics, and new media theorists to examine the complicated synthesis of rhetorical, intellectual, and physical elements of the pages of a fifteenth-century treatise. This treatise, the *Controversia de nobilitate*, has been transmitted in manuscript, print, photograph, and microfilm, and on computer across diverse linguistic, geographical, and cultural boundaries. As the next chapters will demonstrate, designers and readers have imagined the text with different configurations of materials, letter forms, spaces, and images. In so doing, they have proposed their own interpretations of the *Controversia de nobilitate* and shaped its reception through six centuries of history.

The *Controversia de nobilitate* was written in Latin around 1428 by Buonaccorso da Montemagno, and provides a wealth of evidence to support an investigation of the page.[44] Multiple copies of the treatise survive in handwritten, printed, and digital forms. Over a hundred manuscript copies from the fifteenth century are preserved today in libraries across the Italian peninsula, from the Biblioteca Ambrosiana in Milan, to the Vatican Library, to the Biblioteca Nazionale Marciana in Venice. In addition, a number of translations of the *Controversia de nobilitate* survive from the same period. The Italian and French translations are extant in handwritten copies, and the *Controversia* was

printed in Latin, Italian, French, German, and English before 1501. More recently, two versions of the *Controversia* have appeared in the digital environment, Jean Miélot's fifteenth-century French translation on CD-ROM and the English translation of 1481 in an online database.

Originally from Pistoia, Buonaccorso da Montemagno moved to Florence, where he worked as a jurist, diplomat, and scholar.[45] He was one of a number of writers in the humanist milieu of Florence to take up the question of nobility, which he did in the *Controversia de nobilitate*. Whether nobility was endowed by birthright alone was a debate of some interest in the fifteenth century, a part of the humanist revival of classical themes. Indeed, both Plato and Aristotle had explored the nature of an elite social class. In the *Nicomachean Ethics* and the *Politics*, Aristotle recognized that good family connections and wealth were important for the acquisition of virtue, but so too were rational thought and contemplation.[46] Similarly, in the story of the *Controversia de nobilitate*, Buonaccorso explores whether a noble character is only passed down through birthright or whether it must be cultivated with labour and outstanding civic service. He stages the traditional question as a debate in ancient Rome between two suitors, Publius Cornelius Scipio and Gaius Flaminius, who are competing for the hand of the virtuous Lucretia. To determine which man is worthy of being her husband, Lucretia and her father ask the suitors to engage in a debate about their respective nobility. They must argue their cases in front of the senate, and Lucretia will marry the man who is deemed the winner of the contest.

The *Controversia* is organized as two extended monologues, with Cornelius speaking first. Cornelius contends that nobility can only be passed through the bloodlines. He argues that virtue is inherited, transferred from parent to child. Because he is of a highly ranked family, Cornelius says that nobility is in his blood and bones, and can be detected through a close inspection of his countenance. He uses the public statues and memorials of his ancestors as evidence of his personal nobility. These are to be understood as visible records that remind the public of the debt owed his family and, by extension, him. Moreover, Cornelius believes that his conspicuous wealth should garner him much esteem. Arguing that prestige follows fortune, he enumerates the properties left to him by his family, including the country estates where he spends his time on leisurely pursuits. He also provides an inventory of the material goods – magnificent family heirlooms, opulent furniture, sumptuous jewellery – that would be available to Lucretia should she choose to marry him. She would have an easy and relaxed life with him, he declares, with no material care in the world. Servants would meet her every need, and she would pass her days unencumbered, hunting, singing, and playing music in the company of her maidens.

Countering Cornelius's argument, Flaminius contends that nobility does not travel through bloodlines and therefore cannot be assumed by familial association. Instead, nobility must be attained by each individual and, furthermore, renewed continually

through work. In support of his argument, he cites cases in which poor men achieved respect and gained social status on the basis of their own merit. For instance, Flaminius says, Servius Tullius and Marcus Porcius Cato were of humble families, the former being a son of slaves; both distinguished themselves through their military prowess to become two of the most highly regarded men of Rome. Flaminius adds that lowly origins did not hinder Socrates, Euripides, or Demosthenes from achieving great repute. He also provides examples to illustrate that poverty need not preclude nobility. To make his point, he recalls the story of Lucius Quintus Cincinnatus, a farmer who was eventually nominated to the esteemed office of dictator by the Roman senate. Flaminius argues that like these great men, he has also distinguished himself in his military service to Rome. More recently, he has turned his attention to the study of philosophy with Latin and Greek masters. He contends that his books and library are important signifiers of virtue; they are material evidence of his nobility to be contrasted with the rich home furnishings of Cornelius. Flaminius says to Lucretia, '[In my home,] you will see my library filled with books, in which I have placed all my hope. These are indeed illustrious household goods.'[47] To counter the inventory of jewellery and heirlooms offered by Cornelius, Flaminius gestures to the collection of books in his library. Thus presented to bear witness to the virtuous character of its owner and his home, the library emerges as an important symbol in the debate about nobility and more broadly indicates the appeal of such a space to Buonaccorso and his contemporaries.

Over the course of six hundred years, Buonaccorso's treatise has been copied, recopied, and translated in various ways. Yet the text of the *Controversia de nobilitate* has remained remarkably consistent. The most dramatic changes to the *Controversia* are in the design of its pages. The material fluidity of texts in general has been noted by Henri-Jean Martin, who writes: 'Even in periods of apparent stability, ... traditional texts were ceaselessly revised, adapted, translated, and changed in their physical aspect to bring them into line with the spirit of the times and to make them appeal to a specific public. The presentation of written texts – one might say, the 'staging' of the written work – never stopped evolving.'[48] As will become evident in the next chapters, Buonaccorso's treatise continues to be reincarnated in different guises for different audiences. An examination of the history of the *Controversia de nobilitate* reveals that designers are even today 're-staging' Buonaccorso's composition for their readers. These material variations mark important shifts in the perception and use of the treatise; the differences in the materiality of the page are differences in meaning.

Designers have used a range of materials as well as an assortment of letter forms, colours, and combinations of text, space, and image to propose their own interpretations of Buonaccorso's story. Outfitted with different paratextual codes, the *Controversia* can be presented as a rhetorical exercise, a courtly romance, a scholarly tract, or a precious relic. These ways of reading the *Controversia de nobilitate* are further reinforced by the

parcelling of the treatise with texts of more established repute: the pages of the *Controversia* are placed in close proximity to aspirational ones in hopes of consolidating a particular identity for Buonaccorso's treatise. The different material contexts of the *Controversia de nobilitate* have accrued for the text multiple, varied, and overlapping identities. These guises are still in force today and establish the grounds upon which the treatise is received and understood.

Whether a product of manuscript, print, digital, or hybrid technologies, the page of the *Controversia de nobilitate* constitutes a thick network of expressions that continues to be augmented as it passes through history. Readers interpret text, space, and image as they are inclined, but the meanings that they formulate are predicated upon the materiality of each carefully designed page.[49] The page is thus an interface, standing at the centre of the complicated dynamic of intention and reception; it is the material manifestation of an ongoing conversation between designer and reader. The page has borne witness to this rich exchange for centuries, and will continue to do so for many more. For its long-standing participation in the transmission of knowledge in the West, we shall begin our exploration of how the page matters.