Mechanisms for the Transmission of Culture: The Role of "Place" in the Arts of Memory

Mary Carruthers

This essay will explore the organizing theme of this conference, *translatio*, as literally as possible, taking it to indicate those cultural materials—linguistic, auditory, tactile, visual—that are "carried-across" from one place to another. From one place to another, and also one time to another, for *translatio* is profoundly the task of recollection. There are various mechanisms for bringing about such cultural transportation, of course—material causes like codices and rolls, jewels and fabrics and pots in particular, things that can be carried from one place to another and that also carry across time. In the Middle Ages, however, these means of translation were spotty and uncertain at best. Far more frequently than a book or a token, the favored means of cultural translation, especially in the early Middle Ages, was apt to be a living, breathing, thinking and speaking person.

A living human mind could even now be considered a possible form of "material culture," though not one that most historians are very happy to consider, let alone rely on. People die too soon, for one thing. And they have "faulty" memories. Yet, in one of the most moving acts of his reign, when Charlemagne decided to collect a great library to build up the palace school of his court in Aachen, he did so first by bringing over from England a person.[1] Alcuin in turn collected a group of scholars about him, to form the palace school and thus to create the palace library. Of course they brought books with them, but mostly they brought their learning, stored away in the treasuries of their memories. In doing so, Charlemagne, wittingly or not, was realizing an antique and early Christian trope (and reality) that one finds articulated in Jerome and in Cassiodorus, among others: that of the learned person as a living library, one who makes a mental chest of memorized texts and materials, which are

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[1] Charlemagne's seeking out of Alcuin is recounted in Einhard's *Life of Charlemagne*, Bk. III. A good introductory account of Carolingian schools is John Contreni, "The Pursuit of Knowledge in Carolingian Europe," in *"The Gentle Voices of Teachers": Aspects of Learning in the Carolingian Age*, ed. R. E. Sullivan (Columbus: Ohio State University Press, 1995), 106–41.

then always ready as a reference and meditation tool for him- or herself, and for the service of others.

In his sixtieth Epistle, Jerome wrote to a correspondent that, "by means of careful reading and daily meditation, he should make himself into a library for Christ."[2] Two centuries later Cassiodorus described a blind Greek scholar named Eusebius, who had come to the monastery at Vivarium at Cassiodorus' invitation, presumably as part of his great effort to collect knowledge. This Eusebius had been blind since childhood, yet "he had hidden away in the library of his memory [*in memoriae suae bibliotheca*] so many authors, so many books, that he could assuredly tell others who were reading in what part of a codex they might find what he had spoken of."[3] Another example known to Cassiodorus was the Scriptural expositor, Didymus of Alexandria, a man whose commentaries were renowned for their subtlety and comprehensiveness, yet who had been blind from birth and thus could read only in his memory. There are also examples of scholars from the later Middle Ages, including Thomas Aquinas, William of Ockham, and Francesco Petrarca, whose reading and compositional habits make clear that the goal of making a library of one's memory was by no means dimmed in an age when written books were far more plentiful, at least to scholars.

Even at the end of the Middle Ages, as books had become increasingly plentiful and (if one can believe Geoffrey Chaucer and many others) learned people increasingly fewer, the trope of the human library persisted, translated into later medieval terms. So, in the mid-fourteenth century, the bishop of Lincoln, Richard de Bury, in his *Philobiblon* described how he had the manuscripts for his library collected from throughout Europe. When they are released to public view again by Bury's teams of searchers, the dusty, cobwebbed, rat-nibbled books cry out in complaint against the scholars and keepers who have abused them. So even when amassing libraries became a matter first of collecting books rather than scholars (as had been the case in the times of Cassiodorus and of Charlemagne), the books demanded to be alive, to speak and converse, to be consumed and digested through the memories of living

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[2] "Lectioneque assiduo, et meditatione diuturna, pectus suum bibliothecam fecerat Christi": Jerome, *Epistulae* lx.10, *Patrologia latina* 22: 595.

[3] "Hic tantos auctores, tantos libros in memoriae suae bibliotheca condiderat, ut legentes probabiliter admoneret, in qua parte codicis quod praedixerat invenirent": Cassiodorus, *Institutiones,* ed. R. A. B. Mynors, Oxford Classical Texts (Oxford: Oxford University Press, 1937), I. 5. 2. Cassiodorus mentions the example of Didymus the blind expositor in this same passage. In his *Life of St. Anthony*, an essential book of early monasticism, St. Athanasius remarked on Anthony's well-stocked memory which served him instead of books: see chaps. 2–3. As a boy, St. Anthony refused to learn to read, and, according to his *Life*, learned his vast store of Scripture entirely by ear. The impression this story made on St. Augustine precipitated the crisis he describes in *Confessiones*, Book VIII. I have discussed the mental library model for the art of memory in greater detail in "Les lecteurs du moyen-âge occidental et l'art de la mémoire," in *Des Alexandries II: L'art de lire,* ed. C. Jacob (Paris: Bibliothèque Nationale de France, 2003), 221–32.

people. Thus, even when confined physically to their shelves, the books moved readily throughout Europe through such living vehicles, "borne everywhere in the minds of their listeners"(*Philobiblon*, 4).[4]

But how did these people do it? How was it possible for a human memory to be regarded as a *primary* means of cultural transmission—indeed, according to many medieval writers, a *preferred* means of *translatio studii*? The places, *loci*, involved in such cultural transmissions are mental, a particular kind of human space with distinctive qualities. The rules for making, filing, and organizing such spaces were taught as a basic aspect of the crafting of one's memory in the schools of antiquity and the Middle Ages, and indeed through much of the seventeenth century. The cultivation and training of memory was a basic feature of education at this time, not only because of the need to store material in memory, but more importantly because of the imperative to train and enhance the computational and inventive powers of the mind. The ancient Greek myth that made Mnemosyne, "Memory," the mother of all the muses encapsulates this concern. In order to develop the memory into a powerful engine of invention, it was conceived of in spatial and locational terms like a kind of map, with its places and routes plainly marked. Memories were indeed, as Aristotle had said, "of the past," but this characteristic of memories is common to all of them, as self-evident as the observation that all people breathe. To be useful in making new knowledge, particular memories must be retrievable instantly, and one at a time, one needs "random access" to them.[5] To distinguish among them, to be able find one among all the others, a uniquely markable spatial location was the key. Before I discuss some specific examples of how such systems were thought to work, however, I want to spend a little time describing how some medieval philosophers had come to conceive of the brain's various functions.

Figure 1.1 reproduces a diagram of the process of thought formation from an Anglo-Norman manuscript made in England in the later fourteenth century (Cambridge, University Library, MS Gg 1.1). It accompanies a brief treatise in Latin on the brain, which mentions Thomas Aquinas as its chief authority. The various activities involved in thought are drawn as "cells," compartments linked by "channels," as you may see here. It is important to understand that this drawing is a diagrammatic representation, not an anatomical drawing; it was drawn in order to make the functional relationships clear but the first three activities shown in the diagram as sequential were actually thought to occur almost simultaneously. The sources of the psychology

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[4] Richard de Bury, *Philobiblon*, ed. and trans. E. C. Thomas (London: Kegan Paul, 1888); the quotations are from chapter 4.

[5] Albertus Magnus, "Commentary on Aristotle, *On Memory and Recollection*," trans. J. M. Ziolkowski, in M. Carruthers and J. M. Ziolkowski, eds., *The Medieval Craft of Memory: An Anthology of Texts and Pictures* (Philadelphia: University of Pennsylvania Press, 2002), 118–52. Albertus' commentary should be read in conjunction with that of Thomas Aquinas on this same text of Aristotle, a translation of which is in the anthology just cited. See also M. Carruthers, *The Book of Memory* (Cambridge: Cambridge University Press, 1990), 46–79.
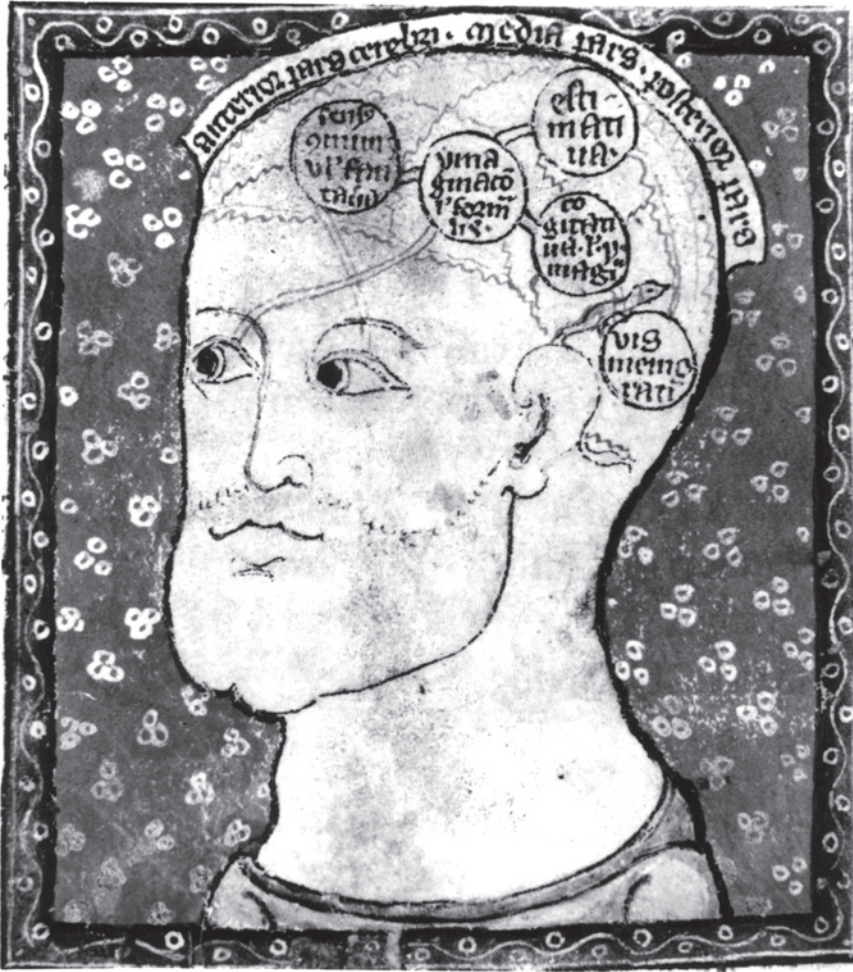
I am about to describe are Aristotle and his medieval commentators, both in Arabic
and in Latin: Ibn Sina, Ibn Rushd, Albertus Magnus, Thomas Aquinas, Walter Bur-
ley. Of central importance as well are Galen and his medieval disseminators.

  First, sense impressions are received from the various senses in the *sensus com-
munis* or *fantasia*, located in the forward part of the brain. (In this diagram, the eyes
represent all the senses.) The various sense impressions are then brought together
mentally by the image-forming ability, *imaginatio* or *vis formalis*, the ability to form

an image from many sensory data. Thus, raw sense data are thought to be composed or "gathered together" (*colligere*) by the actions of both *fantasia* (phantasy) and *vis formalis* (the power of making forms) into images having formal properties that are perceptible and useful to human thought.[6] The Aristotelian criterion of similitude, "likeness," must be understood in this context—mental images have "likeness" not as exact copies do, but in the way that a schematic drawing can be said to be "like" the object it represents. It is equally important to note that the resulting mental image was considered to be composed of input from all the senses. In the context of thinking, the Latin word *imago* at this time was not limited solely to the visual sense, although it is also true that the visual was regarded as the primary instrument of cognition for most people.

In the process of being perceived as a complete image, the sensory experience elicits a response, through an activity known as estimation, or *vis aestimativa*. This is a kind of judgment, but pre-rational, an "instinctive feeling" that accompanies the perception of the image. The classical example to demonstrate "estimation" in ancient philosophy is that a lamb knows to fear a wolf even though it has never seen one before. Conceptions (*imagines*) are thus constructed by the mind from all the materials of sensation, and they have two characteristics: likeness or *similitudo,* and also a "feeling" that marks them emotionally. Thus, in this psychology there is no such thing as a completely neutral or "objective" experience, since all the images or *phantasiai* in which we comprehend our experiences are already colored with some feeling before we can "know" them.

These *imagines* are made present to the mind as the materials of understanding in the activity called *cogitatio*, "cogitation, thinking," and from them concepts, ideas, and thoughts are constructed. All thoughts are therefore made of images, and the other name for cogitation in this picture is *vis imaginativa* or "the ability to imagine."

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[6] The treatise on the brain in Gg 1.1, ff. 490–491v, which this diagram accompanies, specifically acknowledges the authority of Thomas Aquinas but the labelling of the diagram does not entirely accord with Thomas's analysis. *Sensus communis* in Aquinas has a receiving function only. The first operation of the mind—Aristotle's first apprehension—was designated by Averroes as *formatio*, the *vis formalis* of the diagram. In the Latin versions of Avicenna, this was called *imaginatio*, that which forms the materials of *sensus communis* into an image apprehensible by the mind. Thomas tends to equate this *imaginatio* with *fantasia* or *vis phantastica*. By eliding *fantasia* with *sensus communis*, the diagram introduces mental action at an even earlier stage in the making of a conception; perhaps it intends to convey (correctly) simultaneous mental activity among *sensus communis*, *fantasia* (*imaginatio/vis formalis*), and *vis aestimativa*, rather than a simple linear progression from stage to stage of assembly. Another difference is that Thomas considers *vis aestimativa* and *vis cogitativa* both as judging and evaluating activities, the one (*aestimativa)* in animals, the other (*cogitativa*) unique to people. He does not conflate, as does the diagram, *vis cogitativa* with *vis imaginativa*. See the relevant citations in R. J. Deferrari et al., *A Lexicon of St. Thomas Aquinas* (Washington: Catholic University of America Press, 1948), and the discussion of M. D. Chenu, *Toward Understanding St. Thomas* (Chicago: Regnery, 1963), esp. 102–3.

Aristotle notably said that human beings cannot conceive understanding except through their *phantasiai*. These human conceptions are finally stored and recalled in the memory, *vis memorativa*, in the final stage of the constructive process. Notice that memory, like thought, is *vis*, an agent; it is not simply a receptacle.

The path between memory and thoughtmaking or *cogitatio* is two-way, because memories must be recalled as well as stored. A sort of valve was thought to exist, which would allow mental *imagines* to pass into memory, and also to be recalled for *cogitatio*. This was called the *vermis*, represented in the diagram as a little dragon-like creature between *cogitatio* and *memoria*. It had been observed that people often lower their heads in order to think and raise them when trying to recollect something. This was taken as evidence for the action of the *vermis*, opening as needed for recollection, and closing for concentrated thinking once one had received from memory the materials one needed.

Thus, memory storage was to be undertaken for the purpose of constructing thoughts. And memories were to be retained and stored in an inventory, neither as a jumble of past impressions, nor a repetitive, reiterative recording of experiences that can only be played the same way over and over. The making of this inventory was considered to be in itself an art—the craft of memory, *ars memorativa*. Recollection was a type of investigation, of discovery and invention—hence Aristotle's analysis of the topics (seats) of argument as a kind of memory art, an analysis repeated in the discussions on the *topica* by Cicero and Boethius, and later in medieval academic commentary on both Aristotle's *Topica* and the *Rhetorica ad Herennium*. Like all arts, the arts of memory have techniques and principles that can be learned, and—with a great deal of practice—even mastered. However, some people are more talented practitioners than others, and no amount of training will make someone with no talent into a master. Masters of memory were considered to be quasi-divine beings by their contemporaries, while some training in these arts was thought to be of great educational value for everyone, due to both their practical utility in cultures without easy access to quantities of physical books and their support of moral virtue, especially prudence, as a well-supplied memory was necessary for making informed judgments.

From the standpoint of our own cognitive psychology, the most astonishing, even alien, aspect of the medieval analysis is how entirely the imagination is implicated in cognition and in memory. In modern psychology memory is cast entirely in the role of passive storage: as a container in which to retain "traces" of events that have happened and content we have learned in the past, which may thus be directly recovered in the present. For more than a century, the fundamental philosophical questions about memory have involved representation: i.e., how accurate and how complete is the "trace" which an event has left in the brain? In present-day psychology, imagination needs to be separated from memory, lest these signature traces, these photographs of past events, be compromised and lose their truth value. In the medieval diagram, however, what memory stores and presents again to cognition is

an end product of imagination, feeling, and prior thought. Any direct traces of sensations are collected up at the start of the process in the *sensus communis* but, from the instant they are received in bits and pieces from their various sources, a fictive faculty, *fantasia* or *imaginatio*, goes to work.

Our *phantasiai* have the property of "location" within the brain. This is a principle of Aristotelian psychology that is fundamental in the pedagogy of the trivium as well. One can see this locational model at work in the Cambridge diagram, as each function is drawn in a determinate place within the brain. Medieval psychology was not phrenology, however. It recognized very well that the "locations" of images were mental, schemes that the mind makes for storing its images, as Albertus Magnus commented (and as I have discussed at length in *The Book of Memory*).[7] These mental places were also called *topica* and *loci*. To find them again after their creation, they needed to be arranged and addressed in a ready order that permits a particular place to be found securely and at once. Recollection was analyzed as an investigative procedure, in which the mind tracked the materials of memory and brought them forth from their lairs to be recomposed and reassembled for new thought. The procedure required markers, cues and clues that could function to link up and draw in a quantity of material from memory storage. One should think of a properly inventoried medieval scholar's memory store as distributed across and linked throughout an organized network, a network that can be entered at any of an infinite number of places by means of a mark (*nota*) that is also a key (*clavis*), providing access from any point to the rich treasury of memory.

In both antiquity and the Middle Ages, the most common model for human memory likened it to a tablet or a parchment page, upon which a person writes. This model is extremely old and widespread, and it is very interesting that even in antiquity, when actual books were written in rolls, the model for memory is that of a flat, rectangular surface that can be taken in with a single mental "look." This page can become quite complex. Figure 1.2 shows the full opening of one such page of memory, in this case a Psalter with generous commentary, made in Paris for Herbert of

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[7] I discussed the property of location and spatial organaization schemes predicated on this property in *The Book of Memory*, esp. 80–121. In the comments in his treatise *De bono* (Tractatus IV, Q. 2, "On the parts of prudence," article 2) on the *Rhetorica ad Herennium*'s principles for making locations in the mind for memory images, Albertus Magnus makes it clear that he understood these locational schemes to be wholly mental in nature, something "which the soul makes itself for storing images"; one imagines a classification scheme that "affects memory by this means, that it is formally composed *[solemnis]* and spare *[rarus]*" (see *The Book of Memory*, 277). Since pastness is a quality that all memories share, time per se cannot serve as a marker to distinguish one memory from another, but "place" can and does. In this same discussion, Albertus also makes it clear that he views recollection as an investigative procedure of discovering and reassembling memories from separate parts, a distributive model rather than the later model of memories as traces stored whole in the memory. The flexibility and "random access" which such a model provides was key to its inventive power in composition.
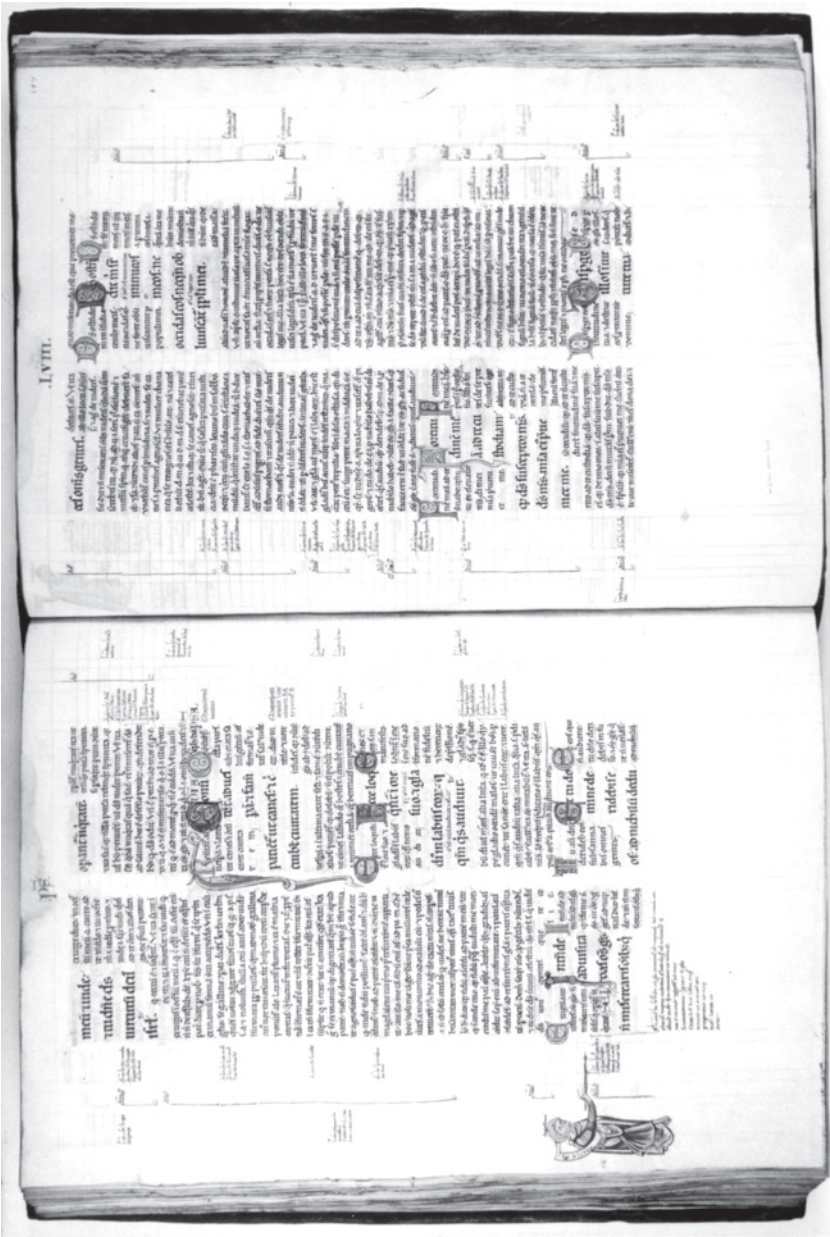
Figure 1.2
Psalter of Herbert of Bosham. Cambridge, Trinity College, MS B.5.4, ff. 146v-147r.
Paris, ca. 1170
By permission of the Masters and Fellows of Trinity College, Cambridge

Bosham, a chaplain to Thomas Becket, in about 1170 (Cambridge, Trinity College, MS B.5.4). The *mise-en-page* of this book illustrates many basic principles of the arts of memory. The Psalms was one of the fundamental texts of medieval culture, a book every educated person learned by heart as a step in learning to read. Biblical texts like this played the same role in medieval Christian culture that Homer or Virgil played in antiquity; they were considered foundational not just to moral character but to literate, rational thought itself. The two basic principles for memorizing such core texts are division and composition.[8] In order to memorize a long work, it was divided into brief segments, and then "placed" mentally into an orderly scheme. This scheme could be anything, so long as it was clear and readily recoverable. Number sequences and the alphabet were two obvious schemes that fit these requirements, although there were others in use as well. The Bible's schematic division into chapters and verses, still in use today, was largely in place by the fourth century, even though the text was not fully written into books until the sixteenth century. In Figure 1.2, one sees the textual divisions of Psalm 58: 6–9 written in a large script. Each part is marked by a painted initial. By building chains of such segments in one's memory, a very long work—such as all of the Psalms or the whole *Aeneid*—could be readily retained and securely recovered in its original order, or rearranged and extracted to suit a new composition, simply by rehearsing various numerical sequences.

Such pages were intended for study and meditation—they were not to be used by beginning readers. Indeed, Herbert's manuscript is not a single work but a whole library of materials, an encyclopedia of related knowledge gathered together. Each verse division of the main text is treated as though it were a separate "place" in the order. The Gallican version is paralleled by the Hebrew next to it and the commentary is then written into the margins, in a different and smaller script. The commentary is that of Peter Lombard but some additions have been made to it, indicated in yet another script. The segments of commentary are linked to the main text to which they refer by a common initial or, in some cases, a shared figural drawing. We should think of each of these divisions not as flat bits of text but as three-dimensional, like boxes (*arcae*) or rooms (*cellae*), packed full of linked matters. Surrounding the main commentaries are margins containing yet more commentary, and in the outermost margins, brackets and abbreviations indicate the sources of the texts: Augustine, Cassiodorus, Jerome, Ambrose, and sometimes others. The various links are all carefully marked by shared initials (in some cases) or by different scripts or by the *notae* of punctuation, which are not good facilitators for ease of reading, even by competent

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[8] Both requirements were discussed in a text that was central to early medieval pedagogy, both on its own and through having been extensively plagiarized by Martianus Capella, Consultus Fortunatianus, *Artis rhetoricae libri tres*. There is a modern critical edition by L. Calboli-Montefusco (Bologna: Padrón, 1979); the earlier edition is that of C. Halm, *Rhetores latini minores* (Leipzig: Teubner, 1863). The importance to memorization of dividing a long text and marking its sections was also featured by Quintilian, *Inst. orat.* XI. 27-31.

readers. In fact, these pages are not very easy to read, since one must jump around in them to find one's way—rather at a distance in many cases—from one verse of the psalm to another. More obviously, the markers join up and draw in materials from different parts of the page. The openings of this glossed psalter provide an early version of "hypertext," its links and networks securely fashioned for ready reference and recollection.[9]

Because the art of memory was to such an important extent the basis of an art of composition, the primary goals when "preparing" material for memory were flexibility, security, and ease of recombining matters into new patterns and forms. Recollection/invention is a "gathering together" (*compositio*) into one "place" (*locus*) of materials previously stored in memory as images (*imagines*). Albertus Magnus wrote of recollection as a type of rational investigation, a sort of hunt or chase (Latin *investigare*, "following footprints or tracks [vestiges] of animals through a forest").[10] Like any forest, the brain has paths through it, and places within it where the game was to be found. The map of the world, *mappamundi*, shown in Figure 1.3 is found in an Apocalypse book, containing text and extensive commentary rather in the manner of the Psalter commentary shown in Figure 1.2. "The Beatus of Saint-Sever" (Paris, Bibliothèque Nationale de France, MS lat. 8878) is one of the most beautifully executed of this family of monastic books, mostly from the tenth through twelfth centuries. Together with the biblical text, it contained the ninth-century commentary of Beatus of Liebana on St. John's Apocalypse and an extraordinary set of pictures that are essential commentary as well. This map was painted in the book without reference to any particular section of the biblical text; not all the extant versions have it, but about half do, most presenting it as a full, double-page opening as it appears here.[11] It is not a map like any we know today. One could never use this

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[9] On the glossed book format see C. De Hamel, *Glossed Books of the Bible and the Origins of the Paris Book Trade* (London: Boydell and Brewer, 1984). Such manuscript formats have now often been likened to hypertext, but I think the insight was first developed in a contemporary setting by Jacques Derrida when he adapted the format for his meditation on the inclusive nature of the text in *Glas* (Paris: Galilée, 1974).

[10] See the commentary cited in note 5 above.

[11] The map in illustrated Beatus manuscripts was added in response to the Prologue of Book II of Beatus of Liebana's commentary, which describes the evangelizing mission of the Apostles. See the magisterial survey of these manuscripts by J. W. Williams, *The Illustrated Beatus* (London: Harvey Miller, 1994), 1: 50–53. Williams discusses the Saint-Sever manuscript in vol. 3, and gives a full bibliography for the manuscript there. The folios in this manuscript containing the map were inserted in their proper place during or before a thirteenth-century rebinding: they were not included when the manuscript was foliated (Williams, *Illustrated Beatus*, 3: 54). On the philosophical and meditational context for map-making in late antiquity, see C. Jacob, *La description de la Terre habitée de Denys d'Alexandrie ou la leçon de géographie* (Paris: Albin Michel, 1990). Briefer considerations of medieval developments are in E. Edson, *Mapping Time and Space* (London: The British Library, 1997), esp. 145–63, and N. R. Kline, *Maps of Medieval Thought* (Woodbridge:

to navigate, nor was it ever intended for such a purpose. It contains places from the history in the Bible (the Garden of Eden with the five rivers flowing from it, the Red Sea) and from contemporary Europe: Italy and Rome, Galicia, Francia, and all the way over at the edge the islands of Britannia and Hibernia (out in the dark, among the fishes). This map is another study device, an instrument for organizing and relating knowledge. The places on the map constitute a set of routes (*itineraria*) that can be made to serve as points of organization for the topics of any composition. We have advice in preachers' manuals on how to compose, using the cities of pilgrimage routes as devices for the "arrangement" of subject matters into their places within a rational scheme. Such a map shows the way(s) through a composition, in this case the great *geographia* of the communion of patriarchs and saints through human history.

Figure 1.4 presents the most convenient and portable of all the instruments of the arts of memory, the hand. Hand diagrams like this one from the Howard Psalter are very common, and used for a wide variety of purposes.[12] This particular hand was to be used at bedtime for the meditation known as the examination of conscience. Each joint of the fingers serves as a place for the different subject matters covered in such an examination. Having memorized these topics in the various "places" of the hand, one could easily examine oneself without missing any important categories of sin; given both the likelihood of quick death and the firm belief in damnation, this was an important consideration at this time. Moreover, a confessor could also use this to examine a penitent, or a preacher to compose a set of sermons on sin. There is a corresponding hand of blessings; the two are often drawn together. Notice that this hand, the left, is not realistically shown, for the thumb is given three joints not two. One of those joints is wholly mental in origin. In this way simplicity and symmetry are maintained in the ordering of topics, making it much easier to manipulate and shuffle one's materials around if one cares to do so without losing "track" of one's "place" in the whole. The Latin word for such a rigid, simple, and easily grasped arrangement is *solemnis*, a word often used by writers on memory technique for the principle of ordering topics.

The requirement of flexibility and recombination is critical to recollection, the goal of memory storage, as I said earlier. Long texts and other complex subjects are divided up and marked in this elaborate way precisely so that they can be used variously and recombined into the patterns of new work. Rote memorizing precludes

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Boydell, 2001), esp. 194-218. I discussed medieval maps, including the Beatus map, as meditation devices in M. Carruthers, *The Craft of Thought* (Cambridge: Cambridge University Press, 1998), 32–44, 198–205. See also P. Hadot, *Philosophy as a Way of Life*, trans. M. Chase (Oxford: Blackwell, 1995), 238–50, on the philosophical exercise of *kataskopos*.

    [12] See C. R. Sherman, *Writing on Hands: Memory and Knowledge in Early Modern Europe* (Carlisle, Pennsylvania: The Trout Gallery, Dickinson College, 2000), the catalogue of an exhibition of printed materials (ca. 1500–1800) illustrating uses of the hand as a calculating and mnemonic tool. Also the discussion by K. Berger of "The Guidonian Hand" in Carruthers and Ziolkowski, *The Medieval Craft of Memory*, 71–82.
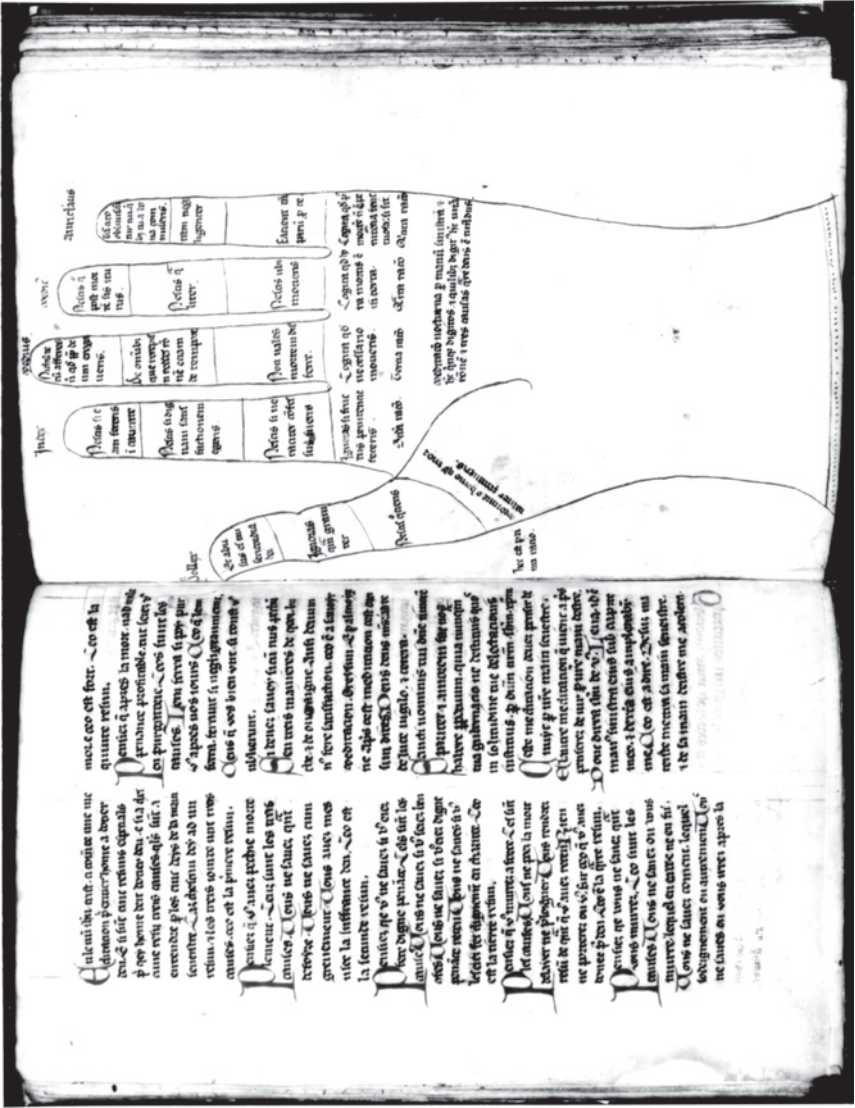
Figure 1.4
Hand diagram. Howard Psalter. London, British Library, MS Harley 273, ff. 110v–111r.
Place of production, date?
By permission of The British Library

this essential flexibility. The divisions are to be "short" (*brevis*). Just how short? The length that "the mind's eye" can take in during a single glance or gaze of a memory place. The word used is *conspectus*. This is very much like our notion of "working memory" or "short-term memory," but the model for it is definitely spatial, not temporal. If the "places" of memory are thought of as "little rooms" or "seats" in a scheme, then the dimension of each "place" is a single *conspectus* or inner gaze. Evidently, this is not a precise measurement, for every person's *conspectus* will have a somewhat different capacity.

The plans of buildings are favored recollection and meditation devices, especially the plans of ideal buildings. Figure 1.5 shows one such meditation plan, known as "The Plan of St. Gall," after the monastery which owned it (it is now catalogued as Sankt-Gallen, Stiftsbibliothek MS 1092). We all know that the clergy of the Middle Ages were great planners of buildings—we see their art still around us today—but these stone monuments are only the traces of fictional buildings conceived more elaborately in their minds. Figure 1.5 is a modern re-drawing and labeling of one such plan; the original is a large manuscript having the dimensions of a wall map rather than a book.[13] It has a preface that explains how it was made by one abbot for use by another in contemplation and meditation, in order to promote meditation on a perfect monastic life. The design of this complex of buildings, like a set of rooms, offers an itinerary through the various "places" of monastic life, from church to cloister, to dormitory, to hospice, to garden, to cemetery. At the time this plan was made, monasteries were not constructed in this way, so this is an entirely ideal arrangement, a utopian architecture to recall and be mindful of (*recollectio*) the fullness of monastic life. Figure 1.6 and Figure 1.7 present two more images of fictional architecture made about 325 years later. Both are from the same work, a long commentary on the ekphrastic vision of Ezekiel by the twelfth-century Parisian master, Richard of St. Victor.[14] Ezekiel's text describes in great detail the various dimensions of buildings

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[13] On the nature and function of the St. Gall plan, see L. Nees, "The Plan of St. Gall and the Theory of the Program of Carolingian Art," *Gesta* 25 (1986): 1–8, and C. Heitz, "Nouvelles perspectives pour le plan de Saint-Gall," *Bulletin de la Société nationale des antiquaires de France* (1992): 169–73, both arguing against the notion that the St. Gall plan was a prototype for real buildings, as Walter Horn had argued in 1979. I discussed the meditation function of such plans in *The Craft of Thought*, 221-76.

[14] On the drawings and plans of Richard of St. Victor's Ezekiel commentary, see W. Cahn, "Architecture and Exegesis: Richard of St. Victor's Ezekiel Commentary and Its Illustrations," *Art Bulletin* 76 (1994): 53–68. These drawings were considered essential to the commentary and were routinely copied with the text. Richard's older contemporary, Hugh of St. Victor, famously composed a *descriptio* of Noah's Ark as a meditation device and orienting summary of his treatise on monastic life, *De Archa Noe* (formerly called *De Archa Noe morali*). A discussion and complete English translation of this text, with bibliography, is in Carruthers and Ziolkowski, *The Medieval Craft of Memory*, 41–70; see also Carruthers, *The Book of Memory*, 229–39, and *The Craft of Thought*, 241–50.
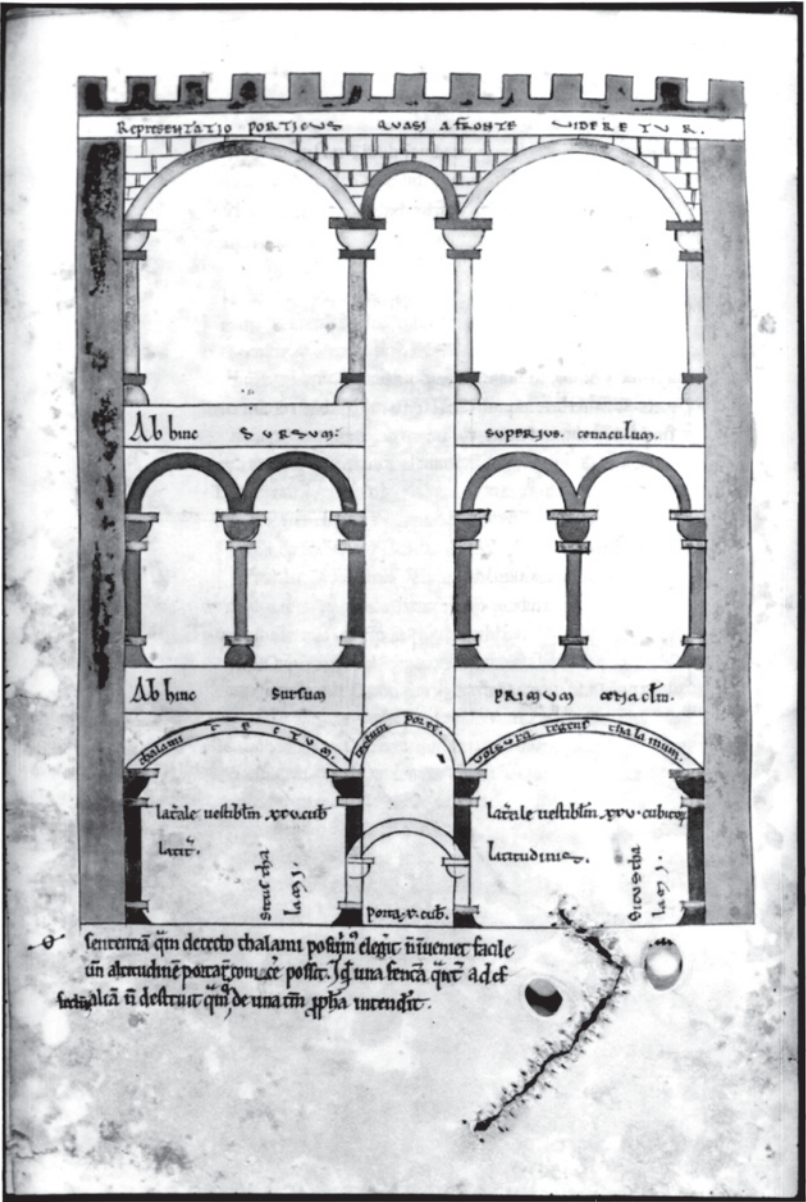
Figure 1.6
Temple Mount of Jerusalem, Eastern Gatehouse. Richard of Saint-Victor, *Commentary on Ezekiel*. Oxford, Bodleian Library, MS Bodl. 494, f. 155v. Place of production? twelfth century
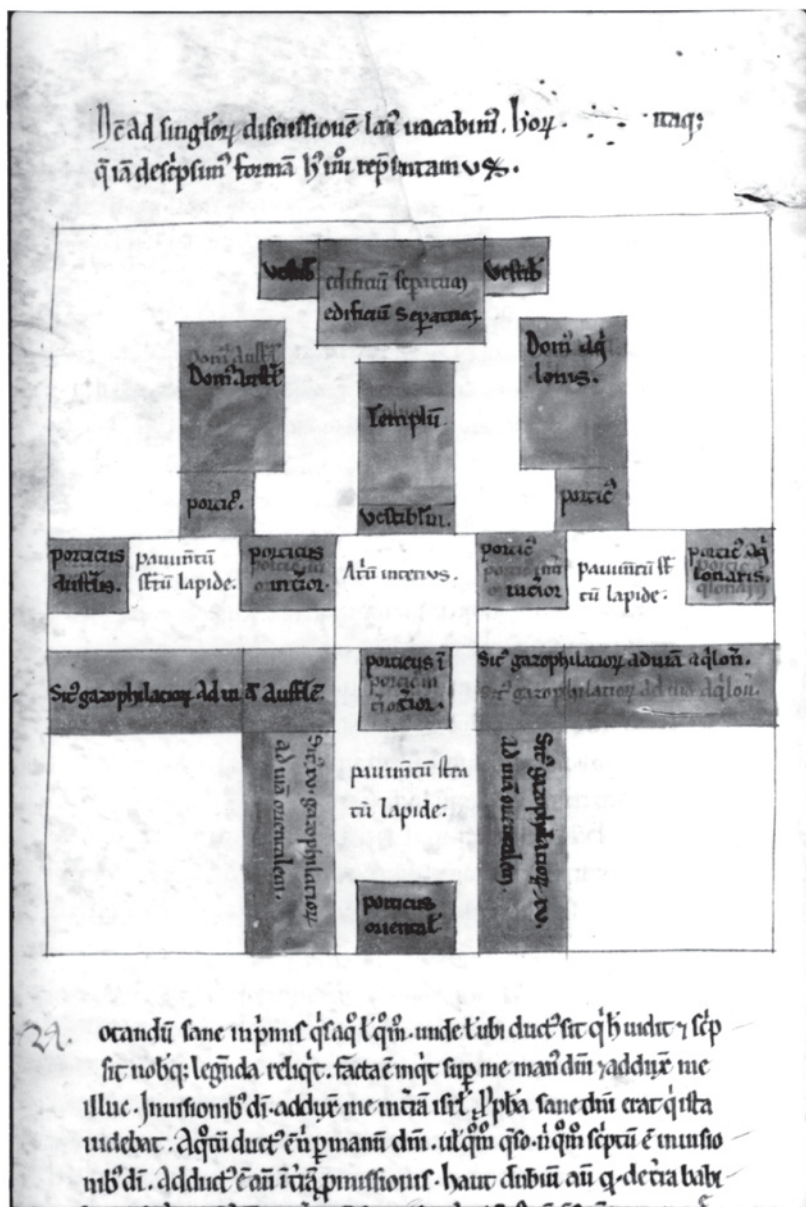
FIGURE 1.7
Temple Mount of Jerusalem, Temple Precinct. Richard of Saint-Victor, *Commentary on Ezekiel*. Oxford, Bodleian Library, MS Bodl. 494, f. 133r. Place of production? twelfth century.

By permission of the Bodleian Library, University of Oxford

on an idealized, visionary Temple Mount in Jerusalem. Figure 1.6 shows a rendering of the eastern gatehouse that resembles the façade of a twelfth-century gatehouse, such as a tower. Richard also drew a number of plans of the Temple precincts themselves, the schematic of a visionary building (Figure 1.7). In genre, I suggest, the plans are similar to the "Plan of St Gall," in that the St. Gall diagram is of idealized sacred precincts that were themselves also a type of the holy city of Jerusalem. It is striking in Richard's drawings that the sacred buildings are presented in plan, while the gatehouses, in the walls of the city, are drawn in elevation as façades. Such devices were used by others to organize general meditations on monastic life, on the virtuous life, on history, and on many other matters. The canons of St. Victor were particularly fond of such plans, which served as summaries of their complex works much in the manner that we still use outline summaries, both to make something clear to our students and to help us in constructing our own work. Into these outlines we are able to "gather" all sorts of materials and still keep clear to ourselves and others the "ways" and "itineraries" of our composition.

Figure 1.8 is another such summary diagram, this time in the shape of a spoked wheel. This is the "picture" that introduces another meditation/composition on the ideals of monastic life called "On the Dove and the Hawk." The bits of text in this diagram are chapter headings for the work that follows. The author, a twelfth-century Benedictine monk named Hugo de Folieto, wrote several meditations that incorporate an introductory picture.[15] In the manuscripts, the layout makes clear that these picture-introductions are integral in the text, but in many editions the pictures have been omitted and only the words are printed. It is clear, however, that the author intended this diagram to be an essential part of his work—its *proemium* or introduction—not just an illustration of its words. The organization of the diagram, with the dove at its center and the topics of the work radiating out from it, is an accurate guide to the method of the work itself, in which a number of biblical texts using the word *columba*, "dove," radiate out from the central concept. This is a somewhat different pattern of organization from the map or architectural plan, but the basic spatial principles of "division," "disposition," "pathways," and "gathering together" are equally present. The composition is, typically, thought of in terms of "gathering" subject matters into "places" or "topics," for the Greek word *topos*, "topic," means "place" and the Latin verb *legere,* "to read" (as well as its Greek antecedent) means "to gather up," "to lay together," "to collect by picking" as one picks flowers for an anthology.

Meditation on sacred Scripture in a monastic setting and learned academic commentary on complex texts and doctrine were not the only activities to which the arts of memory were addressed, however. After the twelfth century, much more material

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[15]   The drawings and treatise are discussed at length, together with an edition and translation of the text, in W. B. Clark, *The Medieval Book of Birds: Hugh of Fouilloy's Aviarium* (Binghamton: Medieval and Renaissance Text Series, 1992). See also C. De Clercq, "Le role de l'image dans un manuscrit médiéval (Bodl. Lyell 71)," *Gutenberg Jahrbuch* 37 (1962): 23–30.
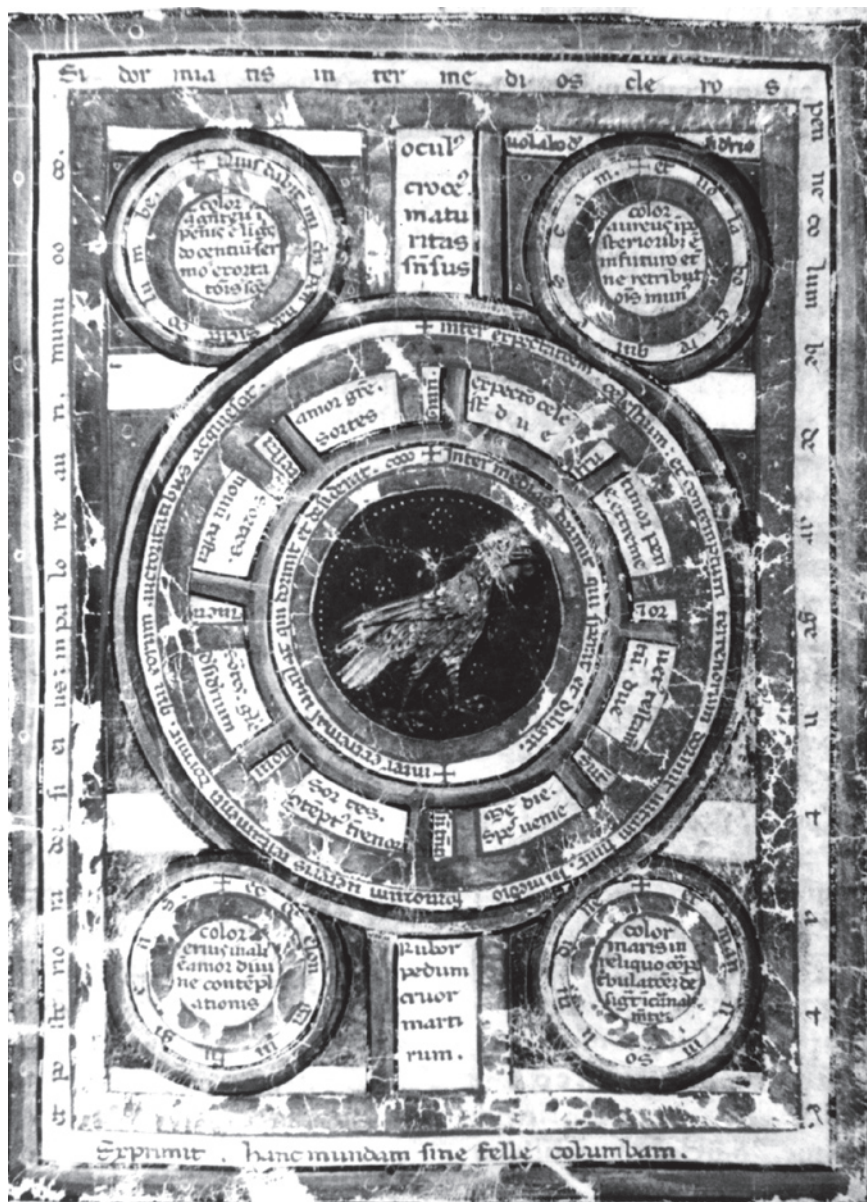
Figure 1.8
Chapter Diagram. Hugo de Folieto, *On the Dove and the Hawk*. Oxford, Bodleian
Library, MS Lyell 71, f. 4. Italy, ca. 1300
By permission of the Bodleian Library, University of Oxford

was composed for lay audiences speaking in the vernacular languages, and sermons became one of the commonest kinds of composition. Most of the preachers were itinerant friars, who traveled from one place to another preaching in the vernacular to crowds of people for days at a time. They spoke *ex tempore*, without notes, composing their words as they spoke from generalized outlines of subject matter that they had memorized. There are many records of such performances by friars. Several devices for composing sets of sermons on major topics were widely copied and used. Figure 1.9 is one such, the "Tower of Wisdom," *turris sapientiae*. This picture was made for preaching by friars, and it is a kind of machine (*machina*, literally a hoist used to build walls) for inventing a large number of sermons related to the general subject of the virtues and vices.[16] The building type, as Lucy Freeman Sandler has pointed out, is that of a gatehouse tower, not a church façade—perhaps a gatehouse tower like that of the visionary Jerusalem depicted in Richard of St Victor's architectural drawings for his Ezekiel commentary. Such a diagram presents a "space" for large-scale composition (or for many small compositions on a general theme), in the form of groups of places and images, linked together like a chain (*catena*) or even a scene (*scaena*). The places within it are disposed in easily perceived courses of stone, and one climbs through these levels in one's mind as one ascends the tower. The various stages are additionally indicated by the letters of the alphabet, each one marking a new topic; these are written along the base and up the sides of the tower. Each stone is clearly distinct from the others, and has only a word or very short phrase written on it. One can, mentally, either stand back and see the tower as a whole, or move in closer to examine a single stone or row, such as the steps at the base. These features demonstrate some important characteristics of memory places (or *loci*) made in accord with the technique of the arts of memory: they are *rarus*, distinct from one another and not crowded together. They are clear, *clarus*, meaning they are both distinctive and well illuminated: no shadows appear in these pictures; the light is flat and even, neither too dim nor too dazzling. They have a rigid, self-evident order (*solemnis*). The figure as a whole is drawn as though it were initially viewed in one glance from a moderate distance of about ten meters. And the images are active (*agentes*)—to use the diagram, the beholder must mentally move about within its places, climbing, walking among them, seeing them now from a distance, now close up.

In conclusion, I will consider three variations on the same meditation device, a seraph or cherub having six wings. This figure was one of the most popular used

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[16] L. F. Sandler discusses the Tower of Wisdom's context and function, together with a translation of John of Metz's explanation of it, in Carruthers and Ziokowski, *The Medieval Craft of Memory*, 215–25. See also L. F. Sandler, *The Psalter of Robert Delisle in the British Library* (London: Harvey Miller, 1983; paperback ed., 1999), which has excellent reproductions of all the diagrams in the Delisle Psalter version of the *Speculum theologie*, including the Tower of Wisdom. L. Bolzoni has discussed the rhetorical functions of the "Tower of Wisdom" and similar diagrams in *The Web of Images: Vernacular Preaching from its Origin to St Bernardino da Siena* (Aldershot: Ashgate, 2004), 50–76.
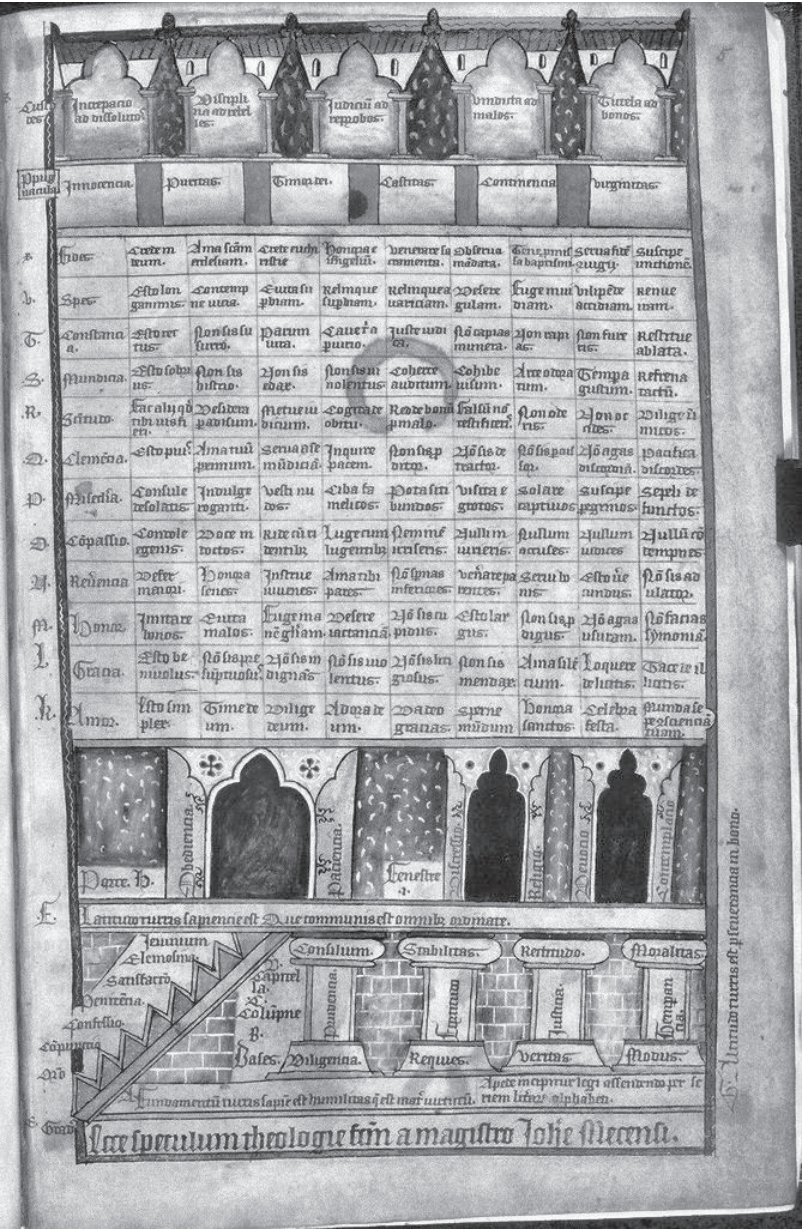
Figure 1.9
"Tower of Wisdom". London, British Library, MS Arundel 83-I, f. 5. Place of production, date?
By permission of The British Library

in late medieval preaching. Variations on it can be found in dozens of manuscripts and printed preaching manuals during more than four hundred years, from the late twelfth through the early seventeenth centuries. It is a device for composing a group of sermons on the subject of penance, and was particularly popular in the liturgical seasons of Lent and Advent.

Figure 1.10 is the earliest of these that still exists, in a manuscript made at Sawley Abbey in England around 1200 (Cambridge, Corpus Christi College, MS 66). This figure was initially the summary *pictura* for a famous homiletic text called "A *tractatus* upon the six wings" (*De sex alis*). To use such a compositional device as the Seraph/Cherub, a person would need to internalize the picture, remembering the divisions of the subject in order, as major headings of "wings" and sub-headings of "feathers." With this figure in mind (literally) one could readily have the basic topics for as many as thirty sermon-meditations, nearly a whole season's worth, on the general subject of penitence. Each preacher would readily be able to adapt the scheme to the specific occasions of his own speaking. For example, as Lina Bolzoni has demonstrated, San Bernardino of Siena, the great preacher of the fifteenth century, did just this, adding two additional feather-topics to each of the six wings in order to make the total number of topics better suit his Lenten cycle (that is, forty-two rather than thirty). In Figure 1.11, the six-winged creature is shown with three pairs of wings, one over its feet, one spread to the sides, and one over its head. This conformation makes for some ambiguity in the relationship of major headings and sub-headings, because the wings over its feet are interlaced in such a way that it could be difficult to clearly differentiate the subtopics ("Feathers") on Wing One from those of Wing Two. In other words, the figure violates the mnemotechnical requirements of being sufficiently *rarus* and *clarus* for the intended purpose of meditation. Indeed, in later versions of the Seraph, confusion does arise precisely over these sets of topics and subtopics. The preachers seem to have been aware of the problem because other conformations were created.

Figure 1.11 shows the six wings with their various topics spaced evenly like the spokes of a wheel around the central face of the angel-seraph. This makes the subjects easier to read and to keep distinct from one another. This picture was made about 200 years after the one in Figure 1.10, and it is Italian, not English, occuring in a manuscript likely of Dominican provenance made in the late fourteenth century (Florence, Biblioteca Medicea Laurenziana, MS Laur. Plut. 30.24). The great variation in drawing among these images is an indication of how widely the figure was adapted for practical use. It was not treated like a work of art or an icon but like a tool, which is exactly what it was. Figure 1.12 shows yet another conformation of the seraph, from the early fifteenth century (Yale University, Beinecke Library MS 416). This was made in the monastery of Kempen in the Rhineland for contemplatives, not preachers (Kempen was the home of Thomas à Kempis). It is more complex and more inclusive of chains of other texts and subjects. The monk who drew this figure is shown under the angel's feet: he is "Hermanus custos," Herman the abbot.
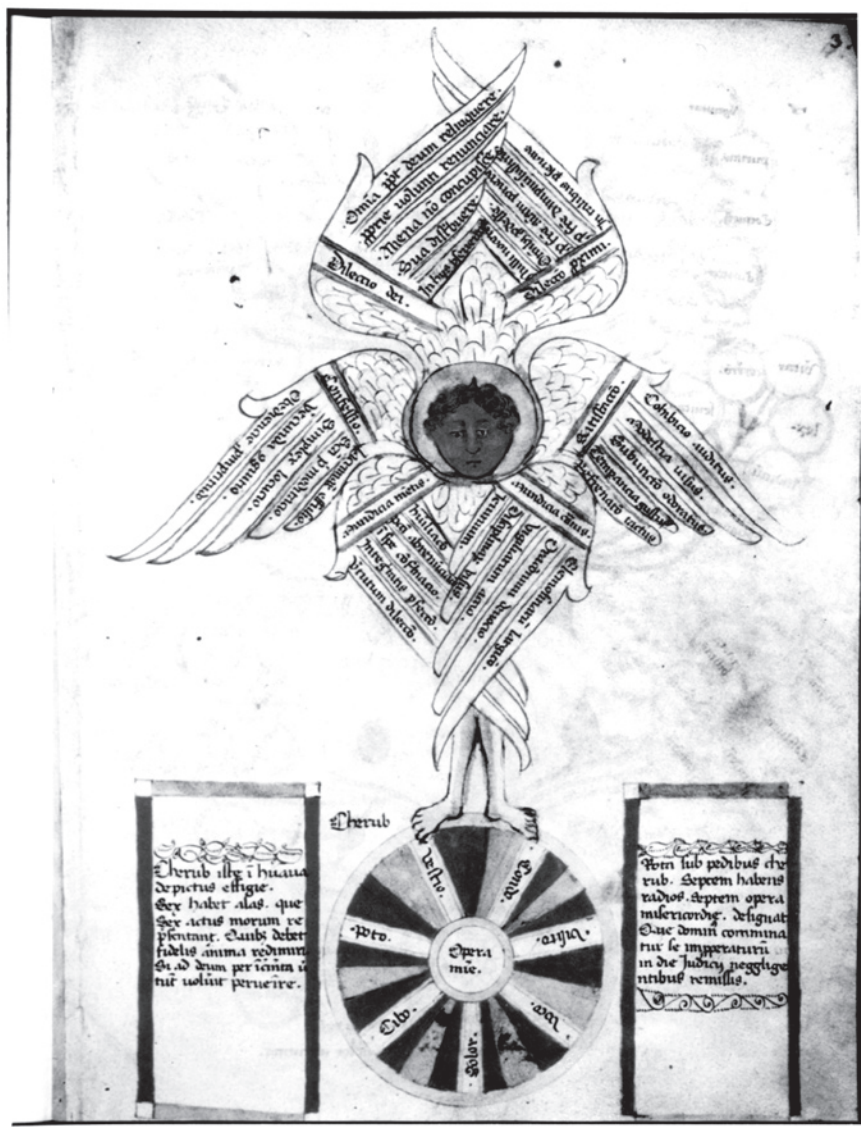
Figure 1.10
Seraph/Cherub. *De sex alis.* Cambridge, Corpus Christi College, MS 66, p. 100. Sawley Abbey, England, ca. 1200

Figure 1.11
Seraph/Cherub. *De sex alis* [check title]. Florence, Biblioteca Medicea Laurenziana, MS Laur. Plut. 30.24, f. 3v. Italian, late fourteenth century.
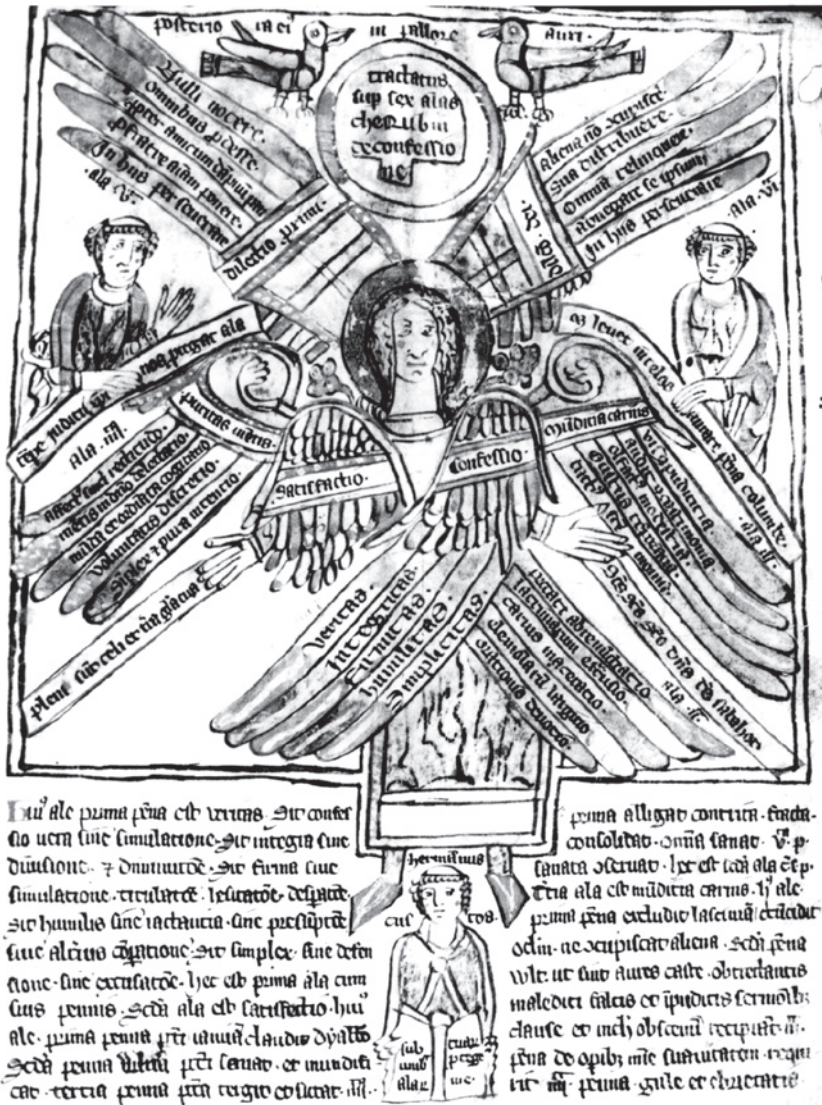
FIGURE 1.12

Seraph/Cherub. Abbot Herman, *Speculum theologiae.* Yale University, Beinecke Library MS 416, f. 8.

Abbey of Kempen, Germany, early fifteenth century [check date]

The device appers to spring up from his head, as indeed was intended. Yet the most startling feature of this drawing is how the feathers of Wing Two have been rotated outward from behind Wing One, so that they can be easily perceived and read in their proper order. Hermanus has solved in his own way the problem of the pair of wings interlacing over the feet, the potential for confusion presented by the angel's wings in Figure 1.10. Every time I have shown this picture to students for the first time, they have judged that the painter was simply incompetent to render this wing normally (whatever a seraph's wing "normally" looks like). But incompetence is not at issue here, for Hermanus has deliberately "exploded" this wing outward and back-ward at the wrist in order to make it clear and easy to read, and thus to recollect its topics or "places" in the investigative, rational manner described by Albertus Mag-nus. His purpose is not to draw a "realistic" angel but to provide a useful mental tool for creative meditation.[17]

I hope I have been able to demonstrate, however superficially, that the craft of memory, like its successor investigative art, systematic logic, is not fundamentally just an overly complicated procedure for preparing to pass examinations or for memo-rizing random facts. It is ill-suited to rote repetition, as people who have written on it have been pointing out for over two thousand years. Rather it was a craft for creating new knowledge, and for investigating difficult subjects in the forum of debate and commentary. The concept of "place" was basic to it, because the ordering of material in places gave one the flexibility and security necessary to make something out of the information one had learned, whether in the form of lengthy texts or of long lists of facts. Manuscript paintings such as those discussed in this essay are not only pretty pictures, but imply a whole science of recollection and an investigative method. They are the gatehouses of the mind for those with the knowledge to use them, those skilled in the arts of memory.

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[17] I have considered these seraph drawings as *artes inveniendi* at greater length in an essay entitled "Movement in the Mind's Eye" in J. Hamburger and A.-M. Bouché, eds., *The Mind's Eye* (Princeton: Princeton University Press, forthcoming). San Bernardino da Siena's use of the Cherub diagram in composing and delivering his sermons is considered by Bolzoni in "Predicazione e arte della memoria: un quaresimale di Bernardino da Siena e l'immagine del Serafino," in *Musagetes: Festschrift für Wolfram Prinz*, ed. R. G. Kecks (Berlin: Gebr. Mann, 1991), 179–95, and in *The Web of Images*, 120–35.