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The Book of Memory

A Study of Memory in Medieval Culture

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Abbreviations

AASS	*Acta Sanctorum*
Ad Her.	Cicero, *Rhetorica ad Herennium*
Avi. Lat.	Avicenna (Ibn Sina) Latinus
CCSL	*Corpus Christianorum, series latina*
CHB	*The Cambridge History of the Bible*
Conf.	St. Augustine, *Confessiones*
CSEL	*Corpus Scriptorum Ecclesiasticorum Latinorum*
CT	Geoffrey Chaucer, *The Canterbury Tales*
De orat.	Cicero, *De oratore*
DTC	*Dictionnaire de Théologie Catholique*
Du Cange	C. Du Cange, *et al.*, *Glossarium mediae et infimae latinitatus*. Graz. 1954–5
EETS	The Early English Text Society
Epist.	*Epistolae* (various authors, as indicated)
Etym.	Isidore of Seville, *Etymologiae*
FQ	Edmund Spenser, *The Faerie Queene*
HF	Geoffrey Chaucer, *The House of Fame*
Inst.	Quintilian, *Institutio oratoria*
JMRS	*Journal of Medieval and Renaissance Studies*
JWCI	*Journal of the Warburg and Courtauld Institutes*
MED	*The Middle English Dictionary*
MGH	*Monumenta Germaniae historica*
OED	*The Oxford English Dictionary*
Ox. Lat. Dict.	*The Oxford Latin Dictionary*
PG	*Patrologia cursus completus, series Graeca*. Edited by J.-P. Migne. Paris, 1857–66.
PL	*Patrologia cursus completus, series Latina*. Edited by J.-P. Migne. Paris, 1841–64.
Sent.	Isidore of Seville, *Sententiarum libri* III
ST	Thomas Aquinas, *Summa Theologiae*
STC	*A Short-Title Catalogue* (Pollard and Redgrave)

Introduction

When we think of our highest creative power, we think invariably of the imagination. "Great imagination, profound intuition," we say: this is our highest accolade for intellectual achievement, even in the sciences. The memory, in contrast, is devoid of intellect: "just memorization," not "real thought" or "true learning." At best, for us, memory is a kind of photographic film, exposed (we imply) by an amateur and developed by a duffer, and so marred by scratches and "inaccurate" light-values.

We make such judgments (even those of us who are hard scientists) because we have been formed in a post-Romantic, post-Freudian world, in which imagination has been identified with a mental unconscious of great, even dangerous, creative power. Consequently, when they look at the Middle Ages, modern scholars are often disappointed by the apparently lowly, working-day status accorded to imagination in medieval psychology – a sort of draught-horse of the sensitive soul, not even given intellectual status. Ancient and medieval people reserved *their* awe for memory. Their greatest geniuses they describe as people of superior memories, they boast unashamedly of their prowess in that faculty, and they regard it as a mark of superior moral character as well as intellect.

Because of this great change in the relative status of imagination and memory, many moderns have concluded that medieval people did not value originality or creativity. We are simply looking in the wrong place. We should instead examine the role of memory in their intellectual and cultural lives, and the values which they attached to it, for there we will get a firmer sense of their understanding of what we now call creative activity.

The modern test of whether we "really know" something rests in our ability to use what we have been taught in a variety of situations (American pedagogy calls this "creative learning"). In this characterization of learning, we concur with medieval writers, who also believed that education meant the construction of experience and method (which they called "art") out of knowledge. They would not, however, have understood our separation of "memory" from "learning." In their understanding of the matter, it was memory that made knowledge into useful experience, and memory that combined these pieces of information-become-experience into what we call "ideas," what they were more likely to call "judgments."

A modern experimental psychologist has written that "some of the best

'memory crutches' we have are called laws of nature," for learning can be seen as a process of acquiring smarter and richer mnemonic devices to represent information, encoding similar information into patterns, organizational principles, and rules which represent even material we have never before encountered, but which is "like" what we do know, and thus can be "recognized" or "remembered."[1] This is a position that older writers would have perfectly understood.

I think it will be useful to begin my study by comparing descriptions of two men whom their contemporaries universally recognized to be men of remarkable scientific genius (assessments which time has proven correct, though that is only partly relevant to my discussion): Albert Einstein and Thomas Aquinas. Each description is the testimony (direct or reported) of men who knew and worked intimately with them over a long period of time. The first is by Leopold Infeld, a physicist who worked with Einstein at Princeton:

> I was very much impressed by the ingenuity of Einstein's most recent paper. It was an intricate, most skilfully arranged chain of reasoning, leading to the conclusion that gravitational waves do not exist. If true, the result would be of great importance to relativity theory . . .
>
> The greatness of Einstein lies in his tremendous imagination, in the unbelievable obstinacy with which he pursues his problems. Originality is the most essential factor in important scientific work. It is intuition which leads to unexplored regions, intuition as difficult to explain rationally as that by which the oil diviner locates the wealth hidden in the earth.
>
> There is no great scientific achievement without wandering through the darkness of error. The more the imagination is restricted, the more a piece of work moves along a definite track – a process made up rather of additions than essentially new ideas – the safer the ground and the smaller the probability of error. There are no great achievements without error and no great man was always correct. This is well known to every scientist. Einstein's paper might be wrong and Einstein still be the greatest scientist of our generation . . .
>
> The most amazing thing about Einstein was his tremendous vital force directed toward one and only one channel: that of original thinking, of doing research. Slowly I came to realize that in exactly this was his greatness. Nothing is as important as physics. No human relations, no personal life, are as essential as thought and the comprehension of how "God created the world." . . . one feels behind [his] external activity the calm, watchful contemplation of scientific problems, that the mechanism of his brain works without interruption. It is a constant motion which nothing can stop. . . . The clue to the understanding of Einstein's role in science lies in his loneliness and aloofness. In this respect he differs from all other scientists. . . . He had never studied physics at a famous university, he was not attached to any school; he worked as a clerk in a patent office. . . . For him the isolation was a blessing since it prevented his thought from wandering into conventional channels. This aloofness, this independent thought on problems which Einstein formulated for himself, not marching with the crowd but looking for his own lonely pathways, is the most essential feature of his creation. It is not only originality, it is not only imagination, it is something more.[2]

The following descriptions are excerpted from a life of St. Thomas Aquinas, written shortly after his death by Bernardo Gui, and from testi-

mony taken at Thomas's canonization hearings from his close contemporary, Thomas of Celano, who also knew Reginald, Thomas's *socius*, or friar-companion.

> Of the subtlety and brilliance of his intellect and the soundness of his judgment, sufficient proof is his vast literary output, his many original discoveries, his deep understanding of the Scriptures. His memory was extremely rich and retentive: whatever he had once read and grasped he never forgot; it was as if knowledge were ever increasing in his soul as page is added to page in the writing of a book. Consider, for example, that admirable compilation of Patristic texts on the four Gospels which he made for Pope Urban [the *Catena aurea* or "Golden Chain"] and which, for the most part, he seems to have put together from texts that he had read and committed to memory from time to time while staying in various religious houses. Still stronger is the testimony of Reginald his *socius* and of his pupils and of those who write to his dictation, who all declare that he used to dictate in his cell to three secretaries, and even occasionally to four, on different subjects at the same time . . . No one could dictate simultaneously so much various material without a special grace. Nor did he seem to be searching for things as yet unknown to him; he seemed simply to let his memory pour out its treasures. . . .
>
> He never set himself to study or argue a point, or lecture or write or dictate without first having recourse inwardly – but with tears – to prayer for the understanding and the words required by the subject. When perplexed by a difficulty he would kneel and pray and then, on returning to his writing or dictation, he was accustomed to find that his thought had become so clear that it seemed to show him inwardly, as in a book, the words he needed . . .
>
> Even at meal-times his recollection continued; dishes would be placed before him and taken away without his noticing; and when the brethren tried to get him into the garden for recreation, he would draw back swiftly and retire to his cell alone with his thoughts.[3]

It might be useful to isolate the qualities of genius enumerated in each of the above descriptions. Of Einstein: ingenuity, intricate reasoning, originality, imagination, essentially new ideas coupled with the notion that to achieve truth one must err of necessity, deep devotion to and understanding of physics, obstinacy, vital force, single-minded concentration, solitude. Of Thomas Aquinas: subtlety and brilliance of intellect, original discoveries coupled with deep understanding of Scripture, memory, nothing forgotten and knowledge ever-increasing, special grace, inward recourse, single-minded concentration, intense recollection, solitude.

As I compare these two lists I am struck first by the extent to which the qualities ascribed to each man's working habits are the same. In both, one gets a vivid sense of extraordinary concentration on problems to the exclusion of most daily routine. Infeld speaks of tremendous vital force, Bernardo of intense inner prayer, but both are describing a concentrated continuous energy that expresses itself in a profound singlemindedness, a remarkable solitude and aloofness. Each also praises the intricacy and brilliance of the reasoning, and its prolific character, its originality. It is important to appreciate that Bernardo values originality in Thomas's work – he praises its creativeness just as Infeld praises that in Einstein's.

What we have, in short, is a recognizable likeness between these two extraordinary intellects, in terms of what they needed for their compositional activity (the activity of thought), the social isolation required by each individual, and what is perceived to be the remarkable subtlety, originality, and understanding of the product of such reasoning. What is strikingly different is that in the one case this process and product are ascribed to intuition and imagination unfettered by "definite" tracks, in the other to a "rich and retentive memory," which never forgot anything and in which knowledge increased "as page is added to page in the writing of a book."

My point in setting these two descriptions up in this way is simply this: the nature of creative activity itself – what the brain does, and the social and psychic conditions needed for its nurture – has remained essentially the same between Thomas's time and our own. Human beings did not suddenly acquire imagination and intuition with Coleridge, having previously been poor clods. The difference is that whereas now geniuses are said to have creative imagination which they express in intricate reasoning and original discovery, in earlier times they were said to have richly retentive memories, which they expressed in intricate reasoning and original discovery.

We know a good deal about the actual procedures that Thomas Aquinas followed in composing his works, thanks in part to the full accounts we have from the hearings held for his canonization,[4] and in part to the remarkable survival of several pages of autograph drafts of certain of his early works. Both sources of material have received a thorough analysis from the paleographic scholar, Antoine Dondaine.[5] Dondaine's work confirmed the existence, alluded to many times in the contemporary accounts, of a group of three or four secretaries who took down Thomas's compositions in a fair hand from his own dictation. The autographs are written in *littera inintelligibilis*, a kind of shorthand that fully lives up to its name (Dondaine says that the great nineteenth-century editor, Uccelli, lost his eyesight scrutinizing these drafts) for it was not designed to be read by anyone other than the author himself. As Dondaine has reconstructed the process of composing the *Summa contra gentiles*, an early work for which a number of autograph leaves exist, Thomas wrote first in *littera inintelligibilis* and then summoned one of his secretaries to take down the text in a legible hand while Thomas read his own autograph aloud. When one scribe tired, another took over.

But no autographs are found of the later major works. Dondaine remarks this fact as curious, because one would expect these autographs to have been treasured at least as carefully as those of earlier works. He suggests that their nonexistence is due not to loss but to there having been none in the first place to save. "Le fait qu'il n'y ait plus d'autographes des ouvrages postérieurs invite á penser que saint Thomas ne les a pas écrits, sinon peut-être sous forme de brouillons, et qu'il les a dictés en les composant."[6] Dondaine points out the tedium and waste of time involved for Thomas in writing out a complete text, even in shorthand, and then reading it aloud for it to be written again, this time in a fair hand.

There is good evidence in the remembrance of his peers that, certainly later in life, Thomas was not accustomed to write his thoughts down himself, even in *inintelligibilis*. Two incidents in particular suggest this habit. There is the famous story of Thomas at dinner with Louis XI, Saint Louis. Though seated next to the king, Thomas was still preoccupied by an argument he was composing against the Manichees. Suddenly he struck the table, crying, "That settles the Manichees!" and called out to Reginald, his *socius*, "as though he were still at study in his cell . . . 'Reginald, get up and write!"[7] This incident must have occurred between the springs of 1269 and 1270; the work in progress was the Second Part of the *Summa theologica*.[8]

The second incident occurred in conjunction with the writing of his commentary on Isaiah, a work for which an autograph of five chapters exists (Vatican MS. lat. 9850).[9] Thomas became puzzled for days over the interpretation of a text:

> At last, one night when he had stayed up to pray, his *socius* overheard him speaking, as it seemed, with other persons in the room; though what was being said the *socius* could not make out, nor did he recognize the other voices. Then these fell silent and he heard Thomas's voice calling: "Reginald, my son, get up and bring a light and the commentary on Isaiah; I want you to write for me." So Reginald rose and began to take down the dictation, which ran so clearly that it was as if the master was reading aloud from a book under his eyes.[10]

Pressed by Reginald for the names of his mysterious companions, Thomas finally replied that Peter and Paul had been sent to him, "and told me all I desired to know." This tale, among other things, suggests that some of Thomas's work was composed in a mixture of some parts written out in shorthand and then read to a secretary and some mentally composed and dictated. The contemporary sources suggest strongly that the entire *Summa theologica* was composed mentally and dictated from memory, with the aid at most of a few written notes, and there is no reason to disbelieve them.

Around 1263, Thomas wrote a compilation of patristic texts on the Gospels, the *Catena aurea*, which Gui describes, in the passage I just quoted, as "put together from texts that [Thomas] had read and committed to memory from time to time while staying in various religious houses."[11] Chenu accurately describes it as a "concatenation of patristic texts cleverly coordinated into a running commentary"; it includes a number of Greek authorities as well, which Thomas had had translated into Latin in order to add these extracts, "being careful to place the names of the authors before their testimonies" in the proper quotational style, whose purpose, as we will see in chapter 3, was certainly to aid memorial retention.[12] The *catena* or "chain" is a very old medieval genre of scholarly commentary, used widely by the monastic scholars as part of *lectio divina*.[13] The authorities are chained, or hooked, together by a particular Biblical phrase. Thus the commentary entirely follows the sequence of the main text, each chapter division of the Gospel book forming a division of the *Catena*, and each verse

(actually its unnumbered phrases and clauses) quoted separately with a string of relevant comments following it.

The written organization of the *catena* simply reproduces its memorial organization, as each bit of Biblical text calls up the authorities attached to it. For example, on Mt. 2:9, Thomas Aquinas first gives us a bit of Chrysostom on Matthew, then Augustine from two sources, then the ordinary gloss, then Ambrose on Luke, then Remigius, and then the gloss again. It is important to note that in writing this work Thomas did not look up each quotation in a manuscript tome as he composed; the accounts are specific on this point. The texts were already filed in his memory, in an ordered form that is one of the basics of mnemonic technique. And of course, once the texts were in his memory they stayed there for use on other occasions.

I am not suggesting that Thomas never made reference to manuscripts – on the contrary, we know that he did. We also know that one task of his secretaries was to copy manuscripts for his use.[14] But the picture we are often given of Thomas pausing while dictating in order to check a reference in a manuscript seems to me contrary to the evidence. For we are told over and over again that Thomas's flow to his secretaries was unceasing: it "ran so clearly that it was as if the master were reading aloud from a book under his eyes." He dictated "as if a great torrent of truth were pouring into him from God. Nor did he seem to be searching for things as yet unknown to him; he seemed simply to let his memory pour out its treasures." And again, "When perplexed by a difficulty he would kneel and pray and then, on returning to his writing or dictation, he was accustomed to find that his thought had become so clear that it seemed to show him inwardly, as in a book, the words he needed."[15]

That unceasing torrent, that clarity as though reading from a book before his eyes, that quality of retaining whatever he had read and grasped, can be understood if we are willing to give his trained memory its due. Thomas himself stresses the importance of concentration in memory, and we are told many times of his remarkable power of deep concentration, often approaching a trance-like state in which he did not feel physical pain. Thomas communed with his memory constantly, certainly before he dictated, and only when he clearly had "the understanding *and the words required*" (my emphasis) would he lecture or write or dictate.[16] (This, of course, is not to suggest that his works were dictated always in the absolutely final form in which we have them today; Dondaine gives much evidence of revision and reworking in the autographs and between the autographs and the fair texts. For some works, he left notes which were to be worked up later; the *Supplement* to the *Summa* is an example of such a practice.) I am even inclined to take somewhat seriously his comment to Reginald that Peter and Paul spoke with him and instructed him in his difficulties with the text of Isaiah. Their words were certainly intimately in his mind, among the many voices in his memory, intimate colleagues to his own thoughts. Moreover, subvocalization, a murmur, was a persistent and apparently necessary feature of

memory work. One of his secretaries, a Breton called Evan, told how Thomas would sometimes sit down to rest from the work of dictating and, falling asleep, would continue to dictate in his sleep, Evan continuing to write just the same. What Evan took for sleep may have been an extreme form of Thomas's concentration. Or perhaps we should credit the story as told; since the matter had been worked out beforehand in Thomas's memory, perhaps a kind of mental "automatic pilot" took over in times of extreme fatigue.

Most remarkable is the testimony of all his pupils and secretaries, including Reginald, that "he used to dictate in his cell to three secretaries, and even occasionally to four, on different subjects at the same time."[17] Gui comments, "No one could dictate simultaneously so much various material without a special grace." Dondaine is inclined to discount this story as the evidence of the single Breton secretary (are Bretons especially credulous?).[18] But Gui ascribes the testimony to *all* those who wrote to Thomas's dictation.

Moreover, as Dondaine himself notes, such stories have been told – though rarely – of other historical figures, notably Julius Caesar. Petrarch tells the story about Caesar as an instance of trained memory ("ut memoria polleret eximia"), that he could dictate four letters on different subjects to others, while writing a fifth in his own hand.[19] Whether the tale is factual or not is less important for my analysis than that Petrarch understood it as evidence of the power of Caesar's *memory*, for Petrarch himself had a significant reputation as an authority on memory training. Thomas's biographer, too, understood a similar feat to be enabled by powerful memory. But it is not achieved by raw talent alone; indeed natural talent will not produce such facility or accuracy. Memory must be trained, in accordance with certain elementary techniques.

The nature of these techniques and how they were taught is the subject of much of my study. *Memoria* meant, at that time, trained memory, educated and disciplined according to a well-developed pedagogy that was part of the elementary language arts – grammar, logic, and rhetoric. The fundamental principle is to "divide" the material to be remembered into pieces short enough to be recalled in single units and to key these into some sort of rigid, easily reconstructable order. This provides one with a "random-access" memory system, by means of which one can immediately and securely find a particular bit of information, rather than having to start from the beginning each time in order laboriously to reconstruct the whole system, or – worse – relying on simple chance to fish what one wants out from the murky pool of one's undifferentiated and disorganized memory.

It is possible for one with a well-trained memory to compose clearly in an organized fashion on several different subjects. Once one has the all-important starting-place of the ordering scheme and the contents firmly in their places within it, it is quite possible to move back and forth from one distinct composition to another without losing one's place or becoming confused. As an experiment, I tried memorizing a few psalms (texts that come to us with a divisional system already in place) in accordance with an elementary scheme described by the twelfth-century teacher, Hugh of St.

Victor – a scheme that I analyze in detail in chapter 3. That scheme enabled me to recall the texts in any order I pleased. If one so novice and unskilled as I am can recite without difficulty three psalms "at the same time" (that is, going easily from one psalm to another, verse to verse, backwards or forwards or skipping around at will) a memory as highly talented and trained as Thomas's could surely manage three *quaestiones* of his own composition at the same time. The key lies in the imposition of a rigid order to which clearly prepared pieces of textual content are attached. Both the initial laying down of the scheme and its recollection are accomplished in a state of profound concentration. Proper preparation of material, rigid order, and complete concentration are the requirements which Thomas Aquinas himself defines in his discourses on trained memory, and as we will see are continuously emphasized in all ancient and medieval mnemonic practices.

Scholars have always recognized that memory necessarily played a crucial role in pre-modern Western civilization, for in a world of few books, and those mostly in communal libraries, one's education had to be remembered, for one could never depend on having continuing access to specific material. While acknowledging this, however, insufficient attention has been paid to the pedagogy of memory, to what memory was thought to be, and how and why it was trained. Nor can the immense value attached to trained memory be understood only in terms of differing technical applications, though these are basic.

It is my contention that medieval culture was fundamentally memorial, to the same profound degree that modern culture in the West is documentary. This distinction certainly involves technologies – mnemotechnique and printing – but it is not confined to them. For the valuing of *memoria* persisted long after book technology itself had changed. That is why the fact of books in themselves, which were much more available in the late Middle Ages than ever before, did not profoundly disturb the essential value of memory training until many centuries had passed. Indeed the very purpose of a book is differently understood in a memorial culture like that of the Middle Ages than it is today.

A book is not necessarily the same thing as a text. "Texts" are the material out of which human beings make "literature." For us, texts only come in books, and so the distinction between the two is blurred and even lost. But, in a memorial culture, a "book" is only one way among several to remember a "text," to provision and cue one's memory with "dicta et facta memorabilia." So a book is itself a mnemonic, among many other functions it can also have. Thomas Aquinas makes this assumption about books in a comment on Ps. 69:28, "Let them be blotted from the book of life":

> A thing is said metaphorically to be written on the mind of anyone when it is firmly held in the memory . . . For things are written down in material books to help the memory.[20]

Andrew of St. Victor, writing over a hundred years earlier, comments similarly on Is. 1:18: "Though your sins be as scarlet, they shall be white as snow":

> According to Jewish tradition, the sins of all men are preserved in writing on a shining white substance . . . Grievous sins are written in red and other colours which adhere more faithfully to the parchment and strike the reader's eye more readily . . . When sins are said to be written in books, what else does it mean but that God remembers as though they were written?[21]

In the early twelfth century, Hugh of St. Victor, instructing some young students on how to remember, explains clearly the mnemonic utility of manuscript page layout and decoration (appendix A). Repeating traditional advice about always memorizing from the same written source, lest a confusion of images caused by seeing different layouts make it impossible for the brain to impress a single image, he says:

> it is a great value for fixing a memory-image that when we read books, we study to impress on our memory . . . the color, shape, position, and placement of the letters . . . in what location (at the top, the middle or bottom) we saw [something] positioned . . . in what color we observed the trace of the letter or the ornamented surface of the parchment. Indeed I consider nothing so useful for stimulating the memory as this.

Much later, in a fifteenth-century French *ars memorativa*, similar advice is given to pay close attention to the color of lines and the appearance of the page in order to fix the text as a visual image in memory:

> wherefore one best learns by studying from illuminated books, for the different colors bestow remembrance of the different lines and consequently of that thing which one wants to get by heart.[22]

Throughout this study, my concern is with educated memory. All my evidence comes from learned works, most of them written in Latin, from about the fourth through the fourteenth centuries; the few vernacular poets I cite are themselves learned, working within a highly educated group. *Memoria*, as these writers understood and practiced it, was a part of *litteratura*: indeed it was what literature, in a fundamental sense, was for. Memory is one of the five divisions of ancient and medieval rhetoric; it was regarded, moreover, by more than one writer on the subject as the "noblest" of all these, the basis for the rest. *Memoria* was also an integral part of the virtue of prudence, that which makes moral judgment possible. Training the memory was much more than a matter of providing oneself with the means to compose and converse intelligently when books were not readily to hand, for it was in trained memory that one built character, judgment, citizenship, and piety.

Memoria also signifies the process by which a work of literature becomes institutionalized – internalized within the language and pedagogy of a group. In describing the truth of Holy Scripture, John Wyclif argues that God's text is contained only in a sort of short-hand form in books, language, and other human artifacts "which are the memorial clues and traces of pre-existing truth"; because of this, the actual words are five times removed from Truth itself, and must therefore be continually interpreted and adapted to what he calls the *liber vitae*, the book of life in the actual person of Christ.[23] This

opinion is a commonplace; Wyclif attributes it to Augustine, but we find it earlier than that, for the idea that language, as a *sign* of something else, is always at a remove from reality is one of the cornerstones of ancient rhetoric. This idea gives to both books and language a subsidiary and derivative cultural role with respect to *memoria*, for they have no meaning except in relation to it. A work is not truly read until one has made it part of oneself – that process constitutes a necessary stage of its "textualization." Merely running one's eyes over the written pages is not reading at all, for the writing must be transferred into memory, from graphemes on parchment or papyrus or paper to images written in one's brain by emotion and sense.

It should be clear from what I have said so far that I am not concerned with what has traditionally been the subject of studies of "the rise of literacy" during the Middle Ages, although I have, inevitably, run up against other scholars' distinctions between "oral" and "literate" societies in the course of my work. As a historian of literature, my emphasis is on the function of literature in particular societies – and "literature" is not the same thing as "literacy." The ability to "write" is not always the same thing as the ability to compose and comprehend in a fully textual way, for indeed one who writes (a scribe) may simply be a skilled practitioner, employed in a capacity akin to that of a professional typist today. The distinction of composing (or "making" in Middle English) from writing-down continued to be honored throughout the Middle Ages. Similarly, learning by hearing material and reciting aloud should not be confused with ignorance of reading. Especially in describing the Middle Ages, when the criterion of being *litteratus* was knowledge of Latin, one should be careful to remember that some degree of bilingualism (Latin and a vernacular) was a fact of every educated European's life, and not confuse apologies for "illiteracy," meaning "unable to compose fluently in Latin," with an apology for being unable to think or write clearly in any language.[24]

Historians of literacy have been concerned with normative channels of communication in societies. An "oral" society is thus one in which communication occurs in forms other than written documents, and in which law and government are conducted on the basis of orally-preserved custom. For such an historian, much of the best evidence comes from studying the changing ways in which legally persuasive evidence was thought to be established.[25] In the medieval period, such studies have focused on the ways in which the tribal cultures of Germanic, northern Europe became acculturated to the literate norms of late Roman law and education, preserved primarily in Italy and in the institutions of the Roman church. Because oral cultures must obviously depend on memory, and hence value memory highly, such valorization has come to be seen as a hallmark of orality, as opposed to literacy. This has led to a further assumption that literacy and memory are *per se* incompatible, and that a "rise of literacy" will therefore bring with it a consequent devalorizing and disuse of memory.

It is this assumption that my study calls particularly into doubt. For the cultivation and training of memory was a basic aspect of the literate society of Rome, and continued to be necessary to literature and culture straight through the Middle Ages. This privileged cultural role of memory seems independent of "orality" and "literacy" as these terms have come to be defined in the social sciences, and it is dangerous to confuse those terms with a literary and ethical concept like medieval "memory."

Indeed, I think it is probably misleading to speak of literary culture as a version of "literacy" at all. The reason is simply this – as a concept, literacy privileges a physical artifact, the writing-support, over the social and rhetorical process that a text both records and generates, namely, the composition by an author and its reception by an audience. The institutions of literature, including education in the arts of language, the conventions of debate, and meditation, as well as oratory and poetry, are rhetorically conceived and fostered.

The valuing of memory training depends more, I think, on the role which rhetoric has in a culture than on whether its texts are presented in oral or written forms, or some combination of the two. For the sake of definition, I will distinguish here between fundamentalism and textualism as representing two polar views of what literature is and how it functions in society. These two extremes are always in tension with one another; one can analyze many changes in literary theory as efforts to redress an imbalance of one over the other. (For example, some Biblical scholars of the thirteenth century stressed the literal "intention" of the text in order to redress what they saw as an excess of interpretative commentary on the part of earlier exegetes – in my terms, this would be a dash of fundamentalism injected to offset too excessive a textualism.)

Fundamentalism regards a work of literature as essentially not requiring interpretation. It emphasizes its literal form as independent of circumstance, audience, author – of all those factors that are summed up in rhetorical analyses by the word "occasion." Legal scholars speak of "originalists," those who believe that the "original intention" of a written document is contained entirely in its words, and that all interpretation is unnecessary and distracting. The kinship of this position to religious fundamentalism is apparent. True fundamentalism understands words not as signs or clues but takes them as things in themselves. It also regards works exclusively as objects, which are therefore independent of institutions – perhaps that is why fundamentalism was so frequently a component of medieval heresies.[26]

Fundamentalism denies legitimacy to interpretation. Instead of interpreting, a reader is engaged at most only in rephrasing the meaning of the written document, a meaning which is really transparent, simple, and complete – but which the detritus of history and linguistic change has temporarily concealed. (It is significant that the Southern Baptist fundamentalists have allowed the publication of only one Bible commentary, the Boardman Bible Commentary, which purports simply to clear up inadvertent

obscurities produced by history.) Fundamentalist translations are considered to be merely restatements of an inerrant truth that is clear and non-ambiguous – they are not adaptations or interpretive readings. Fundamentalism ideally should produce no gloss or commentary. Thus the role of scholarship is solely to identify the accumulations of interpretive debris and to polish up the original, simple meaning. It is reasonable, from a fundamentalist attitude, that God must be the direct author of the Bible. This belief holds true as well among secular fundamentalists writing about literature, who postulate a God-like author who plans, directs, and controls the meaning of his work.

But texts need not be confined to what is written down in a document. Where literature is valued for its social functions, works (especially certain ones, of course) provide the sources of a group's memory. Societies of this sort are "textual communities," in Brian Stock's phrase, whether those texts exist among them in oral or written form. The Latin word *textus* comes from the verb meaning "to weave" and it is in the institutionalizing of a story through *memoria* that textualizing occurs. Literary works become institutions as they weave a community together by providing it with shared experience and a certain kind of language, the language of stories that can be experienced over and over again through time and as occasion suggests. Their meaning is thought to be implicit, hidden, polysemous and complex, requiring continuing interpretation and adaptation. Taken to an extreme, of course, textualism can bury the original work altogether in purely solipsistic interpretation. Beryl Smalley, who spent her scholarly life reading medieval commentaries, once remarked wryly that "choos[ing] the most arbitrary interpreter of Biblical texts of the Middle Ages would be rather like awarding a prize for the ugliest statue of Queen Victoria."[27]

In the process of textualizing, the original work acquires commentary and gloss; this activity is not regarded as something other than the text, but is the mark of textualization itself. *Textus* also means "texture," the layers of meaning that attach as a text is woven into and through the historical and institutional fabric of a society. Such "socializing" of literature is the work of *memoria*, and this is as true of a literate as of an oral society. Whether the words come through the sensory gateways of the eyes or the ears, they must be processed and transformed in memory – they are made our own. Thomas Aquinas was a highly literate man in a highly literate group, yet his contemporaries reserved their greatest praise not for his books but for his memory, for they understood that it was memory which allowed him to weave together his astonishing works.

Memory also marked his superior moral character; it should not go unnoticed that the praise heaped on his memory came at his canonization trial. In fact, prodigious memory is almost a trope of saints' lives. One thinks of St. Anthony, who learned the whole Bible by heart merely from hearing it read aloud (the fact that he never saw the words written is what astonished his contemporaries); of St. Francis of Assisi, reputed by his followers to have a

remarkably exact and copious memory. Tropes cannot be dismissed as "mere" formulas, for they indicate the values of a society and the way in which it conceives of its literature. The choice to train one's memory or not, for the ancients and medievals, was not a choice dictated by convenience: it was a matter of ethics. A person without a memory, if such a thing could be, would be a person without moral character and, in a basic sense, without humanity. *Memoria* refers not to how something is communicated, but to what happens once one has received it, to the interactive process of familiarizing – or textualizing – which occurs between oneself and others' words in memory.

Many historians will wonder why I have avoided assigning Neoplatonist or Aristotelian labels in my discussion of memorial technique and practice, especially given the role of memory in Neoplatonist philosophy. But my decision is deliberate. A currently accepted picture of the intellectual history of the twelfth and thirteenth centuries is one of movement from a Neoplatonist matter/spirit dualism, influenced profoundly by Augustine (though not identical with his thought), to an Aristotelian hylemorphism articulated most successfully by Thomas Aquinas. But to associate an interest in memorial practice with one of these schools more than the other is misleading, as I discovered early in my study of the subject. While the Neoplatonist–Aristotelian distinction is crucial in some areas of medieval culture, it is not, I think, when it comes to this one. In fact, intellectual history, as traditionally practiced, is not the best way to go about studying the role of memory in medieval culture.

Memoria is better considered, in the context of my study, as *praxis* rather than as *doxis*. Practices are sometimes influenced by ideas (and vice versa) – chapter 4 describes one major instance of this in later medieval mnemotechnique – but they are distinct, and follow different patterns and tempos of change. Historians of rhetoric have sometimes described Memory as one of the two "technical" parts of their subject, along with Delivery, distinguishing it thereby from the "philosophical" areas of Invention, Arrangement, and Style. This classification may well have contributed to the impression that *memoria*, being merely technical, was limited in its applicability to the conditions of oral debate, as was Delivery.[28] But as the practical technique of reading and meditation, *memoria* is fundamental in medieval paideia, having even greater importance in that context than it does as a "part" of rhetoric. If my study achieves nothing else, I hope it will prevent students from ever again dismissing mnemonics and mnemotechnique with the adjective "mere," or from assuming that memory technique had no serious consequence just because it was useful and practical.

The historian Lawrence Stone has wisely remarked that all historical change is relative. Within any given period, we may stress differences or continuities. Most historians of the Middle Ages are now engaged in detailing the differences that existed among Western peoples during that immensely long stretch of time, geography, and linguistic and institutional developments

that we hide within the blanket designation "the Middle Ages." In this study, I stress the continuities, though I am aware of the differing circumstances that separate the various scholars and poets whose work I discuss. I am concerned with elementary assumptions and the commonplaces which underlie the practices that are the subject of my study.

My method is, I hope, made legitimate by the nature of the topic I am studying: *memoria*, in the rich complex of practices and values that word acquired. It is also justified by the elementary nature of my subject, whose training began in one's earliest education and was basic to both reading and composition. And while this study lays some foundations, it is in fact the first of three. It must be complemented by a full study of how mnemotechnique changed over the medieval centuries (I glance at this aspect of my subject in chapter 4). The third study would consider *memoria* not as a technique but as a cultural value or "modality" (in the sense developed by A. J. Greimas) of literature, and this aspect of it is touched upon especially in chapters 5 and 6.[29]

I begin this book with an examination of two of the governing models for the operation of memory in respect to knowledge, expressed as two families of related metaphors: memory as a set of waxed tablets upon which material is inscribed; and memory as a storehouse or inventory. These models are complementary; they are also archetypal Western commonplaces. The next two chapters examine the workings of memory itself. Chapter 2 begins by considering memory's psychosomatic nature in classical and medieval psychology, its intermediary relationship between sensory information and intellectual abstraction, and its identification with habit in the ethical realm. Next, chapter 2 considers the ethical imperative attached to memory training, and ends by examining a parallel between the ancient memory system based upon placing images mentally in architectural places and the case history of a "memory artist" described by the Soviet neuropsychologist, A. R. Luria.

Chapter 3 describes several elementary schemes taught for designing a trained memory, which utilize the principle of a rigid order into which short pieces of material are placed, and consciously supplied with a network of associations, the aim being to provide a securely accessible "library" (as it was often called) known by heart. In chapter 4, I examine the circumstances in which the ancient mnemotechnique described in the *Rhetorica ad Herennium*, attributed to Cicero, was revived in the scholastic setting of the universities and by the early humanists, and examine carefully three scholastic arts of memory that seem to show how an essentially medieval mnemotechnique was married (somewhat awkwardly) to principles of the ancient architectural scheme. I have provided, in appendices, English translations of three medieval texts that are not easily available now, but are important descriptions of various memory techniques. They are Hugh of St. Victor's preface to his elementary Biblical *Chronicle*; a discussion of the nature of memory and memory technique by Albertus Magnus; and an "Art of Memory" by the English cleric, Thomas Bradwardine.

The last part of this book turns from the theory and practice of mnemotechnique itself to examine why it was held in such esteem. Here I define in detail the important institutional role of *memoria*, first in relation to reading and then in the context of the activity of composition. These related discussions in chapters 5 and 6 clarify how literature was thought to contribute to the ethical life of the individual and to the public memory of society. Finally, in chapter 7, I examine how the memorial needs of readers and the memorial nature of literature affect the presentation and layout of the text in the physical book itself.

I would like to acknowledge at this point certain works whose influence on my opinions came as I was working out the earliest parts of this study, and is consequently more profound than may be entirely evident from my notes: Paul Ricoeur, *The Rule of Metaphor*; Jacques Derrida, "White Mythology"; Wesley Trimpi, *Muses of One Mind*; Gerald Bruns, *Inventions*; Richard Rorty, *Philosophy and the Mirror of Nature*; Clifford Geertz, *The Interpretation of Cultures*; A. J. Greimas, *On Meaning*; Jean Leclercq, *The Love of Learning and the Desire for God*; the studies of ancient and early medieval education by H.-I. Marrou and Pierre Riché; and Brian Stock, *The Implications of Literacy*. I have raided the footnotes of many scholarly studies, but none more fruitfully than those of Richard and Mary Rouse. Finally, and most importantly of all, any work on artificial memory systems must begin with the studies of Frances Yates and Paolo Rossi; though mine ranges far from theirs, I could not have done without them.

Citations in the footnotes give only the author, title (or short title), and page references to works; the reader is referred to the bibliography at the back of this volume for complete reference data. I have generally used the Oxford Latin Dictionary when discussing words only within a classical context; I have used Lewis and Short's Latin Dictionary, supplemented by various word-lists and dictionaries of medieval Latin and/or the *Thesaurus linguae Latinae*, when discussing Latin words in later contexts.

My subject is complex and multifaceted; I have tried to keep my analysis adequate to it, though I know I have simplified some things, perhaps overly so. I must ask for some patience from my readers, as I follow out various strands of what is, actually, a skein. If I seem to be digressing unconscionably, I hope that they will bear with me until we come back to the main subject, enriched in understanding. (And perhaps some of the memory techniques described in my early chapters will help in remembering the parts of this discussion.) For this book can be read in at least two ways: as a history of a basic and greatly influential practice of medieval pedagogy, and as a reflection on the psychological and social value of the institution of *memoria* itself, which is in many ways the same as the institution of literature.

I

Models for the Memory

TABULA MEMORIAE

Readers who are familiar with a current opinion that there are radical differences between "oral culture" (based upon memory) and "literate culture" (based upon writing) may be puzzled by the very title of this book, and even consider it self-contradictory. My source, however, is Dante,[1] who was newly articulating a very old observation. Even the earliest writers I discuss did not operate within a culture that could be described as truly "oral." Yet for all these writers, memory is a central feature of knowledge – its very basis in fact – whether through "recollection" (as for Plato) or as the agent building "experience" (as for Aristotle). This emphasis upon memory persists, shared by societies varying widely in the availability of books to readers: that is, in their "literacy." (I am adopting here Eric Havelock's useful definition of "literacy" as coterminous with "book-acquiring public.")[2]

In none of the evidence I have discovered is the act of writing itself regarded as a supplanter of memory, not even in Plato's *Phaedrus*. Rather books are themselves memorial cues and aids, and memory is most like a book, a written page or a wax tablet upon which something is written. Cicero writes about the relationship of writing to memory in his elementary text, *Partitiones oratoriae*:

> [M]emory . . . is in a manner the twin sister of written speech [*litteratura*] and is completely similar [*persimilis*] to it, [though] in a dissimilar medium. For just as script consists of marks indicating letters and of the material on which those marks are imprinted, so the structure of memory, like a wax tablet, employs places [*loci*] and in these gathers together [*collocat*] images like letters.[3]

The metaphor of memory as a written surface is so ancient and so persistent in all Western cultures that it must, I think, be seen as a governing model or "cognitive archetype," in Max Black's phrase.[4] In the passage most familiar to the later Middle Ages, the image is used by Aristotle in his treatise *De memoria et reminiscentia*. A memory is a mental picture (phantasm; Latin *simulacrum* or *imago*) of a sort which Aristotle defines clearly in *De anima*, an "appearance" which is inscribed in a physical way upon that part of the body which constitutes memory. This phantasm is the final product of the entire process of sense perception, whether its origin be visual or auditory, tactile or olfactory. Every sort of sense perception ends up in the form of a

phantasm in memory. And how is this "mental picture" produced? "The change that occurs marks [the body] in a sort of imprint, as it were, of the sense-image, *as people do who seal things with signet-rings*" (my emphasis).[5] In this particular passage, Aristotle uses, in addition to his usual word phantasm, the word *eikón* or "copy," which he qualifies by calling it "a sort of *eikón*." His language here derives in turn from Plato, who uses several of the same words in his own descriptions of what constitutes the physiological process of memory. As Richard Sorabji notes, for Plato, too, recollection involved "the seeing of internal pictures" which are imprinted upon the memory as if with signet rings.[6]

The idea that the memory stores, sorts, and retrieves material through the use of some kind of mental image was not attacked until the eighteenth century.[7] It has recently been vigorously revived by certain cognitive psychologists, some of whose experimental work provides startling apparent corroboration of ancient observations concerning what is useful for recollection.[8] According to the early writers, retention and retrieval are stimulated best by visual means, and the visual form of sense perception is what gives stability and permanence to memory storage. They do not talk of "auditory memory" or "tactile memory" as distinct from "visual memory," the way some moderns do.[9] The sources of what is in memory are diverse, but what happens to an impression or an idea once it gets into the brain is a single process resulting in the production of a phantasm that can be "seen" and "scanned" by "the eye of the mind." This sort of language is constant and pervasive in writings on the subject from earliest times. Albertus Magnus, for instance, writes that "something is not secure enough by hearing, but it is made firm by seeing." And he quotes Horace to the effect that "things intrusted to the ear / Impress our minds less vividly than what is exposed / To our trustworthy eyes."[10]

A major source of confusion for proponents of the opinion that a "literate consciousness" replaced an earlier oral one lies in their frequent failure to distinguish this very matter, the generic cause from the physiological cause (if I may, on the verge of an Aristotelian analysis, freely adapt some Aristotelian categories). In discussing the acts of memory, we can be concerned with three quite separate matters: first, what is the actual origin of information entering the brain; second, how is that information encoded, and is it in a way that physically affects our brain tissue; and third, how is its recollection best stimulated and secured, or what kind of heuristic devices are necessary for us to find it again once it has been stored? As I have already indicated, according to the Greek tradition, all perceptions however presented to the mind are encoded as *phantasmata*, "representations" or a "kind of *eikón*."[11] Because they are themselves "sort-of pictures," these representations were thought to be best retained for recollection by marking them in an order that was "readable," a process the ancients thought to be most like the act of seeing.

Evidently, at least in the context of this metaphor, reading was considered to be essentially a visual act, despite the fact that most ordinary social reading,

at least, was done aloud by someone to a group of listeners, throughout antiquity and until the Renaissance. None the less, as they understood the process, whatever enters the mind changes into a "see-able" form for storing in memory. Jerome describes it well and typically in his commentary on Ezekiel 40:4 ("And the man said unto me, Son of man, behold with thine eyes, and hear with thine ears, and set thine heart upon all that I shall shew thee; for to the intent that I might shew them unto thee art thou brought hither.") "Nothing," Jerome writes, "that you have seen or heard is useful, however, unless you deposit what you should see and hear in the treasury of your memory. When indeed he says, *all that I shall shew thee*, he makes his listener attentive, and also makes (these things) prepared for the eyes of his heart, so that he may hold in memory those things shown to him, *for to the intent that I might shew them unto thee art thou brought hither*."[12]

Material presented acoustically is turned into visual form so frequently and persistently, even when the subject is sound itself, that the phenomenon amounts to a recognizable trope. Guido d'Arezzo, the eleventh-century Benedictine music master whose annotation schemes profoundly influenced the writing of music, likens the values of the chord to the letters of the alphabet – one writes with each: "Just as in all writing there are four-and-twenty letters, so in all melody we have seven notes."[13] The note recalls a *vox* or sound, just as the written letter does. In his *Teseida*, Boccaccio describes how Palemone's prayer to Venus takes on human shape as his words rise up. This "shape" walks around the gardens and temple of Venus, and petitions the goddess, while the speaker himself remains corporeally below (Bk 7, 50–69). And in Chaucer's *The House of Fame*, gossip-spread tales pass through the House of Rumour until, acquiring a feathered body, they "creep" through a window and "fly" away (*HF*, III, 2,081–2,087).

I want to distinguish very carefully here between "pictorial" and "visual."[14] Memories could be marked by pictorial means; the ancient system described in *Rhetorica ad Herennium* was precisely that. But pictures are not the only sorts of objects we can see. We also see written words and numbers, punctuation marks, and blotches of color; if we read music, we can see it as notes on the staff; if we play the piano by ear, we can see music as the position of our fingers. Moreover, we can manipulate such information in ways that make it possible to bring it together or separate it in a variety of ways, to collate, classify, compose, and sort it in order to create new ideas or deconstruct old ones.

One accomplishment which seems always to have been greatly admired by both ancient and medieval writers was the ability to recite a text backwards as well as forwards, or to skip around in it in a systematic way, without becoming lost or confused. The ability to do this marked the difference between merely being able to imitate something (to reproduce it exactly) and really knowing it, being able to recall it in various ways.

Such reports are common enough throughout the period of my study. For example, Augustine describes a school friend named Simplicius:

> an excellent man of remarkable memory, who, when he might be asked by us for all the next-to-last verses in each book of Virgil, responded in order quickly and from memory. If we then asked him to recite the verse before each of those, he did. And we believed that he could recite Virgil backwards. If we desired a commonplace concerning any topic, we asked him to make one and he did. If we wanted even prose passages from whatever of Cicero's orations he had committed to memory, that also he could do; he followed in order however many divisions [*versus*] we wanted, backwards and forwards. When we wondered (about his abilities), he testified that he had not known God could do this before this proof from experience.[15]

Notice that what is unusual to Augustine is not that Simplicius knew all of Virgil and much of Cicero, nor that he could manipulate these texts, but the *degree* to which he could do so – pulling single verses of Virgil out of context, composing commonplaces on any topic, running extensively backwards as well as forwards through various lengthy texts. The proof of a good memory lies not in the simple retention even of large amounts of material; rather, it is the ability to move it about instantly, directly, and securely that is admired.

To produce this facility, memory must be trained as though it were a kind of calculative ability, manipulating letters, bits of text, and commonplaces in addition to numbers. Such manipulation can only be accomplished if the materials can in some sense be internally "read." Try the following two exercises. First, recite from memory the first verse of Psalm 23 ("The Lord is my shepherd; I shall not want") in normal order, and then backwards word by word. Next, whistle a short phrase from "Mary Had a Little Lamb" in normal order, and then backwards note by note. It is possible to scan both the words and the musical phrase backwards, but the music must be rendered in a form that makes the relations of pitch able to be "read" in a way similar mentally to reading the words backwards. For instance, if one assigns the musical values of the first phrase to the three joints of one finger, one will find that one is as easily able to perform the musical exercise as the recitational one. This is the principle of the so-called "Guidonian hand," associated with Guido d'Arezzo (though probably older), in which the musical values of the gamut are assigned to various locations on the left hand. Drawings of it appear in many musical texts through the late Renaissance.[16] Visual coding, like writing, allows the memory to be organized securely for accurate recollection of a sort that permits not just reduplication of the original material, but sorting, analysis, and mixing as well, genuine learning, in short, rather than simple repetition.[17]

It might be useful to pause a moment here in order to clarify certain terms I have occasion to use throughout this work. First, I wish to clarify the distinction between memory understood as the ability to reproduce something exactly ("rote") and memory as recollection or reminiscence. Second, and related to the pre-modern understanding of reminiscence, I want to clarify the distinction I make between the adjectives "heuristic" and "hermeutical."

Modern experimental psychology, focusing on the behavior and capacity

very red transverse stripes, three above, three below, and three in the middle, which may signify to you the nine orders of angels, or likewise a man having cut off his thumb, holding his wound with the other hand so then indeed only nine digits remain; for "ten," is formed a zero or a full hand, et cetera, to work with according to your skill in the algorism [secundum algorismi peritiam operare]. However, one who will learn the notary art may attain the highest perfection of this craft.

Here ends the treatise of Master Thomas Bradwardine on acquiring a trained memory. Thanks to God says R. Emylton.[5]

Notes

Introduction

1 Quoted from Miller, "Information and Memory," pp. 44–45.
2 Infeld, *Quest: An Autobiography*, pp. 263, 267, 272, 274–275.
3 "The Life of St. Thomas Aquinas" by Bernardo Gui, and Bartholomew of Capua, "Testimony at the First Canonization Inquiry." Translated by Foster, *Biographical Documents*, pp. 50–51, 37; 107.
4 These sources are available in the *AASS*, March vol. 1, pp. 655–747, in Prümmer, *Fontes vitae*, and in an English translation by Foster, *Biographical Documents*. See Foster's excellent bibliography, pp. x–xii. The relationship between the various accounts is surveyed also by Mandonnet, "Pierre Calo et la légende de S. Thomas."
5 Dondaine, *Les Secrétaires de St. Thomas*, esp. pp. 10–25.
6 Dondaine, *Les Secrétaires*, p. 25.
7 See Foster, *Biographical Documents*, pp. 44–45; Gui, sect. 25; Tocco, c. 43.
8 Foster, *Biographical Documents*, p. 73, note 59.
9 Chenu, *Introduction à St. Thomas*, p. 245; see also Dondaine, *Les Secrétaires*, pp. 20–22, and plate 37.
10 Foster, *Biographical Documents*, p. 38; Gui, c. 16; Tocco, c. 31.
11 Foster, *Biographical Documents*, p. 51; Gui, c. 32.
12 Chenu, *Introduction à St. Thomas*, pp. 248–249.
13 The technique is described by Leclercq, *Love of Learning*, esp. pp. 76–77.
14 Dondaine, *Les Secrétaires*, p. 19.
15 Foster, *Biographical Documents*, pp. 38 (Gui, c. 16), 51 (Gui, c. 32), and 37 (Gui, c. 15).
16 Gui, c. 15.
17 Dondaine, *Les Secrétaires*, p. 51; Gui, c. 32; *Fontes*, p. 89.
18 Dondaine, *Les Secrétaires*, p. 18. Walz, *San Tommaso d'Aquino*, pp. 167–168, explains Evan the Breton's story as an oblique reference to a practice of leaving notes to a secretary to write up while the author slept; but this is not what the sources say took place. The typical postures of profound concentration and sleep were remarkably similar; see my discussion in chapter 6.
19 "Epystolas de rebus maximis quaternas dictabat aliis, ipse manu propria quintam scribens." Petrarch, *Rerum memorandarum libri*, II. 2; p. 43. There does not seem to be a contemporary source for this story, though Cicero flatters Caesar as one who "forgot nothing except his injuries"; "Pro Ligario," xii, 35. The story is told to illustrate Caesar's superior memory in the elder Pliny's *Natural History*, VII, XXV, 92. Petrarch quotes from both of these sources in his own recounting of the story.

20 *ST* I, Q. 24, a. 1. resp.
21 Smalley, *Study of the Bible*, p. 148.
22 "pourtent est ce que on estudie mieulx es livres enlumines, pour ce que la difference des couleurs donne souvenance de la difference des lignes et consequamment de celle chose que on veut impectorer"; Paris, Bibliothèque Ste. Genéviève MS. 2521, ff. 96–99v. The quotation is from f. 96r–v, and is cited by Hajdu, *Das Mnemotechnische Schriftum des Mittelalters*, p. 114. The English translation is mine, based on my own independent transcriptions of this manuscript.
23 John Wycliff, "De veritate sacrae scripturae," cap. 6 (quoted by Smalley, "The Bible and Eternity"): "sed quinto modo sumitur scriptura sacra pro codicibus, vocibus aut aliis artificialibus, que sunt signa memorandi veritatem priorem, quomodo loquitur Augustinus."
24 Hildegard of Bingen (eleventh century) dictated her mystical visions in the best Latin she could muster to a scribe, who took them down; then she had the written version corrected by a priest for inelegancies of Latin. It is apparent from the descriptions of how she worked that she composed first probably in German, then translated that to Latin herself, dictated this version, and then had it finally corrected for solecisms. It is also apparent that she could understand Latin well enough to know whether the priest's corrections fairly represented her meaning. This represents a very different situation from that commonly assumed when moderns use the word "illiterate." See Albert Derolez, "The Genesis of Hildegard of Bingen's 'Liber divinorum operum'." On the meaning of the term "illiterate," see also Clanchy, *From Memory to Written Record*, esp. pp. 175–185.
25 The excellent studies by Clanchy, *From Memory to Written Record*, and Stock, *The Implications of Literacy*, are cases in point.
26 See Brian Stock's fascinating dissection of the fundamentalist aspect of various eleventh century heresies in his *Implications of Literacy*, pp. 88–240. He does not identify this as fundamentalism, but rather associates it with literacy *per se*; the conjunction seems to me a bit of a red herring, however, because the determining distinction has to do with views of literature, which can exist among either oral or literate groups.
27 Smalley, "The Bible and Eternity," p. 89.
28 For example, see Kennedy, *Classical Rhetoric*, p. 98.
29 Greimas defines cultural values not as absolutes but as cultural and psychological modes, which allow adaptation and changes of behavior; see *On Meaning*, esp. chapter 8, "On the Modalization of Being."

Chapter 1

1 The phrase occurs in the beginning of *La Vita Nuova*, although the intimate connection of memory with writing is evident throughout his work (compare *Paradiso*, 17, 91–92, where Cacciaguida tells Dante he shall carry things told to him about the future "scritto nella mente"). For a brief discussion of the memory-as-book metaphor, see Curtius, *European Literature and the Latin Middle Ages*, pp. 326–332, but his whole previous discussion of "The Book of Nature" (chapter 16) is pertinent. E. G. Gardner has an excellent study of Dante on memory and imagination, in which he especially notes that for Dante memory was "mental writing"; "Imagination and Memory in the Psychology of Dante," esp. pp. 280–282.
2 Havelock, *Literate Revolution*, p. 57. Elizabeth L. Eisenstein rightly emphasizes the cultural effects of the "democratization" of the reading public made possible by numerous, cheap, printed materials; *The Printing Press*, esp. vol. 1, 71–159, and

The Printing Revolution, chapter 4. Good summary discussions of the state of current knowledge of literacy among the medieval laity at various times and in various places are Parkes, "The Literacy of the Laity," D'Avray, *The Preaching of the Friars*, pp. 29–43, and Clanchy, *Memory to Written Record*, pp. 151–201.
3 *Partitiones oratoriae*, 26.
4 Black, *Models and Metaphors*, pp. 219–243.
5 450a 25; Sorabji translation, *Aristotle on Memory*, p. 50. Hett (LCL) translates: "for the movement produced [by a phantasm] implies some impression of sense movement, just as when men seal with signet rings." The Greek is "katháper oi sphragizómenoi toîs daktylíois"; text ed. Hett, Loeb Classical Library. *Daktyliós* (Liddell and Scott, s.v.) is a "signet-ring," a word used also by Plato in his version of this metaphor; Aristotle's verb is a synonym of the one Plato uses, meaning "to authenticate with a seal" (Liddell and Scott, s.v. *σφραγ-ιζω*).
6 Sorabji, *Aristotle on Memory*, p. 5, note 1; Plato uses the image in *Theaetetus*; see following discussion.
7 Sorabji, *Aristotle on Memory*, p. 5, note 2.
8 Richardson, *Mental Imagery and Human Memory*, contains a helpful review of current experimental work in this field, set within a solid philosophical framework. Two interesting books which attempt definitions of "representation" within the context of verbal and cognitive functions are Norman Malcolm, *Memory and Mind*, and Jerry Fodor, *The Language of Thought*.
9 H. S. Chaytor makes much of these distinctions, *Script to Print*, pp. 6–10. See also Eisenstein, "Clio and Chronos."
10 *Postilla super Isaiam*, p. 11, lines 6–9, *Opera omnia*, vol. 19, on Is. 1.1, *quam vidit*: "Auditu enim satis certus non fuit, sed visu certificabatur, sicut dicit Horatius." The lines from Horace are *Ars poetica*, ll. 180–181: "Segnius irritant animos demissa per aurem, / quam quae sunt oculis subiecta fidelibus" (ed. A. S. Wilkins; trans. S. P. Bovie).
11 Liddell and Scott, s.v. *εικοσ*.
12 *Commentarium in Ezekiel*, XII, 40; *PL* 25, 373D–374A: "Nihil enim prodest vidisse et audisse, nisi ea quae videris et audieris, in memoriae reposueris thesauro. Quando autem dicit, *omnia quae ego ostendam tibi*, intentum facit auditorem, facit et cordis oculis praeparatum, ut memoriter teneat quae sibi ostendenda sunt, *quia ut omnia ostendantur tibi, adductus es huc*."
13 Letter to Brother Michael: "Sicut in omni scriptura xx. et iiii. litteras, ita in omni cantu septem tantum habemus voces." Gerbert, *Scriptores ecclesiastici*, vol. 2, p. 46.
14 A summary discussion of "mental imagery" as a concept in modern psychology is in. Richardson, *Mental Imagery and Human Memory*, pp. 4–24; he mentions 'dual coding theory," in which pictures and verbal processes are considered to be alternative, independent methods of symbolic representation, and a "common coding theory," in which "a single system of abstract propositional representations" underlies "all cognitive and mnemonic processes" (p. 6). See also Norman Malcolm's remarks on "The Picture Theory of Memory," pp. 120–164.
15 *De natura et origine animae*, IV.vii.9; *CSEL*, 60, p. 389, lines 7–19.
16 The diagram is pictured in the *New Grove Dictionary* s.v. *Solmization*. The twelfth-century chronicler, Sigebert of Gembloux, writes of Guido:

> Guido, Aretinus monachus, post omnes pene musicos in Ecclesia claruit, in hoc prioribus praeferendus quod ignotos cantus etiam pueri et puellae facilius discant vel doceantur per ejus regulam quam per vocem magistri, aut per visum [usum] alicujus instrumenti, dummodo sex litteris vel syllabis modulatim appositis ad sex