THE ART OF MEMORY

by

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Chapter I

THE THREE LATIN SOURCES FOR THE CLASSICAL ART OF MEMORY[1]

AT a banquet given by a nobleman of Thessaly named Scopas, the poet Simonides of Ceos chanted a lyric poem in honour of his host but including a passage in praise of Castor and Pollux. Scopas meanly told the poet that he would only pay him half the sum agreed upon for the panegyric and that he must obtain the balance from the twin gods to whom he had devoted half the poem. A little later, a message was brought in to Simonides that two young men were waiting outside who wished to see him. He rose from the banquet and went out but could find no one. During his absence the roof of the banqueting hall fell in, crushing Scopas and all the guests to death beneath the ruins; the corpses were so mangled that the relatives who came to

[1] The English translations of the three Latin sources used are those in the Loeb edition of the classics: the *Ad Herennium* is translated by H. Caplan; the *De oratore* by E. W. Sutton and H. Rackham; Quintilian's *Institutio oratoria* by H. E. Butler. When quoting from these translations I have sometimes modified them in the direction of literalness, particularly in repeating the actual terminology of the mnemonic rather than in using periphrases of the terms.

The best account known to me of the art of memory in antiquity is that given by H. Hajdu, *Das Mnemotechnische Schriftum des Mittelalters*, Vienna, 1936. I attempted a brief sketch of it in my article 'The Ciceronian Art of Memory' in *Medioeve e Rinascimento, Studi in onore di Bruno Nardi*, Florence, 1955, II, pp. 871 ff. On the whole, the subject has been curiously neglected.

take them away for burial were unable to identify them. But Simonides remembered the places at which they had been sitting at the table and was therefore able to indicate to the relatives which were their dead. The invisible callers, Castor and Pollux, had handsomely paid for their share in the panegyric by drawing Simonides away from the banquet just before the crash. And this experience suggested to the poet the principles of the art of memory of which he is said to have been the inventor. Noting that it was through his memory of the places at which the guests had been sitting that he had been able to identify the bodies, he realised that orderly arrangement is essential for good memory.

> He inferred that persons desiring to train this faculty (of memory) must select places and form mental images of the things they wish to remember and store those images in the places, so that the order of the places will preserve the order of the things, and the images of the things will denote the things themselves, and we shall employ the places and images respectively as a wax writing-tablet and the letters written on it.[2]

The vivid story of how Simonides invented the art of memory is told by Cicero in his *De oratore* when he is discussing memory as one of the five parts of rhetoric; the story introduces a brief description of the mnemonic of *places* and *images* (*loci* and *imagines*) which was used by the Roman rhetors. Two other descriptions of the classical mnemonic, besides the one given by Cicero, have come down to us, both also in treatises on rhetoric when memory as a part of rhetoric is being discussed; one is in the anonymous *Ad C. Herennium libri IV*; the other is in Quintilian's *Institutio oratoria.*

The first basic fact which the student of the history of the classical art of memory must remember is that the art belonged to rhetoric as a technique by which the orator could improve his memory, which would enable him to deliver long speeches from memory with unfailing accuracy. And it was as a part of the art of rhetoric that the art of memory travelled down through the European tradition in which it was never forgotten, or not forgotten until comparatively modern times, that those infallible guides in all human activities, the ancients, had laid down rules and precepts for improving the memory.

[2] Cicero, *De oratore*, II, lxxxvi, 351–4.

It is not difficult to get hold of the general principles of the mnemonic. The first step was to imprint on the memory a series of *loci* or places. The commonest, though not the only, type of mnemonic place system used was the architectural type. The clearest description of the process is that given by Quintilian.[3] In order to form a series of places in memory, he says, a building is to be remembered, as spacious and varied a one as possible, the forecourt, the living room, bedrooms, and parlours, not omitting statues and other ornaments with which the rooms are decorated. The images by which the speech is to be remembered—as an example of these Quintilian says one may use an anchor or a weapon—are then placed in imagination on the places which have been memorised in the building. This done, as soon as the memory of the facts requires to be revived, all these places are visited in turn and the various deposits demanded of their custodians. We have to think of the ancient orator as moving in imagination through his memory building *whilst* he is making his speech, drawing from the memorised places the images he has placed on them. The method ensures that the points are remembered in the right order, since the order is fixed by the sequence of places in the building. Quintilian's examples of the anchor and the weapon as images may suggest that he had in mind a speech which dealt at one point with naval matters (the anchor), at another with military operations (the weapon).

There is no doubt that this method will work for anyone who is prepared to labour seriously at these mnemonic gymnastics. I have never attempted to do so myself but I have been told of a professor who used to amuse his students at parties by asking each of them to name an object; one of them noted down all the objects in the order in which they had been named. Later in the evening the professor would cause general amazement by repeating the list of objects in the right order. He performed his little memory feat by placing the objects, as they were named, on the window sill, on the desk, on the wastepaper basket, and so on. Then, as Quintilian advises, he revisited those places in turn and demanded from them their deposits. He had never heard of the classical mnemonic but had discovered his technique quite independently. Had he extended his efforts by attaching notions to the objects remembered on the places he might have caused still greater amazement by

[3] *Institutio oratoria*, XI, ii, 17–22.

delivering his lectures from memory, as the classical orator delivered his speeches.

Whilst it is important to recognise that the classical art is based on workable mnemotechnic principles it may be misleading to dismiss it with the label 'mnemotechnics'. The classical sources seem to be describing inner techniques which depend on visual impressions of almost incredible intensity. Cicero emphasises that Simonides' invention of the art of memory rested, not only on his discovery of the importance of order for memory, but also on the discovery that the sense of sight is the strongest of all the senses.

> It has been sagaciously discerned by Simonides or else discovered by some other person, that the most complete pictures are formed in our minds of the things that have been conveyed to them and imprinted on them by the senses, but that the keenest of all our senses is the sense of sight, and that consequently perceptions received by the ears or by reflexion can be most easily retained if they are also conveyed to our minds by the mediation of the eyes.[4]

The word 'mnemotechnics' hardly conveys what the artificial memory of Cicero may have been like, as it moved among the buildings of ancient Rome, *seeing* the places, *seeing* the images stored on the places, with a piercing inner vision which immediately brought to his lips the thoughts and words of his speech. I prefer to use the expression 'art of memory' for this process.

We moderns who have no memories at all may, like the professor, employ from time to time some private mnemotechnic not of vital importance to us in our lives and professions. But in the ancient world, devoid of printing, without paper for note-taking or on which to type lectures, the trained memory was of vital importance. And the ancient memories were trained by an art which reflected the art and architecture of the ancient world, which could depend on faculties of intense visual memorisation which we have lost. The word 'mnemotechnics', though not actually wrong as a description of the classical art of memory, makes this very mysterious subject seem simpler than it is.

An unknown teacher of rhetoric in Rome[5] compiled, *circa* 86–82 B.C., a useful text-book for his students which immortalised,

[4] *De oratore*, II, lxxxvii, 357.

[5] On the authorship and other problems of the *Ad Herennium*, see the excellent introduction by H. Caplan to the Loeb edition (1954).

not his own name, but the name of the man to whom it was dedicated. It is somewhat tiresome that this work, so vitally important for the history of the classical art of memory and which will be constantly referred to in the course of this book, has no other title save the uninformative *Ad Herennium*. The busy and efficient teacher goes through the five parts of rhetoric (*inventio, dispositio, elocutio, memoria, pronuntiatio*) in a rather dry text-book style. When he comes to memory[6] as an essential part of the orator's equipment, he opens his treatment of it with the words: 'Now let us turn to the treasure-house of inventions, the custodian of all the parts of rhetoric, memory.' There are two kinds of memory, he continues, one natural, the other artificial. The natural memory is that which is engrafted in our minds, born simultaneously with thought. The artificial memory is a memory strengthened or confirmed by training. A good natural memory can be improved by this discipline and persons less well endowed can have their weak memories improved by the art.

After this curt preamble the author announces abruptly, 'Now we will speak of the artificial memory.'

An immense weight of history presses on the memory section of *Ad Herennium*. It is drawing on Greek sources of memory teaching, probably in Greek treatises on rhetoric all of which are lost. It is the only Latin treatise on the subject to be preserved, for Cicero's and Quintilian's remarks are not full treatises and assume that the reader is already familiar with the artificial memory and its terminology. It is thus really the main source, and indeed the only complete source, for the classical art of memory both in the Greek and in the Latin world. Its rôle as the transmitter of the classical art to the Middle Ages and the Renaissance is also of unique importance. The *Ad Herennium* was a well known and much used text in the Middle Ages when it had an immense prestige because it was thought to be by Cicero. It was therefore believed that the precepts for the artificial memory which it expounded had been drawn up by 'Tullius' himself.

In short, all attempts to puzzle out what the classical art of memory was like must be mainly based on the memory section of *Ad Herennium*. And all attempts such as we are making in this book to puzzle out the history of that art in the Western tradition

[6] The section on memory is in *Ad Herennium*, III, xvi–xxiv.

must refer back constantly to this text as the main source of the tradition. Every *Ars memorativa* treatise, with its rules for 'places', its rules for 'images', its discussion of 'memory for things' and 'memory for words', is repeating the plan, the subject matter, and as often as not the actual words of *Ad Herennium*. And the astonishing developments of the art of memory in the sixteenth century, which it is the chief object of this book to explore, still preserve the 'Ad Herennian' outlines below all their complex accretions. Even the wildest flights of fancy in such a work as Giordano Bruno's *De umbris idearum* cannot conceal the fact that the philosopher of the Renaissance is going through yet once again the old, old business of rules for places, rules for images, memory for things, memory for words.

Evidently, therefore, it is incumbent upon us to attempt the by no means easy task of trying to understand the memory section of *Ad Herennium*. What makes the task by no means easy is that the rhetoric teacher is not addressing us; he is not setting out to explain to people who know nothing about it what the artificial memory was. He is addressing his rhetoric students as they congregated around him *circa* 86–82 B.C., and *they* knew what he was talking about; for *them* he needed only to rattle off the 'rules' which they would know how to apply. We are in a different case and are often somewhat baffled by the strangeness of some of the memory rules.

In what follows I attempt to give the content of the memory section of *Ad Herennium*, emulating the brisk style of the author, but with pauses for reflection about what he is telling us.

The artificial memory is established from places and images (*Constat igitur artificiosa memoria ex locis et imaginibus*), the stock definition to be forever repeated down the ages. A *locus* is a place easily grasped by the memory, such as a house, an intercolumnar space, a corner, an arch, or the like. Images are forms, marks or simulacra (*formae, notae, simulacra*) of what we wish to remember. For instance if we wish to recall the genus of a horse, of a lion, of an eagle, we must place their images on definite *loci*.

The art of memory is like an inner writing. Those who know the letters of the alphabet can write down what is dictated to them and read out what they have written. Likewise those who have learned mnemonics can set in places what they have heard and deliver it

from memory. 'For the places are very much like wax tablets or papyrus, the images like the letters, the arrangement and disposition of the images like the script, and the delivery is like the reading.'

If we wish to remember much material we must equip ourselves with a large number of places. It is essential that the places should form a series and must be remembered in their order, so that we can start from any *locus* in the series and move either backwards or forwards from it. If we should see a number of our acquaintances standing in a row, it would not make any difference to us whether we should tell their names beginning with the person standing at the head of the line or at the foot or in the middle. So with memory *loci*. 'If these have been arranged in order, the result will be that, reminded by the images, we can repeat orally what we have committed to the *loci*, proceeding in either direction from any *locus* we please.'

The formation of the *loci* is of the greatest importance, for the same set of *loci* can be used again and again for remembering different material. The images which we have placed on them for remembering one set of things fade and are effaced when we make no further use of them. But the *loci* remain in the memory and can be used again by placing another set of images for another set of material. The *loci* are like the wax tablets which remain when what is written on them has been effaced and are ready to be written on again.

In order to make sure that we do not err in remembering the order of the *loci* it is useful to give each fifth *locus* some distinguishing mark. We may for example mark the fifth *locus* with a golden hand, and place in the tenth the image of some acquaintance whose name is Decimus. We can then go on to station other marks on each succeeding fifth *locus*.

It is better to form one's memory *loci* in a deserted and solitary place for crowds of passing people tend to weaken the impressions. Therefore the student intent on acquiring a sharp and well-defined set of *loci* will choose an unfrequented building in which to memorise places.

Memory *loci* should not be too much like one another, for instance too many intercolumnar spaces are not good, for their resemblance to one another will be confusing. They should be of moderate size, not too large for this renders the images placed

on them vague, and not too small for then an arrangement of images will be overcrowded. They must not be too brightly lighted for then the images placed on them will glitter and dazzle; nor must they be too dark or the shadows will obscure the images. The intervals between the *loci* should be of moderate extent, perhaps about thirty feet, 'for like the external eye, so the inner eye of thought is less powerful when you have moved the object of sight too near or too far away'.

A person with a relatively large experience can easily equip himself with as many suitable *loci* as he pleases, and even a person who thinks that he does not possess enough sufficiently good *loci* can remedy this. 'For thought can embrace any region whatsoever and in it and at will construct the setting of some locus.' (That is to say, mnemonics can use what were afterwards called 'fictitious places', in contrast to the 'real places' of the ordinary method.)

Pausing for reflection at the end of rules for places I would say that what strikes me most about them is the astonishing visual precision which they imply. In a classically trained memory the space between the *loci* can be measured, the lighting of the *loci* is allowed for. And the rules summon up a vision of a forgotten social habit. Who is that man moving slowly in the lonely building, stopping at intervals with an intent face? He is a rhetoric student forming a set of memory *loci*.

'Enough has been said of places', continues the author of *Ad Herennium*, 'now we turn to the theory of images.' Rules for images now begin, the first of which is that there are two kinds of images, one for 'things' (*res*), the other for 'words' (*verba*). That is to say 'memory for things' makes images to remind of an argument, a notion, or a 'thing'; but 'memory for words' has to find images to remind of every single word.

I interrrupt the concise author here for a moment in order to remind the reader that for the rhetoric student 'things' and 'words' would have an absolutely precise meaning in relation to the five parts of the rhetoric. Those five parts are defined by Cicero as follows:

> Invention is the excogitation of true things (*res*), or things similar to truth to render one's cause plausible; disposition is the arrangement in order of the things thus discovered; elocution is the accomodation of suitable words to the invented (things); memory

> is the firm perception in the soul of things and words; pronunciation is the moderating of the voice and body to suit the dignity of the things and words.[7]

'Things' are thus the subject matter of the speech; 'words' are the language in which that subject matter is clothed. Are you aiming at an artificial memory to remind you only of the order of the notions, arguments, 'things' of your speech? Or do you aim at memorising every single word in it in the right order? The first kind of artificial memory is *memoria rerum*; the second kind is *memoria verborum*. The ideal, as defined by Cicero in the above passage, would be to have a 'firm perception in the soul' of both things and words. But 'memory for words' is much harder than 'memory for things'; the weaker brethren among the author of *Ad Herennium*'s rhetoric students evidently rather jibbed at memorising an image for every single word, and even Cicero himself, as we shall see later, allowed that 'memory for things' was enough.

To return to the rules for images. We have already been given the rules for places, what kind of places to choose for memorising. What are the rules about what kind of images to choose for memorising on the places? We now come to one of the most curious and surprising passages in the treatise, namely the psychological reasons which the author gives for the choice of mnemonic images. Why is it, he asks, that some images are so strong and sharp and so suitable for awakening memory, whilst others are so weak and feeble that they hardly stimulate memory at all? We must enquire into this so as to know which images to avoid and which to seek.

> Now nature herself teaches us what we should do. When we see in every day life things that are petty, ordinary, and banal, we generally fail to remember them, because the mind is not being stirred by anything novel or marvellous. But if we see or hear something exceptionally base, dishonourable, unusual, great, unbelievable, or ridiculous, that we are likely to remember for a long time. Accordingly, things immediate to our eye or ear we commonly forget; incidents of our childhood we often remember best. Nor could this be so for any other reason than that ordinary things easily slip from the memory while the striking and the novel stay longer in the mind. A sunrise, the sun's course, a sunset are

[7] *De inventione*, I, vii, 9 (translation based on that by H. M. Hubbell in the Loeb edition, but made more literal in reproducing the technical terms *res* and *verba*).

marvellous to no one because they occur daily. But solar eclipses are a source of wonder because they occur seldom, and indeed are more marvellous than lunar eclipses, because these are more frequent. Thus nature shows that she is not aroused by the common ordinary event, but is moved by a new or striking occurrence. Let art, then, imitate nature, find what she desires, and follow as she directs. For in invention nature is never last, education never first; rather the beginnings of things arise from natural talent, and the ends are reached by discipline.

We ought, then, to set up images of a kind that can adhere longest in memory. And we shall do so if we establish similitudes as striking as possible; if we set up images that are not many or vague but active (*imagines agentes*); if we assign to them exceptional beauty or singular ugliness; if we ornament some of them, as with crowns or purple cloaks, so that the similitude may be more distinct to us; or if we somehow disfigure them, as by introducing one stained with blood or soiled with mud or smeared with red paint, so that its form is more striking, or by assigning certain comic effects to our images, for that, too, will ensure our remembering them more readily. The things we easily remember when they are real we likewise remember without difficulty when they are figments. But this will be essential—again and again to run over rapidly in the mind all the original places in order to refresh the images.[8]

Our author has clearly got hold of the idea of helping memory by arousing emotional affects through these striking and unusual images, beautiful or hideous, comic or obscene. And it is clear that he is thinking of human images, of human figures wearing crowns or purple cloaks, bloodstained or smeared with paint, of human figures dramatically engaged in some activity—doing something. We feel that we have moved into an extraordinary world as we run over his places with the rhetoric student, imagining on the places such very peculiar images. Quintilian's anchor and weapon as memory images, though much less exciting, are easier to understand than the weirdly populated memory to which the author of *Ad Herennium* introduces us.

It is one of the many difficulties which confront the student of the history of the art of memory that an *Ars memorativa* treatise, though it will always give the rules, rarely gives any concrete

[8] *Ad Herennium*, III, xxii.

application of the rules, that is to say it rarely sets out a system of mnemonic images on their places. This tradition was started by the author of *Ad Herennium* himself who says that the duty of an instructor in mnemonics is to teach the method of making images, give a few examples, and then encourage the student to form his own. When teaching 'introductions', he says, one does not draft a thousand set introductions and give them to the student to learn by heart; one teaches him the method and then leaves him to his own inventiveness. So also one should do in teaching mnemonic images.[9] This is an admirable tutorial principle though one regrets that it prevents the author from showing us a whole set or gallery of striking and unusual *imagines agentes*. We must be content with the three specimens which he describes.

The first is an example of a 'memory for things' image. We have to suppose that we are the counsel for the defence in a law suit. 'The prosecutor has said that the defendant killed a man by poison, has charged that the motive of the crime was to gain an inheritance, and declared that there are many witnesses and accessories to this act.' We are forming a memory system about the whole case and we shall wish to put in our first memory *locus* an image to remind us of the accusation against our client. This is the image.

> We shall imagine the man in question as lying ill in bed, if we know him personally. If we do not know him, we shall yet take some one to be our invalid, but not a man of the lowest class, so that he may come to mind at once. And we shall place the defendant at the bedside, holding in his right hand a cup, in his left, tablets, and on the fourth finger, a ram's testicles. In this way we can have in memory the man who was poisoned, the witnesses, and the inheritance.[10]

The cup would remind of the poisoning, the tablets, of the will or the inheritance, and the testicles of the ram through verbal similarity with *testes*—of the witnesses. The sick man is to be like the man himself, or like someone else whom we know (though not one of the anonymous lower classes). In the following *loci* we

[9] *Ibid.*, III, xxiii, 39.

[10] *Ibid.*, III, xx, 33. On the translation of *medico testiculos arietinos tenentem* as 'on the fourth finger a ram's testicles', see the translator's note, Loeb edition, p. 214. The *digitus medicinalis* was the fourth finger of the left hand. Mediaeval readers, unable to understand *medico*, introduced a doctor into the scene; see below, p. 65

would put other counts in the charge, or the details of the rest of the case, and if we have properly imprinted the places and images we shall easily be able to remember any point that we wish to recall.

This, then, is an example of a classical memory image—consisting of human figures, active, dramatic, striking, with accessories to remind of the whole 'thing' which is being recorded in memory. Though everything appears to be explained, I yet find this image baffling. Like much else in *Ad Herennium* on memory it seems to belong to a world which is either impossible for us to understand or which is not being really fully explained to us.

The writer is not concerned in this example with remembering the speeches in the case but with recording the details or 'things' of the case. It is as though, as a lawyer, he is forming a filing cabinet in memory of his cases. The image given is put as a label on the first place of the memory file on which the records about the man accused of poisoning are kept. He wants to look up something about that case; he turns to the composite image in which it is recorded, and behind that image on the following places he finds the rest of the case. If this is at all a correct interpretation, the artificial memory would now be being used, not only to memorise speeches, but to hold in memory a mass of material which can be looked up at will.

The words of Cicero in the *De oratore* when he is speaking of the advantages of the artificial memory may tend to confirm this interpretation. He has just been saying that the *loci* preserve the order of the facts, and the images designate the facts themselves, and we employ the places and images like a wax writing tablet and the letters written on it. 'But what business is it of mine', he continues, 'to specify the value to a speaker and the usefulness and effectiveness of memory? of retaining the information given you when you were briefed and the opinions you yourself have formed? of having all your ideas firmly planted in your mind and all your resources of vocabulary neatly arranged, of giving such close attention to the instructions of your client and to the speech of the opponent you have to answer that they may seem not just to pour what they say into your ears but to imprint it on your mind? Consequently only people with a powerful memory know what they are going to say and for how long they are going to speak and in what style, what points they have already answered and

what still remains; and they can also remember from other cases many arguments which they have previously advanced and many which they have heard from other people.'[11]

We are in the presence of amazing powers of memory. And, according to Cicero, these natural powers were indeed aided by training of the type described in *Ad Herennium.*

The specimen image just described was a 'memory for things' image; it was designed to recall the 'things' or facts of the case and the following *loci* of the system would presumably have held other 'memory for things' images, recording other facts about the case or arguments used in speeches by the defence or the prosecution. The other two specimen images given in *Ad Herennium* are 'memory for words' images.

The student wishing to acquire 'memory for words' begins in the same way as the 'memory for things' student; that is to say he memorises places which are to hold his images. But he is confronted with a harder task for far more places will be needed to memorise all the words of a speech than would be needed for its notions. The specimen images for 'memory for words' are of the same type as the 'memory for things' image, that is to say they represent human figures of a striking and unusual character and in striking dramatic situations—*imagines agentes.*

We are setting out to memorise this line of verse:

Iam domum itionem reges Atridae parant[12]
(And now their homecoming the kings, the sons of Atreus are making ready)

The line is found only in the quotation of it in *Ad Herennium* and was either invented by the author to exhibit his mnemonic technique or was taken for some lost work. It is to be memorised through two very extraordinary images.

One is 'Domitius raising his hands to heaven while he is lashed by the Marcii Reges'. The translator and editor of the text in the Loeb edition (H. Caplan) explains in a note that 'Rex was the name of one of the most distinguished families of the Marcian gens; the Domitian, of plebeian origin, was likewise a celebrated gens'. The image may reflect some street scene in which Domitius

[11] *De oratore,* II, lxxxvii, 355.

[12] *Ad Herennium,* III, xxi, 34. See translator's notes on pp. 216–17 in the Loeb edition.

of the plebeian gens (perhaps bloodstained to make him more memorable) is being beaten up by some members of the distinguished Rex family. It was perhaps a scene which the author himself had witnessed. Or perhaps it was a scene in some play. It was a striking scene in every sense of the word and therefore suitable as a mnemonic image. It was put on a place for remembering this line. The vivid image immediately brought to mind 'Domitius-Reges' and this reminded *by sound resemblance* of 'domum itionem reges'. It thus exhibits the principles of a 'memory for words' image which brings to mind the words which the memory is seeking through their sound resemblance to the notion suggested by the image.

We all know how, when groping in memory for a word or a name, some quite absurd and random association, something which has 'stuck' in the memory, will help us to dredge it up. The classical art is systematising that process.

The other image for memorising the rest of the line is 'Aesopus and Cimber being dressed for the rôles of Agamemnon and Menelaus in *Iphigenaia*'. Aesopus was a well-known tragic actor, a friend of Cicero; Cimber, evidently also an actor, is only mentioned in this text.[13] The play in which they are preparing to act also does not exist. In the image these actors are being dressed to play the parts of the sons of Atreus (Agamemnon and Menelaus). It is an exciting off-stage glimpse of two famous actors being made up (to smear an image with red paint makes it memorable according to the rules) and dressed for their parts. Such a scene has all the elements of a good mnemonic image; we therefore use it to remember 'Atridae parant', the sons of Atreus are making ready. This image immediately gave the word 'Atridae' (though not by sound resemblance) and also suggested 'making ready' for the home-coming through the actors making ready for the stage.

This method for memorising the verse will not work by itself, says the author of *Ad Herennium*. We must go over the verse three or four times, that is learn it by heart in the usual way, and then represent the words by means of images. 'In this way art will supplement nature. For neither by itself will be strong enough, though we must note that theory and technique are much the

[13] Loeb edition, translator's note, p. 217.

more reliable.'[14] The fact that we have to learn the poem by heart as well, makes 'memory for words' a little less baffling.

Reflecting on the 'memory for words' images, we note that our author seems now concerned not with the rhetoric students' proper business of remembering a speech, but with memorising verse in poems or plays. To remember a whole poem or a whole play in this way one has to envisage 'places' extending one might almost say for miles within the memory, 'places' past which one moves in reciting, drawing from them the mnemonic cues. And perhaps that word 'cue' does give a clue to how the method might be workable. Did one really learn the poem by heart but set up some places with 'cue' images on them at strategic intervals?

Our author mentions that another type of 'memory for words' symbol has been elaborated by the Greeks. 'I know that most of the Greeks who have written on the memory have taken the course of listing images that correspond to a great many words, so that persons who wished to learn these images by heart would have them ready without expending effort in a search for them.'[15] It is possible that these Greek images for words are shorthand symbols or *notae* the use of which was coming into fashion in the Latin world at this time.[16] As used in mnemonics, this would presumably mean that, by a kind of inner stenography, the shorthand symbols were written down inwardly and memorised on the memory places. Fortunately our author disapproves of this method, since even a thousand of such ready-made symbols would not begin to cover all the words used. Indeed, he is rather lenient about 'memory for words' of any kind; it must be tackled just because it is more difficult than 'memory for things'. It is to be used as an exercise to strengthen 'that other kind of memory, the memory for things, which is of practical use. Thus we may without effort pass from this difficult training to ease in that other memory.'

The memory section closes with an exhortation to hard work.

[14] *Ad Herennium, loc. cit.*

[15] *Ibid.*, III, xxiii, 38.

[16] Cicero is said by Plutarch to have introduced shorthand to Rome; the name of his freedman, Tiro, became associated with the so-called 'Tironian notes'. See *The Oxford Classical Dictionary*, article Tachygraphy; H. J. M. Milne, *Greek Shorthand Manuals*, London, 1934, introduction. There may be some connection between the introduction of Greek mnemonics into the Latin world, reflected in *Ad Herennium*, and the importation of stenography at about the same time.

'In every discipline artistic theory is of little avail without unremitting exercise, but especially in mnemonics, theory is almost valueless unless made good by industry, devotion, toil, and care. You can make sure that you have as many places as possible and that these conform as much as possible to the rules; in placing the images you should exercise every day.'[17]

We have been trying to understand inner gymnastics, invisible labours of concentration which are to us most strange, though the rules and examples of *Ad Herennium* give mysterious glimpses into the powers and organisation of antique memories. We think of memory feats which are recorded of the ancients, of how the elder Seneca, a teacher of rhetoric, could repeat two thousand names in the order in which they had been given; and when a class of two hundred students or more spoke each in turn a line of poetry, he could recite all the lines in reverse order, beginning from the last one said and going right back to the first.[18] Or we remember that Augustine, also trained as a teacher of rhetoric, tells of a friend called Simplicius who could recite Virgil backwards.[19] We have learned from our text-book that if we have properly and firmly fixed our memory places we can move along them in either direction, backwards or forwards. The artificial memory may explain the awe inspiring ability to recite backwards of the elder Seneca and of Augustine's friend. Pointless though such feats may seem to us, they illustrate the respect accorded in antiquity to the man with the trained memory.

Very singular is the art of this invisible art of memory. It reflects ancient architecture but in an unclassical spirit, concentrating its choice on irregular places and avoiding symmetrical orders. It is full of human imagery of a very personal kind; we mark the tenth place with a face like that of our friend Decimus; we see a number of our acquaintances standing in a row; we visualise a sick man like the man himself, or if we did not know him, like someone we do know. These human figures are active and dramatic, strikingly beautiful or grotesque. They remind one more of figures in some Gothic cathedral than of classical art proper. They appear to be completely amoral, their function being solely to give an emotional impetus to memory by their personal

[17] *Ad Herennium*, III, xxiv, 40.

[18] Marcus Annaeus Seneca, *Controversiarum Libri*, Lib. I, Praef. 2.

[19] Augustine, *De anima*, lib. IV. cap. vii.

idiosyncracy or their strangeness. This impression may, however, be due to the fact that we have not been given a specimen image of how to remember, for example, the 'things' justice or temperance and their parts, which are treated by the author of *Ad Herennium* when discussing the invention of the subject matter of a speech.[20] The elusiveness of the art of memory is very trying to its historian.

Though the mediaeval tradition which assigned the authorship of *Ad Herennium* to 'Tullius' was wrong in fact, it was not wrong in its inference that the art of memory was practised and recommended by 'Tullius'. In his *De oratore* (which he finished in 55 B.C.) Cicero treats of the five parts of rhetoric in his elegant, discursive, gentlemanly manner—a manner very different from that of our dry rhetoric teacher—and in this work he refers to a mnemonic which is obviously based on the same techniques as those described in *Ad Herennium.*

The first mention of the mnemonic comes in Crassus's speech in the first book in which he says that he does not altogether dislike as an aid to memory 'that method of places and images which is taught in an art.'[21] Later, Anthony tells of how Themistocles refused to learn the art of memory 'which was then being introduced for the first time' saying that he preferred the science of forgetting to that of remembering. Anthony warns that this frivolous remark must not 'cause us to neglect the training of the memory'.[22] The reader is thus prepared for Anthony's later brilliant rendering of the story of the fatal banquet which occasioned the invention of the art by Simonides—the story with which I began this chapter. In the course of the discussion of the art of memory which follows Cicero gives a potted version of the rules.

> Consequently (in order that I may not be prolix and tedious on a subject that is well known and familiar) one must employ a large number of places which must be well lighted, clearly set out in order, at moderate intervals apart (*locis est utendum multis, illustribus, explicatis, modicis intervallis*); and images which are active, sharply defined, unusual, and which have the power of speedily

[20] *Ad Herennium*, III, iii.
[21] *De oratore*, I, xxxiv, 157.
[22] *Ibid.*, II, lxxiv, 299–300.

> encountering and penetrating the psyche (*imaginibus autem agentibus, acribus, insignitis, quae occurrere celeriterque percutere animum possint*).[23]

He has boiled down rules for places and rules for images to a minimum in order not to bore the reader by repeating the textbook instructions which are so well known and familiar.

Next he makes an obscurely worded reference to some extremely sophisticated types of memory for words.

> . . . the ability to use these (images) will be supplied by practise which engenders habit, and (by images) of similar words changed and unchanged in case or drawn (from denoting) the part to denoting the genus, and by using the image of one word to remind of a whole sentence, as a consummate painter distinguishing the position of objects by modifying their shapes.[24]

He next speaks of the type of memory for words (described as 'Greek' by the author of *Ad Herennium*) which attempts to memorise an image for every word, but decides (like *Ad Herennium*) that memory for things is the branch of the art most useful to the orator.

> Memory for words, which for us is essential, is given distinctness by a greater variety of images (in contrast to using the image of one word for a whole sentence of which he has just been speaking); for there are many words which serve as joints connecting the limbs of a sentence, and these cannot be formed by any use of similitudes—of these we have to model images for constant employment; but a memory for things is the special property of the orator—this we can imprint on our minds by a skilful arrangement of the several masks (*singulis personis*) that represent them, so that we may grasp ideas by means of images and their order by means of places.[25]

The use of the word *persona* of the memory-for-things image is interesting and curious. Does it imply that the memory image heightens its striking effect by exaggerating its tragic or comic aspect, as the actor does by wearing a mask? Does it suggest that the stage was a likely source of striking memory images? Or does the word mean in this context that the memory image is like a known individual person, as the author of *Ad Herennium* advises, but wears that personal mask only to jog the memory?

[23] *Ibid.*, II, lxxxvii, 358.
[24] *Ibid., loc. cit.*
[25] *Ibid.*, II, lxxxviii, 359.

Cicero has provided a highly condensed little *Ars memorativa* treatise bringing in all the points in their usual order. Beginning with the statement, introduced by the Simonides story that the art consists in places and images and is like an inner writing on wax, he goes on to discuss natural and artificial memory, with the usual conclusion that nature can be improved by art. Then follow rules for places and rules for images; then the discussion of memory for things and memory for words. Though he agrees that memory for things is alone essential for the orator he has evidently put himself through a memory for words drill in which images for words move (?), change their cases (?), draw a whole sentence into one word image, in some extraordinary manner which he visualises within, as though it were the art of some consummate painter.

> Nor is it true as unskilled people assert (*quod ab inertibus dicitur*) that memory is crushed beneath a weight of images and even what might have been retained by nature unassisted is obscured: for I have myself met eminent people with almost divine powers of memory (*summos homines et divina prope memoria*), Charmadas at Athens and Metrodorus of Scepsis in Asia, who is said to be still living, each of whom used to say that he wrote down what he wanted to remember in certain places in his possession by means of images, just as if he were inscribing letters on wax. It follows that this practice cannot be used to draw out the memory if no memory has been given by nature, but it can undoubtedly summon it to come forth if it is in hiding.[26]

From these concluding words of Cicero's on the art of memory we learn that the objection to the classical art which was always raised throughout its subsequent history—and is still raised by everyone who is told of it—was voiced in antiquity. There were inert or lazy or unskilled people in Cicero's time who took the common sense view, to which, personally, I heartily subscribe—as explained earlier I am a historian only of the art, not a practitioner of it—that all these places and images would only bury under a heap of rubble whatever little one does remember naturally. Cicero is a believer and a defender. He evidently had by nature a fantastically acute visual memory.

And what are we to think of those eminent men, Charmades and Metrodorus, whom he had met whose powers of memory were

[26] *Ibid.*, II, lxxxviii, 360.

'almost divine'? As well as being an orator with a phenomenal trained memory, Cicero was in philosophy a Platonist, and for the Platonist memory has very special connotations. What does an orator and a Platonist mean when he speaks of memories which are 'almost divine'?

The name of the mysterious Metrodorus of Scepsis will reverberate on many later pages of this book.

Cicero's earliest work on rhetoric was the *De inventione* which he wrote about thirty years earlier than the *De oratore*, at about the same time that the unknown author of *Ad Herennium* was compiling his text book. We can learn nothing new from the *De inventione* about Cicero on the artificial memory for the book is concerned with only the first part of the rhetoric, namely *inventio*, the inventing or composing of the subject matter of a speech, the collection of the 'things' with which it will deal. Nevertheless the *De inventione* was to play a very important part in the later history of the art of memory because it was through Cicero's definitions of the virtues in this work that the artificial memory became in the Middle Ages a part of the cardinal virtue of Prudence.

Towards the end of the *De inventione*, Cicero defines virtue as 'a habit of mind in harmony with reason and the order of nature' a stoic definition of virtue. He then states that virtue has four parts, namely Prudence, Justice, Fortitude, and Temperance. Each of these four main virtues he subdivides into parts of their own. The following is his definition of Prudence and its parts:

> Prudence is the knowledge of what is good, what is bad and what is neither good nor bad. Its parts are memory, intelligence, foresight (*memoria, intelligentia, providentia*). Memory is the faculty by which the mind recalls what has happened. Intelligence is the faculty by which it ascertains what is. Foresight is the faculty by which it is seen that something is going to occur before it occurs.[27]

Cicero's definitions of the virtues and their parts in the *De inventione* were a very important source for the formulation of what afterwards became known as the four cardinal virtues. The definition by 'Tullius' of the three parts of Prudence is quoted by Albertus Magnus and Thomas Aquinas when discussing the virtues in their *Summae*. And the fact that 'Tullius' makes memory a part of Prudence was the main factor in their recommendation

[27] *De inventione*, II, liii, 160 (trans. H. M. Hubbell in the Loeb edition).

of the artificial memory. The argument was beautifully symmetrical, and related to the fact that the Middle Ages grouped the *De inventione* with the *Ad Herennium* as both by Tullius; the two works were known respectively as the First and Second Rhetorics of Tullius. Tullius in his First Rhetoric states that memory is a part of Prudence; Tullius in his Second Rhetoric says that there is an artificial memory by which natural memory can be improved. Therefore the practice of the artificial memory is a part of the virtue of Prudence. It is under memory as a part of Prudence that Albertus and Thomas quote and discuss the rules of the artificial memory.

The process by which the scholastics switched artificial memory from rhetoric to ethics will be discussed more fully in a later chapter.[28] I briefly refer to it here in advance because one wonders whether the prudential or ethical use of artificial memory was entirely invented by the Middle Ages, or whether it too may have had an antique root. The stoics, as we know, attached great importance to the moral control of the fantasy as an important part of ethics. As I mentioned earlier, we have no means of knowing how the 'things' Prudence, Justice, Fortitude, Temperance, and their parts would have been represented in the artificial memory. Would Prudence, for example, have taken on a strikingly beautiful mnemonic form, a *persona* like someone that we know, holding or having grouped round her secondary images to remind of her parts—on the analogy of how the parts of the case against the man accused of poisoning formed a composite mnemonic image?

Quintilian, an eminently sensible man and a very good educator, was the dominating teacher of rhetoric in Rome in the first century A.D. He wrote his *Institutio oratoria* more than a century after Cicero's *De oratore.* In spite of the great weight attaching to Cicero's recommendation of the artificial memory, it would seem that its value is not taken for granted in leading rhetorical circles in Rome. Quintilian says that some people now divide rhetoric into only three parts, on the ground that *memoria* and *actio* are given to us 'by nature not by art'.[29] His own attitude to the artificial memory is ambiguous; nevertheless he gives it a good deal of prominence.

[28] See Chapter III, below.

[29] *Institutio oratoria,* III, iii, 4.

Like Cicero, he introduces his account of it with the story of its invention by Simonides of which he gives a version which is in the main the same as that told by Cicero though with some variant details. He adds that there were a good many versions of the story in Greek authorities and that its wide circulation in his own day is due to Cicero.

> This achievement of Simonides appears to have given rise to the observation that it is an assistance to the memory if places are stamped upon the mind, which anyone can believe from experiment. For when we return to a place after a considerable absence, we not merely recognise the place itself, but remember things that we did there, and recall the persons whom we met and even the unuttered thoughts which passed through our minds when we were there before. Thus, as in most cases, art originates from experiment.
>
> Places are chosen, and marked with the utmost possible variety, as a spacious house divided into a number of rooms. Everything of note therein is diligently imprinted on the mind, in order that thought may be able to run through all the parts without let or hindrance. The first task is to secure that there shall be no difficulty in running through these, for that memory must be most firmly fixed which helps another memory. Then what has been written down, or thought of, is noted by a sign to remind of it. This sign may be drawn from a whole 'thing', as navigation or warfare, or from some 'word'; for what is slipping from memory is recovered by the admonition of a single word. However, let us suppose that the sign is drawn from navigation, as, for instance, an anchor; or from warfare, as, for example, a weapon. These signs are then arranged as follows. The first notion is placed, as it were, in the forecourt; the second, let us say, in the atrium; the remainder are placed in order all round the impluvium, and committed not only to bedrooms and parlours, but even to statues and the like. This done, when it is required to revive the memory, one begins from the first place to run through all, demanding what has been entrusted to them, of which one will be reminded by the image. Thus, however numerous are the particulars which it is required to remember, all are linked one to another as in a chorus nor can what follows wander from what has gone before to which it is joined, only the preliminary labour of learning being required.
>
> What I have spoken of as being done in a house can also be done in public buildings, or on a long journey, or in going through a city, or with pictures. Or we can imagine such places for ourselves.
>
> We require therefore places, either real or imaginary, and images

> or simulacra which must be invented. Images are as words by which we note the things we have to learn, so that as Cicero says, 'we use places as wax and images as letters'. It will be as well to quote his actual words:—'One must employ a large number of places which must be well-lighted, clearly set out in order, at moderate intervals apart, and images which are active, which are sharply defined, unusual, and which have the power of speedily encountering and penetrating the mind. Which makes me wonder all the more how Metrodorus can have found three hundred and sixty places in the twelve signs through which the sun moves. It was doubtless the vanity and boastfulness of a man glorying in a memory stronger by art than by nature.[30]

The perplexed student of the art of memory is grateful to Quintilian. Had it not been for his clear directions about how we are to go through the rooms of a house, or a public building, or along the streets of a city memorising our places, we might never have understood what 'rules for places' were about. He gives an absolutely rational reason as to why the places may help memory, because we know from experience that a place does call up associations in memory. And the system which he describes, using signs like an anchor or a weapon for the 'things', or calling up one word only by such a sign through which the whole sentence would come into mind, seems quite possible and is within the range of our understanding. It is in fact what we should call mnemotechnics. There was then, in antiquity, a practice of which that word can be used in the sense in which we use it.

The peculiar *imagines agentes* are not mentioned by Quintilian though he certainly knew of them since he quotes Cicero's abbreviation of the rules which were themselves based on *Ad Herennium*, or on the kind of memory practice with its strange images which *Ad Herennium* describes. But after quoting Cicero's version of the rules, Quintilian dares to contradict that revered rhetorician very abruptly in the totally different estimate which he gives of Metrodorus of Scepsis. For Cicero, the memory of Metrodorus was 'almost divine.' For Quintilian this man was a boaster and something of a charlatan. And we learn from Quintilian an interesting fact—to be discussed further later—that the divine, or pretentious (according to one's point of view) memory

[30] *Ibid.*, XI, ii, 17–22.

system of Metrodorus of Scepsis was based on the twelve signs of the zodiac.

Quintilian's last word on the art of memory is as follows:

> I am far from denying that those devices may be useful for certain purposes, as for example if we have to reproduce many names of things in the order in which we heard them. Those who use such aids place the things themselves in their memory places; they put, for instance, a table in the forecourt, a platform in the atrium, and so on for the rest, and then when they run through the places again they find these objects where they put them. Such a practice may perhaps have been of use to those who, after an auction, have succeeded in stating what object they had sold to each buyer, their statements being checked by the books of the money-takers; a feat which it is alleged was performed by Hortensius. It will however be of less service in retaining the parts of a speech. For notions do not call up images as material things do, and something else has to be invented for them, although even here a particular place may serve to remind us, as, for example, of some conversation which we may have held there. But how can such an art grasp a whole series of connected words? I pass by the fact that there are certain words which it is impossible to represent by any likeness, for example conjunctions. We may, it is true, like short-hand writers, have definite images for everything, and may use an infinite number of places to recall all the words contained in the five books of the second pleading against Verres, and we may even remember them all as if they were deposits placed in safe keeping. But will not the flow of our speech inevitably be impeded by the double task imposed on our memory? For how can our words be expected to flow in connected speech, if we have to look back at separate forms for each individual word? Therefore Charmadas and Metrodorus of Scepsis, to whom I have just referred, of whom Cicero says that they used this method, may keep their systems for themselves; my precepts will be of a simpler kind.[31]

The method of the auctioneer who places images of the actual objects he has sold on memory places is precisely the method used by the professor whose mode of amusing his students we described earlier. This, Quintilian says, will work and may be useful for certain purposes. But the extension of the method to remembering a speech through images for 'things' he thinks is more trouble than it is worth since images for 'things' must all be invented. Even

[31] *Ibid.*, XI, ii. 23–6.

in the simple form of the anchor and weapon type of image he seems not to advise it. He says nothing of the fantastic *imagines agentes*, either for things or words. Images for words he interprets as memorising shorthand *notae* on the memory places; this was the Greek method which the author of *Ad Herennium* discarded but which Quintilian thinks that Cicero admired in Charmadas and Metrodorus of Scepsis.

The 'simpler precepts' of memory training which Quintilian would substitute for the art of memory consist mainly in the advocacy of hard and intensive learning by heart, in the ordinary way, of speeches and so on, but he allows that one can sometimes help oneself by simple adaptations of some of the mnemonic usages. One may use privately invented marks to remind one of difficult passages; these signs may even be adapted to the nature of the thoughts. 'Although drawn from the mnemonic system' the use of such signs is not without value. But there is above all one thing which will be of assistance to the student.

> namely to learn a passage by heart from the same tablets on which he has committed it to writing. For he will have certain tracks to guide him in pursuit of memory, and the mind's eye will be fixed not merely on the pages on which the words were written, but on individual lines, and at times he will speak as though he were reading aloud . . . This device bears some resemblance to the mnemonic system which I mentioned above, but, if my experience is worth anything, is at once more expeditious and more effective.

I understand this to mean that this method adopts from the mnemonic system the habit of visualising writing on 'places', but instead of attempting to visualise shorthand *notae* on some vast place system it visualises ordinary writing as actually placed on the tablet or page.

What it would be interesting to know is whether Quintilian envisages preparing his tablet or page for memorisation by adding to it signs, *notae*, or even *imagines agentes* formed according to the rules, to mark the places which the memory arrives at as it travels along the lines of writing.

There is thus a very marked difference between Quintilian's attitude to the artificial memory and that of the author of *Ad Herennium* and of Cicero. Evidently the *imagines agentes*, fantasti-

[32] *Ibid.*, XI, ii, 32–3.

cally gesticulating from their places and arousing memory by their emotional appeal, seemed to him as cumbrous and useless for practical mnemonic purposes as they do to us. Has Roman society moved on into greater sophistication in which some intense, archaic, almost magical, immediate association of memory with images has been lost? Or is the difference a temperamental one? Would the artificial memory not work for Quintilian because he lacked the acute visual perceptions necessary for visual memorisation? He does not mention, as Cicero does, that Simonides' invention depended on the primacy of the sense of sight.

Of the three sources for the classical art of memory studied in this chapter, it was not on Quintilian's rational and critical account of it that the later Western memory tradition was founded, nor on Cicero's elegant and obscure formulations. It was founded on the precepts laid down by the unknown rhetoric teacher.

Chapter II

THE ART OF MEMORY IN GREECE: MEMORY AND THE SOUL

THE Simonides story, with its gruesome evocation of the faces of the people sitting in their places at the banquet just before their awful end, may suggest that the human images were an integral part of the art of memory which Greece transmitted to Rome. According to Quintilian, there were several versions of the story extant in Greek sources,[1] and one may perhaps conjecture that it formed the normal introduction to the section on artificial memory in a text-book on rhetoric. There were certainly many such in Greek but they have not come down to us, hence our dependence on the three Latin sources for any conjectures we may make concerning Greek artificial memory.

Simonides of Ceos[2] (*circa* 556 to 468 B.C.) belongs to the pre-Socratic age. Pythagoras might still have been alive in his youth. One of the most admired lyric poets of Greece (very little of his poetry has survived) he was called 'the honey-tongued', Latinised

[1] Quintilian says (*Institutio oratoria*, XI, ii, 14–16) that there is disagreement among the Greek sources as to whether the banquet was held 'at Pharsalus, as Simonides himself seems to indicate in a certain passage, and is recorded by Apollodorus, Eratosthenes, Euphorion and Eurypylus of Larissa, or at Crannon, as is stated by Apollas Callimachus, who is followed by Cicero.'

[2] A collection of references to Simonides in ancient literature is brought together in *Lyra Graeca*, edited and translated by J. M. Edmonds, Loeb Classical Library, Vol. II (1924), pp. 246 ff.

as Simonides Melicus, and he particularly excelled in the use of beautiful imagery. Various new departures were credited to this evidently brilliantly gifted and original man. He was said to have been the first to demand payment for poems; the canny side of Simonides comes into the story of his invention of the art of memory which hinges on a contract for an ode. Another novelty is attributed to Simonides by Plutarch who seems to think that he was the first to equate the methods of poetry with those of painting, the theory later succinctly summed up by Horace in his famous phrase *ut pictura poesis*. 'Simonides', says Plutarch, 'called painting silent poetry and poetry painting that speaks; for the actions which painters depict as they are being performed, words describe after they are done.'[3]

It is significant that the comparison of poetry with painting is fathered on Simonides, for this has a common denominator with the invention of the art of memory. According to Cicero, the latter invention rested on Simonides' discovery of the superiority of the sense of sight over the other senses. The theory of the equation of poetry and painting also rests on the supremacy of the visual sense; the poet and the painter both think in visual images which the one expresses in poetry the other in pictures. The elusive relations with other arts which run all through the history of the art of memory are thus already present in the legendary source, in the stories about Simonides who saw poetry, painting and mnemonics in terms of intense visualisation. Looking forward here for one brief moment to our ultimate objective, Giordano Bruno, we shall find that in one of his mnemonic works he treats of the principle of using images in the art of memory under the heads 'Phidias the Sculptor' and 'Zeuxis the Painter', and under those same heads he discusses the theory of *ut pictura poesis*.[4]

Simonides is the cult hero, the founder of our subject, his invention of which is attested not only by Cicero and Quintilian, but also by Pliny, Aelian, Ammianus Marcellinus, Suidas, and others, and also by an inscription. The *Parian Chronicle*, a marble tablet of about 264 B.C. which was found at Paros in the seventeenth century, records legendary dates for discoveries like the invention of the flute, the introduction of corn by Ceres and Triptolemus, the

[3] Plutarch, *Glory of Athens*, 3; cf. R. W. Lee, '*Ut pictura poesis*: The Humanistic Theory of Painting', *Art Bulletin*, XXII (1940), p. 197.

[4] See below, p. 253

publication of Orpheus' poetry; when it comes to historical times the emphasis is on festivals and the prizes awarded at them. The entry which interests us is as follows:

> From the time when the Ceian Simonides son of Leoprepes, the inventor of the system of memory-aids, won the chorus prize at Athens, and the statues were set up to Harmodius and Aristogeiton, 213 years (i.e. 477 B.C.).[5]

It is known from other sources that Simonides won the chorus prize in old age; when this is recorded on the Parian marble the victor is characterised as 'the inventor of the system of memory-aids'.

One must believe, I think, that Simonides really did take some notable step about mnemonics, teaching or publishing rules which, though they probably derived from an earlier oral tradition, had the appearance of a new presentation of the subject. We cannot concern ourselves here with the pre-Simonidean origins of the art of memory; some think that it was Pythagorean; others have hinted at Egyptian influence. One can imagine that some form of the art might have been a very ancient technique used by bards and story-tellers. The inventions supposedly introduced by Simonides may have been symptoms of the emergence of a more highly organised society. Poets are now to have their definite economic place; a mnemonic practised in the ages of oral memory, before writing, becomes codified into rules. In an age of transition to new forms of culture it is normal for some outstanding individual to become labelled as an inventor.

The fragment known as the *Dialexeis*, which is dated to about 400 B.C., contains a tiny section on memory, as follows:

> A great and beautiful invention is memory, always useful both for learning and for life.
> This is the first thing: if you pay attention (direct your mind), the judgment will better perceive the things going through it (the mind).
> Secondly, repeat again what you hear; for by often hearing and saying the same things, what you have learned comes complete into your memory.

[5] Quoted as translated in *Lyra Graeca*, II, p. 249. See F. Jacoby, *Die Fragmente der Griechischen Historiker*, Berlin, 1929, II, p. 1000, and *Fragmente, Kommentar*, Berlin, 1930, II, p. 694.

> Thirdly, what you hear, place on what you know. For example, Χρύσιππος (Chrysippus) is to be remembered; we place it on χρυσὸς (gold) and ἵππος (horse). Another example: we place πυριλάμπης (glow-worm) on πύρ (fire) and λάμπειν (shine). So much for names.
> For things (do) thus: for courage (place it) on Mars and Achilles; for metal-working, on Vulcan; for cowardice, on Epeus.[6]

Memory for things; memory for words (or names)! Here are the technical terms for the two kinds of artificial memory already in use in 400 B.C. Both memories use images; the one to represent things, the other words; this again belongs to the familiar rules. It is true that rules for places are not given; but the practice here described of placing the notion or word to be remembered actually on the image will recur all through the history of the art of memory, and was evidently rooted in antiquity.

The skeleton outline of the rules of the artificial memory is thus already in existence about half a century after the death of Simonides. This suggests that what he 'invented', or codified, may really have been the rules, basically as we find them in *Ad Herennium*, though they would have been refined and amplified in successive texts unknown to us before they reached the Latin teacher four centuries later.

In this earliest *Ars memorativa* treatise, the images for words are formed from primitive etymological dissection of the word. In the examples given of images for things, the 'things' virtue and vice are represented (valour, cowardice), also an art (metallurgy). They are deposited in memory with images of gods and men (Mars, Achilles, Vulcan, Epeus). Here we may perhaps see in an archaically simple form those human figures representing 'things' which eventually developed into the *imagines agentes*.

The *Dialexeis* is thought to reflect sophist teaching, and its memory section may refer to the mnemonics of the sophist Hippias of Elis,[7] who is said, in the pseudo-Platonic dialogues which satirise him and which bear his name, to have possessed a 'science of memory' and to have boasted that he could recite fifty names after hearing them once, also the genealogies of heroes

[6] H. Diels, *Die Fragmente der Vorsokratiker*, Berlin, 1922, II, p. 345. Cf. H. Gomperz, *Sophistik und Rhetorik*, Berlin, 1912, p. 149, where a German translation is given.

[7] See Gomperz, pp. 179 ff.

and men, the foundations of cities, and much other material.[8] It does indeed sound probable that Hippias was a practioner of the artificial memory. One begins to wonder whether the sophist educational system, to which Plato objected so strongly, may have made a lavish use of the new 'invention' for much superficial memorisation of quantities of miscellaneous information. One notes the enthusiasm with which the sophist memory treatise opens: 'A great and most beautiful invention is memory, always useful for learning and for life.' Was the beautiful new invention of artificial memory an important element in the new success technique of the sophists?

Aristotle was certainly familiar with the artificial memory which he refers to four times, not as an expositor of it (though according to Diogenes Laertius he wrote a book on mnemonics which is not extant[9]) but incidentally to illustrate points under discussion. One of these references is in the *Topics* when he is advising that one should commit to memory arguments upon questions which are of most frequent occurrence:

> For just as in a person with a trained memory, a memory of things themselves is immediately caused by the mere mention of their places (τόποι), so these habits too will make a man readier in reasoning, because he has his premisses classified before his mind's eye, each under its number.[10]

There can be no doubt that these *topoi* used by persons with a trained memory must be mnemonic *loci*, and it is indeed probable that the very word 'topics' as used in dialectics arose through the places of mnemonics. Topics are the 'things' or subject matter of dialectic which came to be known as *topoi* through the places in which they were stored.

In the *De insomnis*, Aristotle says that some people have dreams in which they 'seem to be arranging the objects before them in accordance with their mnemonic system'[11]—rather a warning, one

[8] *Greater Hippias*, 285D–286A; *Lesser Hippias*, 368D.

[9] Diogenes Laertius, *Life of Aristotle* (in his *Lives of the Philosophers*, V. 26). The work referred to in the list of Aristotle's works here given, may, however, be the extant *De memoria et reminiscentia*.

[10] *Topica*, 163^{b} 24–30 (translated by W. A. Pickard-Cambridge in *Works of Aristotle*, ed. W. D. Ross, Oxford, 1928, Vol. I).

[11] *De insomnis*, 458^{b} 20–22 (translated by W. S. Hett in the Loeb volume containing the *De anima, Parva naturalia*, etc., 1935).

would think, against doing too much artificial memory, though this is not how he is using the allusion. And in the *De anima* there is a similar phrase: 'it is possible to put things before our eyes just as those do who invent mnemonics and construct images.'[12]

But the most important of the four allusions, and the one which most influenced the later history of the art of memory comes in the *De memoria et reminiscentia*. The great scholastics, Albertus Magnus and Thomas Aquinas, with their proverbially acute minds perceived that the Philosopher in his *De memoria et reminiscentia* refers to an art of memory which is the same as that which Tullius teaches in his Second Rhetoric (the *Ad Herennium*). Aristotle's work thus became for them a kind of memory treatise, to be conflated with the rules of Tullius and which provided philosophical and psychological justifications for those rules.

Aristotle's theory of memory and reminiscence is based on the theory of knowledge which he expounds in his *De anima*. The perceptions brought in by the five senses are first treated or worked upon by the faculty of imagination, and it is the images so formed which become the material of the intellectual faculty. Imagination is the intermediary between perception and thought. Thus while all knowledge is ultimately derived from sense impressions it is not on these in the raw that thought works but after they have been treated by, or absorbed into, the imaginative faculty. It is the image-making part of the soul which makes the work of the higher processes of thought possible. Hence 'the soul never thinks without a mental picture';[13] 'the thinking faculty thinks of its forms in mental pictures';[14] 'no one could ever learn or understand anything, if he had not the faculty of perception; even when he thinks speculatively, he must have some mental picture with which to think.'[15]

For the scholastics, and for the memory tradition which followed them, there was a point of contact between mnemonic theory and the Aristotelian theory of knowledge in the importance assigned by both to the imagination. Aristotle's statement that it is impossible to think without a mental picture is constantly brought in to support the use of images in mnemonics. And Aristotle himself uses the images of mnemonics as an illustration of what he is saying about imagination and thought. Thinking, he says, is something which we can do whenever we choose, 'for it is possible

[12] *De anima* 427[b] 18–22 (Hett's translation). [13] *Ibid.*, 432[a] 17.
[14] *Ibid.*, 431[b] 2. [15] *Ibid.*, 432[a] 9.

to put things before our eyes just as those do who invent mnemonics and construct images.'[16] He is comparing the deliberate selection of mental images about which to think with the deliberate construction in mnemonics of images through which to remember.

The *De memoria et reminiscentia* is an appendix to the *De anima* and it opens with a quotation from that work: 'As has been said before in my treatise *On the Soul* about imagination, it is impossible even to think without a mental picture.'[17] Memory, he continues, belongs to the same part of the soul as the imagination; it is a collection of mental pictures from sense impressions but with a time element added, for the mental images of memory are not from perception of things present but of things past. Since memory belongs in this way with sense impression it is not peculiar to man; some animals can also remember. Nevertheless the intellectual faculty comes into play in memory for in it thought works on the stored images from sense perception.

The mental picture from sense impression he likens to a kind of painted portrait, 'the lasting state of which we describe as memory';[18] and the forming of the mental image he thinks of as a movement, like the movement of making a seal on wax with a signet ring. It depends on the age and temperament of the person whether the impression lasts long in memory or is soon effaced.

> Some men in the presence of considerable stimulus have no memory owing to disease or age, just as if a stimulus or a seal were impressed on flowing water. With them the design makes no impression because they are worn down like old walls in buildings, or because of the hardness of that which is to receive the impression. For this reason the very young and the old have poor memories; they are in a state of flux, the young because of their growth, the old because of their decay. For a similar reason neither the very quick nor the very slow appear to have good memories; the former are moister than they should be, and the latter harder; with the former the picture has no permanence, with the latter it makes no impression.[19]

Aristotle distinguishes between memory and reminiscence, or recollection. Recollection is the recovery of knowledge or sensation

[16] Already quoted above.

[17] *De memoria et reminiscentia*, 449^{b} 31 (translated, as one of the *Parva Naturalia*, by W. S. Hett in the Loeb volume cited).

[18] *Ibid.*, 450^{a} 30.

[19] *Ibid.*, 450^{b} 1–10.

which one had before. It is a deliberate effort to find one's way among the contents of memory, hunting among its contents for what one is trying to recollect. In this effort, Aristotle emphasises two principles, which are connected with one another. These are the principles of what we call association, though he does not use this word, and of order. Beginning from 'something similar, or contrary, or closely connected'[20] with what we are seeking we shall come upon it. This passage has been described as the first formulation of the laws of association through similarity, dissimilarity, contiguity.[21] We should also seek to recover an order of events or impressions which will lead us to the object of our search, for the movements of recollection follow the same order as the original events; and the things that are easiest to remember are those which have an order, like mathematical propositions. But we need a starting-point from which to initiate the effort of recollection.

> It often happens that a man cannot recall at the moment, but can search for what he wants and find it. This occurs when a man initiates many impulses, until at last he initiates that which the object of his search will follow. For remembering really depends upon the potential existence of the stimulating cause . . . But he must seize hold of the starting-point. For this reason some use places (τόπων) for the purposes of recollecting. The reason for this is that men pass rapidly from one step to the next; for instance from milk to white, from white to air, from air to damp; after which one recollects autumn, supposing that one is trying to recollect that season.[22]

What is certain here is that Aristotle is bringing in the places of artificial memory to illustrate his remarks on association and order in the process of recollection. But apart from that the meaning of the passage is very difficult to follow, as editors and annotators admit.[23] It is possible that the steps by which one passes rapidly from milk to autumn—supposing one is trying to recollect that season—may depend on cosmic association of the elements with

[20] *Ibid.*, 451[b] 18–20.

[21] See W. D. Ross, *Aristotle*, London, 1949, p. 144; and Ross's note on this passage in his edition of the *Parva Naturalia*, Oxford, 1955, p. 245.

[22] *De mem. et rem.*, 452[a] 8–16.

[23] For a discussion of the passage, see Ross's note in his edition of the *Parva naturalia*, p. 246.

seasons. Or the passage may be corrupt and fundamentally incomprehensible as it stands.

It is immediately followed by one in which Aristotle is speaking of recollecting through starting at any one point in a series.

> Generally speaking the middle point seems to be a good point to start from; for one will recollect when one comes to this point, if not before, or else one will not recollect from any other. For instance, suppose one were thinking of a series, which may be represented by the letters ABCDEFGH; if one does not recall what is wanted at E, yet one does at H; from that point it is possible to travel in either direction, that is either towards D or towards F. Supposing one is seeking for either G or F, one will recollect on arriving at C, if one wants G or F. If not then on arrival at A. Success is always achieved in this way. Sometimes it is possible to recall what we seek and sometimes not; the reason being that it is possible to travel from the same starting-point in more than one direction; for instance from C we may go direct to F or only to D.[24]

Since the starting-point in a train of recollection has earlier been likened to the mnemonic locus, we may recall in connection with this pretty confusing passage that one of the advantages of the artificial memory was that its possessor could start at any point in his places and run through them in any direction.

The scholastics proved to their own satisfaction that the *De memoria et reminiscentia* provided philosophical justification for the artificial memory. It is however very doubtful whether this is what Aristotle meant. He appears to use his references to the mnemonic technique only as illustrations of his argument.

The metaphor, used in all three of our Latin sources for the mnemonic, which compares the inner writing or stamping of the memory images on the places with writing on a waxed tablet is obviously suggested by the contemporary use of the waxed tablet for writing. Nevertheless it also connects the mnemonic with ancient theory of memory, as Quintilian saw when, in his introduction to his treatment of the mnemonic, he remarked that he did not propose to dwell on the precise functions of memory, 'although

[24] *De mem. et rem.*, 452[a] 16–25. For suggested emendations of the baffling series of letters, of which there are many variations in the manuscripts, see Ross's note in his edition of the *Parva naturalia*, pp. 247–8.

many hold the view that certain impressions are made on the mind, analogous to those which a signet ring makes on wax.'[25]

Aristotle's use of this metaphor for the images from sense impressions, which are like the imprint of a seal on wax, has already been quoted. For Aristotle such impressions are the basic source of all knowledge; though refined upon and abstracted by the thinking intellect, there could be no thought or knowledge without them, for all knowledge depends on sense impressions.

Plato also uses the seal imprint metaphor in the famous passage in the *Theaetetus* in which Socrates assumes that there is a block of wax in our souls—of varying quality in different individuals—and that this is 'the gift of Memory, the mother of the Muses'. Whenever we see or hear or think of anything we hold this wax under the perceptions and thoughts and imprint them upon it, just as we make impressions from seal rings.[26]

But Plato, unlike Aristotle, believes that there is a knowledge not derived from sense impressions, that there are latent in our memories the forms or moulds of the Ideas, of the realities which the soul knew before its descent here below. True knowledge consists in fitting the imprints from sense impressions on to the mould or imprint of the higher reality of which the things here below are reflections. The *Phaedo* develops the argument that all sensible objects are referable to certain types of which they are likenesses. We have not seen or learned the types in this life; but we saw them before our life began and the knowledge of them is innate in our memories. The example given is that of referring our sense perceptions of objects which are equal to the Idea of Equality which is innate in us. We perceive equality in equal subjects, such as equal pieces of wood, because the Idea of Equality has been impressed on our memories, the seal of it is latent in the wax of our soul. True knowledge consists in fitting the imprints from sense impressions on to the basic imprint or seal of the Form or Idea to which the objects of sense correspond.[27] In the *Phaedrus*, in which Plato expounds his view of the true function of rhetoric—which is to persuade men to the knowledge of the truth—he again develops the theme that knowledge of the truth and of the soul consists in remembering, in the recollection of the Ideas once seen by all souls

[25] *Institutio oratoria*, XI, ii, 4.
[26] *Theaetetus*, 191 C–D.
[27] *Phaedo*, 75 B–D.

of which all earthly things are confused copies. All knowledge and all learning are an attempt to recollect the realities, the collecting into a unity of the many perceptions of the senses through their correspondencies with the realities. 'In the earthly copies of justice and temperance and the other ideas which are precious to souls there is no light, but only a few, approaching the images through the darkling organs of sense, behold in them the nature of that which they imitate.'[28]

The *Phaedrus* is a treatise on rhetoric in which rhetoric is regarded, not as an art of persuasion to be used for personal or political advantage, but as an art of speaking the truth and of persuading hearers to the truth. The power to do this depends on a knowledge of the soul and the soul's true knowledge consists in the recollection of the Ideas. Memory is not a 'section' of this treatise, as one part of the art of rhetoric; memory in the Platonic sense is the groundwork of the whole.

It is clear that, from Plato's point of view, the artificial memory as used by a sophist would be anathema, a desecration of memory. It is indeed possible that some of Plato's satire on the sophists, for instance their senseless use of etymologies, might be explicable from the sophist memory treatise, with its use of such etymologies for memory for words. A Platonic memory would have to be organised, not in the trivial manner of such mnemotechnics, but in relation to the realities.

The grandiose attempt to do just this, within the framework of the art of memory, was made by the Neoplatonists of the Renaissance. One of the most striking manifestations of the Renaissance use of the art is the Memory Theatre of Giulio Camillo. Using images disposed on places in a neoclassical theatre—that is using the technique of the artificial memory in a perfectly correct way—Camillo's memory system is based (so he believes) on archetypes of reality on which depend secondary images covering the whole realm of nature and of man. Camillo's view of memory is fundamentally Platonic (though Hermetic and Cabalist influences are also present in the Theatre) and he aims at constructing an artificial memory based on truth. 'Now if the ancient orators,' he says, 'wishing to place from day to day the parts of the speech which they had to recite, confided them to frail places as frail things, it

[28] *Phaedrus*, 249 E–250 D.

is right that we, wishing to store up eternally the eternal nature of all things which can be expressed in speech . . . should assign to them eternal places.'[29]

In the *Phaedrus*, Socrates tells the following story:

> I heard, then, that at Naucratis, in Egypt, was one of the ancient gods of that country, the one whose sacred bird is called the ibis, and the name of the god himself was Theuth. He it was who invented numbers and arithmetic and geometry and astronomy, also draughts and dice, and, most important of all, letters. Now the king of all Egypt at that time was the god Thamus, who lived in a great city of the upper region, which the Greeks call the Egyptian Thebes, and they call the god himself Ammon. To him came Theuth to show his inventions, saying that they ought to be imparted to the other Egyptians. But Thamus asked what use there was in each, and as Theuth enumerated their uses, expressed praise or blame of the various arts which it would take too long to repeat; but when they came to letters, 'This invention, O king,' said Theuth, 'will make the Egyptians wiser and will improve their memories; for it is an elixir of memory and wisdom that I have discovered.' But Thamus replied, 'Most ingenious Theuth, one man has the ability to beget arts, but the ability to judge of their usefulness or harmfulness to their users belongs to another; and now you, who are the father of letters, have been led by your affection to ascribe to them a power the opposite of that which they really possess. For this invention will produce forgetfulness in the minds of those who learn to use it, because they will not practise their memory. Their trust in writing, produced by external characters which are not part of themselves will discourage the use of their own memory within them. You have invented an elixir not of memory but of reminding; and you offer your pupils the appearance of wisdom, not true wisdom, for they will read many things without instruction and will therefore seem to know many things, when they are for the most part ignorant and hard to get along with, since they are not wise, but only appear wise.[30]

It has been suggested that this passage may represent a survival of the traditions of oral memory, of the times before writing had

[29] See below p. 138

[30] *Phaedrus*, 274 C–275 B (quoted in the translation by H. N. Fowler in the Loeb edition).

come into common use.[31] But as Socrates tells it, the memories of the most ancient Egyptians are those of truly wise men in contact with the realities. The ancient Egyptian practice of the memory is presented as a most profound discipline.[32] The passage was used by a disciple of Giordano Bruno when propagating in England Bruno's Hermetic and 'Egyptian' version of the artificial memory as an 'inner writing' of mysterious significance.[33]

As the reader will have perceived, it is a part of the plan of this chapter to follow the treatment of memory by the Greeks from the point of view of what will be important in the subsequent history of the art of memory. Aristotle is essential for the scholastic and mediaeval form of the art; Plato is essential for the art in the Renaissance.

And now there comes a name of recurring importance in our history, Metrodorus of Scepsis of whom Quintilian lets fall the remark that he based his memory on the zodiac.[34] Every subsequent user of a celestial memory system will invoke Metrodorus of Scepsis as the classical authority for bringing the stars into memory. Who was Metrodorus of Scepsis?

He belongs to the very late period in the history of Greek rhetoric which is contemporary with the great development of Latin rhetoric. As we have already been informed by Cicero, Metrodorus of Scepsis was still living in his time. He was one of the Greek men of letters whom Mithridates of Pontus, drew to his court.[35] In his attempt to lead the east against Rome, Mithridates affected the airs of a new Alexander and tried to give a veneer of Hellenistic culture to the mixed orientalism of his court. Metrodorus would appear to have been his chief Greek tool in this process. He seems to have played a considerable political, as well as cultural rôle at the court of Mithridates with whom he was for a

[31] See J. A. Notopoulos, 'Mnemosyne in Oral Literature', *Transactions and Proceedings of the American Philological Association*, LXIX (1938), p. 476.

[32] E. R. Curtius (*European Literature in the Latin Middle Ages*, London, 1953, p. 304) takes the passage as a 'typically Greek' disparagement of writing and books as compared with more profound wisdom.

[33] See below, p. 268

[34] See above, p. 23

[35] The chief source for the life of Metrodorus is Plutarch's Life of Lucullus.

time in high favour, though Plutarch hints that he was eventually put out of the way by his brilliant but cruel master.

We know from Strabo that Metrodorus was the author of a work, or works, on rhetoric. 'From Scepsis', says Strabo, 'came Metrodorus, a man who changed from his pursuit of philosophy to political life, and taught rhetoric, for the most part, in his written works; and he used a brand new style and dazzled many.'[36] It may be inferred that Metrodorus' rhetoric was of the florid 'Asianist' type, and it may well have been in his work or works on rhetoric, under memory as a part of rhetoric, that he expounded his mnemonics. The lost works of Metrodorus may have been amongst the Greek works on memory which the author of *Ad Herennium* consulted; Cicero and Quintilian may have read them. But all that we have to build on is Quintilian's statement that Metrodorus 'found three hundred and sixty places in the twelve signs through which the sun moves'. A modern writer, L. A. Post, has discussed the nature of Metrodorus' memory-system, as follows:

> I suspect that Metrodorus was versed in astrology, for astrologers divided the zodiac not only into 12 signs, but also into 36 decans, each covering ten degrees; for each decan there was an associated decan-figure. Metrodorus probably grouped ten artificial backgrounds (*loci*) under each decan figure. He would thus have a series of *loci* numbered 1 to 360, which he could use in his operations. With a little calculation he could find any background (*locus*) by its number, and he was insured against missing a background, since all were arranged in numerical order. His system was therefore well designed for the performance of striking feats of memory.[37]

Post assumes that Metrodorus used the astrological images as places which would ensure order in memory, just as the normal places memorised in buildings ensured remembering the images on them, and the things or words associated with them, in the right order. The order of the signs, Aries, Taurus, Gemini, and so on gives at once an easily memorised order; and if Metrodorus also had the decan images in memory—three of which go with each

[36] Strabo, *Geography*, XIII, i, 55 (quoted in the translation in the Loeb edition).

[37] L. A. Post, 'Ancient Memory Systems', *Classical Weekly*, New York, XV (1932), p. 109.

sign—he would, as Post says, have an order of astrological images in memory which, if he used them as places, would give him a set of places in a fixed order.

This is a sensible suggestion and there is no reason why an order of astrological images should not be used absolutely rationally as an order of easily remembered and numbered places. This suggestion even may give a clue to what has always struck me as an inexplicable feature of the memory image for remembering the lawsuit given in *Ad Herennium*—namely the testicles of the *ram*. If one has to remember that there were many witnesses in the case through sound resemblance of *testes* with testicles, why need these be the testicles of a ram? Could an explanation of this be that Aries is the first of the signs, and that the introduction of an allusion to a ram in the image to be put on the first place for remembering the lawsuit helped to emphasise the order of the place, that it was the first place? Is it possible that without the missing instructions of Metrodorus and other Greek writers on memory we do not quite understand the *Ad Herennium*.

Quintilian seems to assume that when Cicero says that Metrodorus 'wrote down' in memory all that he wished to remember, this means that he wrote it down inwardly through memorising shorthand signs on his places. If this is right, and if Post is right, we have to envisage Metrodorus writing inwardly in shorthand on the images of the signs and decans which he had fixed in memory as the order of his places. This opens up a somewhat alarming prospect; and the author of *Ad Herennium* disapproves of the Greek method of memorising signs for every word.

The Elder Pliny, whose son attended Quintilian's school of rhetoric, brings together a little anthology of memory stories in his *Natural History*. Cyrus knew the names of all the men in his army; Lucius Scipio, the names of all the Roman people; Cineas repeated the names of all the senators; Mithridates of Pontus knew the languages of all the twenty-two peoples in his domains; the Greek Charmadas knew the contents of all the volumes of a library. And after this list of *exempla* (to be constantly repeated in the memory treatises of after times) Pliny states that the art of memory

> was invented by Simonides Melicus and perfected (*consummata*) by Metrodorus of Scepsis who could repeat what he had heard in the very same words.[38]

[38] Pliny, *Natural History*, VII, cap. 24

Like Simonides, Metrodorus evidently took some novel step about the art. It had to do with memory for words, possibly through memorising the *notae* or symbols of shorthand, and was connected with the zodiac. That is all we really know.

Metrodorus's mnemonics need not necessarily have been in any way irrational. Nevertheless a memory based on the zodiac sounds rather awe-inspiring and might give rise to rumours of magical powers of memory. And if he did use the decan images in his system, these were certainly believed to be magical images. The late sophist Dionysius of Miletus, who flourished in the reign of Hadrian, was accused of training his pupils in mnemonics by 'Chaldaean arts'. Philostratus, who tells the story, rebuts the charge,[39] but it shows that suspicions of this kind could attach themselves to mnemonics.

Memory-training for religious purposes was prominent in the revival of Pythagoreanism in late antiquity. Iamblichus, Porphyry, and Diogenes Laertius all refer to this aspect of Pythagoras's teaching, though without any specific reference to the art of memory. But Philostratus in his account of the memory of the leading sage, or Magus, of Neopythagoreanism—Apollonius of Tyana—brings in the name of Simonides.

> Euxemus having asked Apollonius why he had written nothing yet, though full of noble thoughts, and expressing himself so clearly and readily, he replied: 'Because so far I have not practised silence.' From that time on he resolved to be mute, and did not speak at all, though his eyes and his mind took in everything and stored it away in his memory. Even after he had become a centenarian he remembered better than Simonides, and used to sing a hymn in praise of the memory, in which he said that all things fade away in time, but time itself is made fadeless and undying by recollection.[40]

During his travels, Apollonius visited India where he conversed with a Brahmin who said to him: 'I perceive that you have an excellent memory, Apollonius, and that is the goddess whom we most adore.' Apollonius's studies with the Brahmin were very abstruse, and particularly directed towards astrology and divina-

[39] Philostratus and Eunapius, *The Lives of the Sophists* (Life of Dionysius of Miletus), trans. W. C. Wright, Loeb Classical Library, pp. 91–3.

[40] Philostratus, *Life of Apollonius of Tyana*, I, 14; trans. C. P. Ealls, Stanford University Press, 1923, p. 15.

tion; the Brahmin gave him seven rings, engraved with the names of the seven planets, which Apollonius used to wear, each on its own day of the week.[41]

It may have been out of this atmosphere that there was formed a tradition which, going underground for centuries and suffering transformations in the process, appeared in the Middle Ages as the *Ars Notoria*,[42] a magical art of memory attributed to Apollonius or sometimes to Solomon. The practitioner of the *Ars Notoria* gazed at figures or diagrams curiously marked and called 'notae' whilst reciting magical prayers. He hoped to gain in this way knowledge, or memory, of all the arts and sciences, a different 'nota' being provided for each discipline. The *Ars Notoria* is perhaps a bastard descendant of the classical art of memory, or of that difficult branch of it which used the shorthand *notae*. It was regarded as a particularly black kind of magic and was severely condemned by Thomas Aquinas.[43]

The period of the history of the art of memory in ancient times which most nearly concerns its subsequent history in the Latin West is its use in the great age of Latin oratory as reflected in the rules of *Ad Herennium* and their recommendation by Cicero. We have to try to imagine the memory of a trained orator of that period as architecturally built up with orders of memorised places stocked with images in a manner to us inconceivable. We have seen from the examples of memory quoted how greatly the feats of the trained memory were admired. Quintilian speaks of the astonishment aroused by the powers of memory of the orators. And he even suggests that it was the phenomenal development of memory by the orators which attracted the attention of Latin thinkers to the philosophical and religious aspects of memory. Quintilian's words about this are rather striking:

> We should never have realised how great is the power (of memory) nor how divine it is, but for the fact that it is memory which has brought oratory to its present position of glory.[44]

[41] *Ibid.*, III, 16, 41; translation cited, pp. 71, 85–6.

[42] On the *Ars Notoria*, see Lynn Thorndike, *History of Magic and Experimental Science*, II, Chap. 49.

[43] See below, p. 204.

[44] *Institutio oratoria*, XI, ii, 7.

This suggestion that the practical Latin mind was brought to reflect about memory through its development in the most important of careers open to a Roman has perhaps not attracted the attention it deserves. The idea must not be exaggerated, but it is interesting to glance at Cicero's philosophy from this point of view.

Cicero was not only the most important figure in the transfer of Greek rhetoric to the Latin world; but was also probably more important than anyone else in the popularising of Platonic philosophy. In the *Tusculan Disputations*, one of the works written after his retirement with the object of spreading the knowledge of Greek philosophy among his countrymen, Cicero takes up the Platonic and Pythagorean position that the soul is immortal and of divine origin. A proof of this is the soul's possession of memory 'which Plato wishes to make the recollection of a previous life'. After proclaiming at length his absolute adherence to the Platonic view of memory, Cicero's thought runs towards those who have been famous for their powers of memory:

> For my part I wonder at memory in a still greater degree. For what is it that enables us to remember, or what character has it, or what is its origin? I am not inquiring into the powers of memory which, it is said, Simonides possessed, or Theodectes, or the powers of Cineas, whom Pyrrhus sent as ambassador to the Senate, or the powers in recent days of Charmadas, or of Scepsius Metrodorus, who was lately alive, or the powers of our own Hortensius. I am speaking of the average memory of man, and chiefly of those who are engaged in some higher branch of study and art, whose mental capacity it is hard to estimate, so much do they remember.[45]

He then examines the non-Platonic psychologies of memory, Aristotelian and Stoic, concluding that they do not account for the prodigious powers of the soul in memory. Next, he asks what is the power in man which results in all his discoveries and inventions, which he enumerates;[46] the man who first assigned a name to everything; the man who first united the scattered human units and formed them into social life; the man who invented written characters to represent the sounds of the voice in language; the

[45] *Tusculan Disputations*, I, xxiv, 59 (quoted in the translation in the Loeb edition).

[46] *Ibid.*, I, xxv, 62–4.

man who marked down the paths of the wandering stars. Earlier still, there were 'the men who discovered the fruits of the earth, raiment, dwellings, an ordered way of life, protection against wild creatures—men under whose civilising and refining influence we have gradually passed on from the indispensable handicrafts to the finer arts.' To the art, for example, of music and its 'due combinations of musical sounds'. And to the discovery of the revolution of the heavens, such as Archimedes made when he 'fastened on a globe the movements of moon, sun, and five wandering stars'. Then there are still more famous fields of labour; poetry, eloquence, philosophy.

> A power able to bring about such a number of important results is to my mind wholly divine. For what is the memory of things and words? What further is invention? (*Quid est enim memoria rerum et verborum? quid porro inventio?*) Assuredly nothing can be apprehended even in God of greater value than this . . . Therefore the soul is, as I say, divine, as Euripides dares say, God . . .[47]

Memory for things; memory for words! It is surely significant that the technical terms of the artificial memory come into the orator's mind when, as philosopher, he is proving the divinity of the soul. That proof falls under the heads of the parts of rhetoric, *memoria* and *inventio*. The soul's remarkable power of remembering things and words is a proof of its divinity; so also is its power of invention, not now in the sense of inventing the arguments or things of a speech, but in the general sense of invention or discovery. The things over which Cicero ranges as inventions represent a history of human civilisation from the most primitive to the most highly developed ages. (The ability to do this would be in itself evidence of the power of memory; in the rhetorical theory, the things invented are stored in the treasure house of memory.) Thus *memoria* and *inventio* in the sense in which they are used in the *Tusculan Disputations* are transposed from parts of rhetoric into divisions under which the divinity of the soul is proved, in accordance with the Platonic presuppositions of the orator's philosophy.

In this work, Cicero probably has in mind the perfect orator, as defined by his master Plato in the *Phaedrus*, the orator who knows the truth and knows the nature of the soul, and so is able to persuade souls of the truth. Or we may say that the Roman

[47] *Ibid.*, I, xxv, 65.

orator when he thinks of the divine powers of memory cannot but also be reminded of the orator's trained memory, with its vast and roomy architecture of places on which the images of things and words are stored. The orator's memory, rigidly trained for his practical purposes, has become the Platonic philosopher's memory in which he finds his evidence of the divinity and immortality of the soul.

Few thinkers have pondered more deeply on the problems of memory and the soul than Augustine, the pagan teacher of rhetoric whose conversion to Christianity is recounted in his *Confessions*. In the wonderful passage on memory in that work one gains, I think, quite strongly the impression that Augustine's was a trained memory, trained on the lines of the classical mnemonic.

> I come to the fields and spacious palaces of memory (*campos et lata praetoria memoriae*), where are the treasures (*thesauri*) of innumerable images, brought into it from things of all sorts perceived by the senses. There is stored up, whatever besides we think, either by enlarging or diminishing, or any other way varying those things which the sense hath come to; and whatever else hath been committed and laid up, which forgetfulness hath not yet swallowed up and buried. When I enter there, I require instantly what I will to be brought forth, and something instantly comes; others must be longer sought after, which are fetched, as it were out of some inner receptacle; others rush out in troops, and while one thing is desired and required, they start forth, as who should say, 'Is it perchance I?' These I drive away with the hand of my heart from the face of my remembrance; until what I wish for be unveiled, and appear in sight, out of its secret place. Other things come up readily, in unbroken order, as they are called for; those in front making way for the following; and as they make way, they are hidden from sight, ready to come when I will. All which takes place when I recite a thing by heart.[48]

Thus opens the meditation on memory, with, in its first sentence, the picture of memory as a series of buildings, 'spacious palaces', and the use of the word 'thesaurus' of its contents, recalling the orator's definition of memory as 'thesaurus of inventions and of all the parts of rhetoric'.

In these opening paragraphs, Augustine is speaking of the images from sense impressions, which are stored away in the 'vast court'

[48] *Confessions*, X, 8 (Pusey's translation).

of memory (*in aula ingenti memoriae*), in its 'large and boundless chamber' (*penetrale amplum et infinitum*). Looking within, he sees the whole universe reflected in images which reproduce, not only the objects themselves, but even the spaces between them with wonderful accuracy. Yet this does not exhaust the capacity of memory, for it contains also

> all learnt of the liberal sciences and as yet unforgotten; removed as it were to some inner place, which is as yet no place: nor are they the images thereof, but the things themselves.[49]

And there are also preserved in memory the affections of the mind.

The problem of images runs through the whole discourse. When a stone or the sun is named, the things themselves not being present to the sense, their images are present in memory. But when 'health', 'memory', 'forgetfulness' are named are these present to the memory as images or not? He seems to distinguish as follows between memory of sense impressions and memory of the arts and of the affections:

> Behold in the plains, and caves, and caverns of my memory, innumerable and innumerably full of innumerable kinds of things, either as images, as all bodies; or by actual presence, as the arts; or by certain notions and impressions, as the affections of the mind, which, even when the mind doth not feel, the memory retaineth, while yet whatsoever is in the memory is also in the mind—over all these do I run, I fly; I dive on this side and that, as far as I can, and there is no end.[50]

Then he passes deeper within to find God in the memory, but not as an image and in no place.

> Thou hast given this honour to my memory to reside in it; but in what quarter of it Thou residest, that I am considering. For in thinking on Thee, I have passed beyond such parts of it as the beasts also have, for I found Thee not there among the images of corporeal things; and I came to those parts to which I have committed the affections of my mind, nor found Thee there. And I entered into the very seat of my mind . . . neither wert Thou there . . . And why seek I now in what place thereof Thou dwellest, as if there were places therein? . . . Place there is none; we go forward and backward and there is no place . . .[51]

[49] *Ibid.*, X, 9. [50] *Ibid.*, X, 17. [51] *Ibid.*, X, 25–6.

It is as a Christian that Augustine seeks God in the memory, and as a Christian Platonist, believing that knowledge of the divine is innate in memory. But is not this vast and echoing memory in which the search is conducted that of a trained orator? To one who saw the buildings of the antique world in their fullest splendour, not long before their destruction, what a choice of noble memory places would have been available! 'When I call back to mind some arch, turned beautifully and symmetrically, which, let us say, I saw at Carthage', says Augustine in another work and in another context, 'a certain reality that had been made known to the mind through the eyes, and transferred to the memory, causes the imaginary view.'[52] Moreover the refrain of 'images' runs through the whole meditation on memory in the *Confessions*, and the problem of whether notions are remembered with, or without, images would have been raised by the effort to find images for notions in the orator's mnemonic.

The transition from Cicero, the trained rhetorician and religious Platonist, to Augustine, the trained rhetorician and Christian Platonist, was smoothly made, and there are obvious affinities between Augustine on memory and Cicero on memory in the *Tusculan Disputations*. Moreover Augustine himself says that it was the reading of Cicero's lost work the *Hortensius* (called by the name of that friend of Cicero's who excelled in memory) which first moved him to serious thoughts about religion, which 'altered my affections, and turned my prayers to Thyself, O Lord'.[53]

Augustine is not discussing or recommending the artificial memory in those passages which we have quoted. It is merely almost unconsciously implied in his explorations in a memory which is not like our own in its extraordinary capacity and organisation. The glimpses into the memory of the most influential of the Latin Fathers of the Church raise speculations as to what a Christianised artificial memory might have been like. Would human images of 'things' such as Faith, Hope, and Charity, and of other virtues and vices, or of the liberal arts, have been 'placed' in such a memory, and might the places now have been memorised in churches?

These are the kind of questions which haunt the student of this most elusive art all through its history. All that one can say is that

[52] *De Trinitate*, IX, 6, xi.
[53] *Confessions*, III, 4.

these indirect glimpses of it vouchsafed to us before it plunges, with the whole of ancient civilisation, into the Dark Ages, are seen in rather a lofty context. Nor must we forget that Augustine conferred on memory the supreme honour of being one of the three powers of the soul, Memory, Understanding, and Will, which are the image of the Trinity in man.

Chapter III

THE ART OF MEMORY IN THE MIDDLE AGES

ALARIC sacked Rome in 410, and the Vandals conquered North Africa in 429. Augustine died in 430, during the siege of Hippo by the Vandals. At some time during this terrible era of collapse, Martianus Capella wrote his *De nuptiis Philologiae et Mercurii*, a work which preserved for the Middle Ages the outline of the ancient educational system based on the seven liberal arts (grammar, rhetoric, dialectic, arithmetic, geometry, music, astronomy). In his account of the parts of rhetoric, Martianus gives under memory a brief description of the artificial memory. He thus handed on the art to the Middle Ages firmly lodged in its correct niche in the scheme of the liberal arts.

Martianus belonged to Carthage where were the great rhetoric schools in which Augustine had taught before his conversion. The *Ad Herennium* was certainly known in North African rhetorical circles; and it has been suggested that the treatise had a late revival in North Africa whence it spread back to Italy.[1] It was known to Jerome who mentions it twice and attributes it to 'Tullius',[2] like the Middle Ages. However, knowledge of the artificial memory would not depend for rhetorically educated Christian Fathers, like Augustine and Jerome, or for the pagan Martianus Capella, on knowledge of this actual text. Its techniques were no

[1] F. Marx, introduction to the edition of *Ad Herennium*, Leipzig, 1894, p. I; H. Caplan, introduction to the Loeb edition of *Ad Herennium*, p. xxxiv.

[2] *Apologia adversus libros Rufini* I, 16; *In Abdiam Prophetam* (Migne, *Pat. lat.*, XXIII, 409; XXV, 1098).

doubt known to all rhetoric students, as they had been in Cicero's time, and would have reached Martianus through living contact with normal ancient civilised life, not yet completely obliterated by the barbarian tides.

Reviewing in order the five parts of rhetoric, Martianus comes in due course to its fourth part, which is *memoria*, about which he speaks as follows:

> Now order brings in the precepts for memory which is certainly a natural (gift) but there is no doubt that it can be assisted by art. This art is based on only a few rules but it requires a great deal of exercise. Its advantage is that it enables words and things to be grasped in comprehension quickly and firmly. Not only those matters which we have invented ourselves have to be retained (in memory) but also those which our adversary brings forward in the dispute. Simonides, a poet and also a philosopher, is held to have invented the precepts of this art, for when a banqueting-hall suddenly collapsed and the relatives of the victims could not recognise (the bodies), he supplied the order in which they were sitting and their names which he had recorded in memory. He learned from this (experience) that it is order which sustains the precepts of memory. These (precepts) are to be pondered upon in well-lighted places (*in locis illustribus*) in which the images of things (*species rerum*) are to be placed. For example (to remember) a wedding you may hold in mind a girl veiled with a wedding-veil; or a sword, or some other weapon, for a murderer; which images as it were deposited (in a place) the place will give back to memory. For as what is written is fixed by the letters on the wax, so what is consigned to memory is impressed on the places, as on wax or on a page; and the remembrance of things is held by the images, as though they were letters.
>
> But, as said above, this matter requires much practise and labour, whence it is customarily advised that we should write down the things which we wish easily to retain, so that if the material is lengthy, being divided into parts it may more easily stick (in memory). It is useful to place *notae* against single points which we wish to retain. (When memorising, the matter) should not be read out in a loud voice, but meditated upon with a murmur. And it is obviously better to exercise the memory by night, rather than by day, when silence spreading far and wide aids us, so that the attention is not drawn outward by the senses.
>
> There is memory for things and memory for words, but words are not always to be memorised. Unless there is (plenty of) time

> for meditation, it will be sufficient to hold the things themselves in memory, particularly if the memory is not naturally good.[3]

We can recognise clearly enough the familiar themes of the artificial memory here, though it is a very compressed account. Rules for places are reduced to one only (well-lighted); rules for striking, *imagines agentes* are not given, though one of the specimen images is human (the girl in the wedding dress); the other (the weapon) is of the Quintilian type. No one could practise the art from instructions as slight as these, but enough is said to make recognisable what is being talked about if the description in *Ad Herennium* were available, as it was in the Middle Ages.

Martianus, however, seems most to recommend the Quintilian method of memorising through visualising the tablet, or the page of manuscript, on which the material is written—divided into clearly defined parts and with some marks or *notae* on it at special points—which is to be committed to memory in a low murmur. We see him intent on his carefully prepared pages and hear him faintly disturbing the silence of the night with his muttering.

The sophist Hippias of Elis was regarded in antiquity as the originator of the system of general education based on the liberal arts;[4] Martianus Capella knew them in their latest Latin form, just before the collapse of all organised education in the break up of the ancient world. He presents his work on them in a romantic and allegorical form which made it highly attractive to the Middle Ages. At the 'nuptials of Philology and Mercury' the bride received as a wedding present the seven liberal arts personified as women. Grammar was a severe old woman, carrying a knife and file with which to remove children's grammatical errors. Rhetoric was a tall and beautiful woman, wearing a rich dress decorated with the figures of speech and carrying weapons with which to wound her adversaries. The personified liberal arts conform remarkably well to the rules for images in the artificial memory—strikingly ugly or beautiful, bearing with them secondary images to remind of their parts like the man in the lawsuit image. The mediaeval student, comparing his *Ad Herennium* with Martianus on the artificial memory, might have thought that he was being intro-

[3] Martianus Capella, *De nuptiis Philologiae et Mercurii*, ed. A Dick, Leipzig, 1925, pp. 268–70.

[4] See Curtius, *European Literature in the Latin Middle Ages*, p. 36.

duced to the correct classical memory images for those 'things', the liberal arts.

In the barbarised world, the voices of the orators were silenced. People cannot meet together peacefully to listen to speeches when there is no security. Learning retreated into the monasteries and the art of memory for rhetorical purposes became unnecessary, though Quintilianist memorising of a prepared written page might still have been useful. Cassiodorus, one of the founders of monasticism, does not mention the artificial memory in the rhetoric section of his encyclopaedia on the liberal arts. Nor is it mentioned by Isidore of Seville or the Venerable Bede.

One of the most poignant moments in the history of Western civilisation is Charlemagne's call to Alcuin to come to France to help to restore the educational system of antiquity in the new Carolingian empire. Alcuin wrote a dialogue 'Concerning Rhetoric and the Virtues' for his royal master, in which Charlemagne seeks instruction on the five parts of rhetoric. When they reach memory, the conversation is as follows:

Charlemagne. What, now, are you to say about Memory, which I deem to be the noblest part of rhetoric?

Alcuin. What indeed unless I repeat the words of Marcus Tullius that 'Memory is the treasure-house of all things and unless it is made custodian of the thought-out things and words, we know that all the other parts of the orator, however distinguished they may be, will come to nothing'.

Charlemagne. Are there not other precepts which tell us how it can be obtained or increased.

Alcuin. We have no other precepts about it, except exercise in memorising, practice in writing, application to study, and the avoidance of drunkenness which does the greatest possible injury to all good studies . . .[5]

The artificial memory has disappeared! Its rules have gone, replaced by 'avoid drunkenness'! Alcuin had few books at his disposal; he compiled his rhetoric from two sources only, Cicero's

[5] W. S. Howell, *The Rhetoric of Charlemagne and Alcuin* (Latin text, English translation and introduction), Princeton and Oxford, 1941, pp. 136–9.

De inventione and the rhetoric of Julius Victor, with a little help from Cassiodorus and Isidore.[6] Of these, only Julius Victor mentions the artificial memory and he only in passing and slightingly.[7] Hence Charlemagne's hope that there might be other precepts for memory was doomed to disappointment. But he was told about the virtues, Prudence, Justice, Fortitude, and Temperance. And when he asked how many parts Prudence has he got the correct answer: 'Three; *memoria, intelligentia, providentia*.'[8] Alcuin was of course using Cicero's *De inventione* on the virtues; but he did not seem to know the second horse of the chariot, the *Ad Herennium*, which was to carry the artificial memory to great heights as a part of Prudence.

Alcuin's lack of knowledge of *Ad Herennium* is rather curious because it is mentioned as early as 830 by Lupus of Ferrières and several ninth-century manuscripts of it exist. The earliest manuscripts are not complete; they lack parts of the first book which is not the book which contains the memory section. Complete manuscripts are extant dating from the twelfth century. The popularity of the work is attested by the unusually large numbers of manuscripts that have come down to us; the majority of these date from the twelfth to the fourteenth centuries when the vogue for the work would seem to have been at its height.[9]

All the manuscripts ascribe the work to 'Tullius' and it becomes associated with the genuinely Ciceronian *De inventione*; the habit of associating the two works in the manuscripts was certainly established by the twelfth century.[10] The *De inventione*—described as the 'First Rhetoric' or the 'Old Rhetoric' is given first, and is

[6] See Howell's introduction, pp. 22 ff.

[7] 'For the obtaining of memory many people bring in observations about places and images which do not seem to me to be of any use' (Carolus Halm, *Rhetores latini*, Leipzig, 1863, p. 440).

[8] Alcuin, *Rhetoric, ed. cit.*, p. 146.

[9] See the introductions by Marx and Caplan to their editions of *Ad Herennium*. An admirable study of the diffusion of *Ad Herennium* is made in an unpublished thesis by D. E. Grosser, *Studies in the influence of the Rhetorica ad Herennium and Cicero's De inventione*, Ph.D. thesis, Cornell University, 1953. I have had the advantage of seeing this thesis in microfilm, for which I here express my gratitude.

[10] Marx, *op. cit.*, pp. 51 ff. The association of *Ad Herennium* with *De inventione* in the manuscript tradition is studied in the thesis by D. E. Grosser, referred to in the preceding note.

immediately followed by the *Ad Herennium* as the 'Second Rhetoric' or the 'New Rhetoric'.[11] Many proofs could be given as to how this classification was universally accepted. Dante, for example, is obviously taking it for granted when he gives 'prima rhetorica' as the reference for a quotation from *De inventione*.[12] The powerful alliance between the two works was still in operation when the first printed edition of *Ad Herennium* appeared at Venice in 1470; it was published together with the *De inventione*, the two works being described on the title-page in the traditional way as *Rhetorica nova et vetus*.

The importance of this association for the understanding of the mediaeval form of the artificial memory is very great. For Tullius in his First Rhetoric gave much attention to ethics and to the virtues as the 'inventions' or 'things' with which the orator should deal in his speech. And Tullius in his Second Rhetoric gave rules as to how the invented 'things' were to be stored in the treasure-house of memory. What were the things which the pious Middle Ages wished chiefly to remember? Surely they were the things belonging to salvation or damnation, the articles of the faith, the roads to heaven through virtues and to hell through vices. These were the things which it sculptured in places on its churches and cathedrals, painted in its windows and frescoes. And these were the things which it wished chiefly to remember by the art of memory, which was to be used to fix in memory the complex material of mediaeval didactic thought. The word 'mnemotechnics', with its modern associations is inadequate as a description of this process, which it is better to call the mediaeval transformation of a classical art.

It is of great importance to emphasise that the mediaeval artificial memory rested, so far as I know, entirely on the memory section of *Ad Herennium* studied without the assistance of the other two sources for the classical art. It might be untrue to say that the other two sources were entirely unknown in the Middle Ages; the *De oratore* was known to many mediaeval scholars, particularly

[11] Curtius (*Op. cit.*, p. 153) compares the 'old' and 'new' pairing of the two rhetorics with similar correspondences between *Digestum vetus* and *novus*, Aristotle's *Metaphysica vetus* and *nova*, all ultimately suggested by the Old and New Testaments.

[12] *Monarchia*, II, cap. 5, where he is quoting from *De inv.*, I, 38, 68; Cf. Marx, *Op. cit.*, p. 53.

in the twelfth century,[13] though probably in incomplete copies; it may, however, be unsafe to say that the complete text was unknown until the discovery at Lodi in 1422.[14] The same is true of Quintilian's *Institutio*; it was known in the Middle Ages though in incomplete copies; probably the passage on the mnemonics would not have been accessible before Poggio Bracciolini's much advertised find of a complete text at St. Gall in 1416.[15] However, though the possibility should not be excluded that a few chosen spirits here and there in the Middle Ages might have come across Cicero and Quintilian on the mnemonics,[16] it is certainly true to say that these sources did not become generally known in the memory tradition until the Renaissance. The mediaeval student, puzzling over rules for places and images in *Ad Herennium*, could not turn to the clear description of the mnemotechnical process given by Quintilian; nor did he know Quintilian's cool discussion of its advantages and disadvantages. For the mediaeval student, the rules of *Ad Herennium* were the rules of Tullius, who must be obeyed even if one did not quite understand him. His only other

[13] It was known to Lupus of Ferrières in the ninth century; see C. H. Beeson, 'Lupus of Ferrières as Scribe and Text Critic', *Mediaeval Academy of America*, 1930, pp. I ff.

[14] On the transmission of *De oratore*, see J. E. Sandys, *History of Classical Scholarship*, I, pp. 648 ff.; R. Sabbadini, *Storia e critica di testi latini*, pp. 101 ff.

[15] On the transmission of Quintilian, see Sandys, *Op. cit.*, I, pp. 655 ff.; Sabbadini, *Op. cit.*, p. 381; Priscilla S. Boskoff, 'Quintilian in the Late Middle Ages', *Speculum*, XXVII (1952), pp. 71 ff.

[16] One of these might have been John of Salisbury whose knowledge of the classics was exceptional and who was familiar with Cicero's *De oratore* and Quintilian's *Institutio* (see H. Liebeschütz, *Mediaeval Humanism in the Life and Writings of John Salisbury*, London, Warburg Institute, 1950, pp. 88 ff.)

In the *Metalogicon* (Lib. I, cap. XI) John of Salisbury discusses 'art' and repeats some of the phrases used in the classical sources when introducing the artificial memory (he is quoting from *De oratore* and perhaps also from *Ad Herennium*) but he does not mention places and images nor give the rules about these. In a later chapter (Lib. IV. cap. XII) he says that memory is a part of Prudence (of course quoting *De inventione*) but has nothing about artificial memory here. John of Salisbury's approach to memory appears to me to be different from the main mediaeval 'Ad Herennian' tradition and closer to what was later to be Lull's view of an art of memory. Lull's *Liber ad memoriam confirmandam* (on which see below pp. 191 ff.) seems to echo some of the terminology of the *Metalogicon*.

available sources would have been Martianus Capella with his incomprehensibly potted version of the rules in a setting of allegory.

Albertus Magnus and Thomas Aquinas certainly knew no other source for the rules than the work which they refer to as 'the Second Rhetoric of Tullius'. That is to say, they knew only the *Ad Herennium* on the artificial memory, and they saw it, through a tradition already well established in the earlier Middle Ages, in the context of the 'First Rhetoric of Tullius', the *De inventione* with its definitions of the four cardinal virtues and their parts. Hence it comes about that the scholastic *ars memorativa* treatises—those by Albertus Magnus and Thomas Aquinas—do not form part of a treatise on rhetoric, like the ancient sources. The artificial memory has moved over from rhetoric to ethics. It is under memory as a part of Prudence that Albertus and Thomas treat of it; and this in itself, surely, is an indication that mediaeval artificial memory is not quite what we should call 'mnemotechnics', which, however useful at times, we should hesitate to class as a part of one of the cardinal virtues.

It is very unlikely that Albertus and Thomas invented this momentous transference. Much more probably the ethical or prudential interpretation of artificial memory was already there in the earlier Middle Ages. And this is indeed strongly indicated by the peculiar contents of a pre-scholastic treatise on memory at which we will glance before coming to the scholastics, for it gives us a glimpse of what mediaeval memory was like before the scholastics took it up.

As is well known, in the earlier Middle Ages the classical rhetoric tradition took the form of the *Ars dictaminis*, an art of letter writing and of style to be used in administrative procedure. One of the most important centres of this tradition was at Bologna, and in the late twelfth and early thirteenth centuries the Bolognese school of *dictamen* was renowned throughout Europe. A famous member of this school was Boncompagno da Signa, author of two works on rhetoric the second of which, the *Rhetorica Novissima*, was written at Bologna in 1235. In his study of Guido Faba, another member of the Bolognese school of *dictamen* of about the same period, E. Kantorowicz has drawn attention to the vein of mysticism which runs through the school, its tendency to place rhetoric in a cosmic setting, to raise it to a 'sphere of quasi-holiness in order to com-

pete with theology'.[17] This tendency is very marked in the *Rhetorica Novissima* in which supernatural origins are suggested, for example, for *persuasio* which must exist in the heavens for without it Lucifer would not have been able to persuade the angels to fall with him. And metaphor, or *transumptio*, must without doubt have been invented in the Earthly Paradise.

Going through the parts of rhetoric in this exalted frame of mind, Boncompagno comes to memory, which he states belongs not only to rhetoric but to all arts and professions, all of which have need of memory.[18] The subject is introduced thus:

> *What memory is.* Memory is a glorious and admirable gift of nature by which we recall past things, we embrace present things, and we contemplate future things through their likeness to past things.
> *What natural memory is.* Natural memory comes solely from the gift of nature, without aid of any artifice.
> *What artificial memory is.* Artificial memory is the auxiliary and assistant of natural memory . . . and it is called 'artificial' from 'art' because it is found artificially through subtlety of mind.[19]

The definition of memory may suggest the three parts of Prudence; the definitions of natural and artificial memory are certainly echoes of the opening of the memory section of *Ad Herennium*, which was well known in the *Ars dictaminis* tradition. We seem to detect here a prefiguration of the scholastics on prudence and the artificial memory, and we wait to hear how Boncompagno will give the memory rules.

We wait in vain, for the matter which Boncompagno treats under memory seems to have little connection with the artificial memory as expounded in *Ad Herennium*.

Human nature, so he informs us, has been corrupted from its original angelic form through the fall and this has corrupted memory. According to 'philosophic discipline' the soul before it came into the body knew and remembered all things, but since its infusion into the body its knowledge and memory are confused; this opinion must, however, be immediately rejected because it is contrary to 'theological teaching.' Of the four humours, the

[17] E. H. Kantorowicz, 'An "Autobiography" of Guido Faba', *Mediaeval and Renaissance Studies*, Warburg Institute, I (1943), pp. 261–2.

[18] Boncompagno, *Rhetorica Novissima*, ed. A. Gaudentio, *Bibliotheca Iuridica Medii Aevi*, II, Bologna, 1891, p. 255.

[19] *Ibid.*, p. 275.

sanguine and the melancholic are the best for memory; melancholics in particular retain well owing to their hard and dry constitution. It is the author's belief that there is an influence of the stars on memory; how this works, however, is known only to God and we must not enquire too closely into it.[20]

Against the arguments of those who say 'that natural memory cannot be assisted by artificial aids' it can be urged that there are many mentions in the scriptures of artificial aids to memory; for example, the cock-crow reminded Peter of something, and this was a 'memory sign'. This is only one of these alleged 'memory signs' in the Scriptures of which Boncompagno gives a long list.[21]

But by far the most striking feature of Boncompagno's memory section is that he includes in it, as connected with memory and artificial memory, the memory of Paradise and Hell.

> *On the memory of Paradise.* Holy men . . . firmly maintain, that the divine majesty resides on the highest throne before which stand the Cherubim, Seraphim, and all the orders of angels. We read, too, that there is ineffable glory and eternal life . . . Artificial memory gives no help to man for these ineffable things . . .
> *On the memory of the infernal regions.* I remember having seen the mountain which in literature is called Etna and in the vulgar Vulcanus, whence, when I was sailing near it, I saw sulphurous balls ejected, burning and glowing; and they say that this goes on all the time. Whence many hold that there is the mouth of Hell. However, wherever Hell may be, I firmly believe that Satan, the prince of Demons, is tortured in that abyss together with his myrmidons.
> *On certain heretics who assert that Paradise and Hell are matters of opinion.* Some Athenians who studied philosophical disciplines and erred through too much subtlety, denied the resurrection of the body . . . Which damnable heresy is imitated by some persons today . . . We however believe without doubting the Catholic faith, AND WE MUST ASSIDUOUSLY REMEMBER THE INVISIBLE JOYS OF PARADISE AND THE ETERNAL TORMENTS OF HELL.[22]

No doubt connected with the primary necessity of remembering Paradise and Hell, as the chief exercise of memory, is the list of virtues and vices which Boncompagno gives, which he calls 'memorial notes which we may call directions or signacula, through which we may frequently direct ourselves in the paths of

[20] *Ibid.*, pp. 275–6. [21] *Ibid.*, p. 277. [22] *Ibid.*, p. 278.

'remembrance'. Amongst such 'memorial notes' are the following:

> . . . wisdom, ignorance, sagacity, imprudence, sanctity, perversity, benignity, cruelty, gentleness, frenzy, astuteness, simplicity, pride, humility, audacity, fear, magnanimity, pusillanimity . . .[23]

Though Boncompagno is a somewhat eccentric figure, and should not be taken as entirely representative of his time, yet certain considerations lead one to think that such a pietistic and moralised interpretation of memory, and what it should be used for, may be the background against which Albertus and Thomas formulated their careful revisions of the memory rules. It is extremely probable that Albertus Magnus would have known of the mystical rhetorics of the Bolognese school, for one of the most important of the centres established by Dominic for the training of his learned friars was at Bologna. After becoming a member of the Dominican Order in 1223, Albertus studied at the Dominican house in Bologna. It is unlikely that there should have been no contact between the Dominicans at Bologna and the Bolognese school of *dictamen*. Boncompagno certainly appreciated the friars, for in his *Candelabrium eloquentiae* he praises the Dominican and Franciscan preachers.[24] The memory section of Boncompagno's rhetoric therefore perhaps foreshadows the tremendous extension of memory training as a virtuous activity which Albertus and Thomas (who was of course trained by Albertus) recommend in their *Summae*. Albertus and Thomas, it may be suggested, would have taken for granted—as something taken for granted in an earlier mediaeval tradition—that 'artificial memory' is concerned with remembering Paradise and Hell and with virtues and vices as 'memorial notes'.

Moreover we shall find that in later memory treatises which are certainly in the tradition stemming from the scholastic emphasis on artificial memory, Paradise and Hell are treated as 'memory places', in some cases with diagrams of those 'places' to be used in 'artificial memory'.[25] Boncompagno also foreshadows other characteristics of the later memory tradition, as will appear later.

We should therefore be on our guard against the assumption that when Albertus and Thomas so strongly advocate the exercise

[23] *Ibid.*, p. 279.

[24] See R Davidsohn, *Firenze ai tempi di Dante*. Florence, 1929, p. 44.

[25] See below, pp. 94–5, 108–11, 115–16, 122 (Pl. 7).

of 'artificial memory' as a part of Prudence, they are necessarily talking about what we should call a 'mnemotechnic'. They may mean, amongst other things, the imprinting on memory of images of virtues and vices, made vivid and striking in accordance with the classical rules, as 'memorial notes' to aid us in reaching Heaven and avoiding Hell.

The scholastics were probably giving prominence to, or re-handling and re-examining, already existing assumptions about 'artificial memory' as an aspect of their rehandling of the whole scheme of the virtues and vices. This general revision was made necessary by the recovery of Aristotle whose new contributions to the sum of knowledge which had to be absorbed into the Catholic framework were as important in the field of ethics as in other fields. The *Nicomachean Ethics* complicated the virtues and vices and their parts, and the new evaluation of Prudence by Albertus and Thomas is part of their general effort to bring virtues and vices up to date.

What was also strikingly new was their examination of the precepts of the artificial memory in terms of the psychology of Aristotle's *De memoria et reminiscentia*. Their triumphant conclusion that Aristotle confirmed the rules of Tullius put the artificial memory on an altogether new footing. Rhetoric is in general graded rather low in the scholastic outlook which turns its back on twelfth-century humanism. But that part of rhetoric which is the artificial memory leaves its niche in the scheme of the liberal arts to become, not only a part of a cardinal virtue but a worth-while object of dialectical analysis.

We now turn to the examination of Albertus Magnus and Thomas Aquinas on the artificial memory.

The *De bono* of Albertus Magnus is, as its title states, a treatise 'on the good', or on ethics.[26] The core of the book is formed by the sections on the four cardinal virtues of Fortitude, Temperance, Justice, and Prudence. These virtues are introduced by the definitions given of them in the First Rhetoric of Tullius, and their parts or subdivisions are also taken from the *De inventione*. Other authorities, both Scriptural, patristic, and pagan—Augustine,

[26] Albertus Magnus, *De bono*, in *Opera omnia*, ed. H. Kühle, C. Feckes, B. Geyer, W. Kübel, Monasterii Westfalorum in aedibus Aschendorff, XXVIII (1951), pp. 82 ff.

Boethius, Macrobius, Aristotle—are of course cited as well, but the four sections of the book on the four virtues depend for their structure and main definitions on the *De inventione*. Albertus seems almost as anxious to bring the ethics of the New Aristotle into line with those of the Tullius of the First Rhetoric as with those of the Christian fathers.

When discussing the parts of Prudence, Albertus states that he will follow the divisions made by Tullius, Macrobius, and Aristotle, beginning with those given by

> Tullius at the end of the First Rhetoric where he says that the parts of Prudence are *memoria, intelligentia, providentia*.[27]

We shall first enquire, he continues, what memory is, which Tullius alone makes a part of Prudence. Secondly, we shall enquire what is the *ars memorandi* of which Tullius speaks. The ensuing discussion falls under these two heads, or *articuli*.

The first *articulus* gets rid of the objections which could be made to the inclusion of memory in Prudence. These are mainly two (though drawn up under five heads). First, that memory is in the sensitive part of the soul, whereas Prudence is in the rational part. Answer: reminiscence as defined by the Philosopher (Aristotle) is in the rational part, and reminiscence is the kind of memory which is a part of Prudence. Secondly, memory as a record of past impressions and events is not a habit, whereas Prudence is a moral habit. Answer: memory can be a moral habit when it is used to remember past things with a view to prudent conduct in the present, and prudent looking forward to the future.

Solution. Memory as reminiscence and memory used to draw useful lessons from the past is a part of Prudence.[28]

The second *articulus* discusses 'the *ars memorandi* which Tullius gives in the Second Rhetoric'. It draws up twenty-one points in the course of which rules for places and images are quoted verbatim from *Ad Herennium*, with comments and criticisms. The solution goes through the twenty-one points, solves the problems, abolishes all criticisms, and confirms the rules.[29]

The discussion opens with the definition of natural and artificial memory. The artificial memory, it is now stated, is both a habit and belongs to the rational part of the soul, being concerned with what

[27] *Ibid.*, p. 245. [28] *Ibid.*, pp. 245–6. [29] *Ibid.*, pp. 246–52.

Aristotle calls reminiscence. 'What he [Tullius] says of artificial memory which is confirmed by induction and rational precept . . . belongs not to memory but to reminiscence, as Aristotle says in the book *De memoria et reminiscentia*.'[30] Thus we have at the start the conflation of Aristotle on reminiscence with *Ad Herennium* on memory training. So far as I know, Albertus was the first to make this conflation.

Then come the precepts, beginning, of course, with rules for places. Discussing the phrase in *Ad Herennium* describing good memory places as standing out 'breviter, perfecte, insigniter aut natura aut manu', Albertus asks how can a place be at the same time both 'brevis' and perfectus'? Tullius seems to be contradicting himself here.[31] The solution is that by a 'brevis' place Tullius means that it should not 'distend the soul' by carrying it through 'imaginary spaces as a camp or city'.[32] One deduces from this that Albertus himself advises the use of only 'real' memory places, memorised in real buildings, not the erection of imaginary systems in memory. Since he has mentioned in the previous solution that 'solemn and rare' memory places are the most 'moving',[33] perhaps one can further deduce that the best kind of building in which to form memory places would be a church.

Again, what does Tullius mean by saying that the places should be memorable 'aut natura aut manu'?[34] Tullius should have defined what he means by this which he nowhere does. The solution is that a place memorable by nature is, for example, a field; a place memorable by hand is a building.[35]

The five rules for choosing places are now quoted, namely (1) in quiet spots to avoid disturbance of the intense concentration needed for memorising; (2) not too much alike, for example not too many identical intercolumniations; (3) neither too large nor too small; (4) neither too brightly lighted nor too obscure; (5) with intervals between them of moderate extent, about thirty feet.[36] It is objected that these precepts do not cover current memory practice, for 'Many people remember through dispositions of places contrary to those described'.[37] But the solution is that Tullius means

[30] Point 3, *ibid.*, p. 246. [31] Point 8, *ibid.*, p. 247.
[32] Solution, point 8, *ibid.*, p. 250. [33] Solution, point 7, *ibid.*, *loc. cit.*
[34] Point 10, *ibid.*, p. 247. [35] Solution, point 10, *ibid.*, p. 251.
[36] Point 11, *ibid.*, p. 247. [37] Point 15, *ibid.*, p. 247.

to say that though different people will choose different places—some a field, some a temple, some a hospital—according to what 'moves' them most; yet the five precepts hold good, whatever the nature of the place-system chosen by the individual.[38]

As a philosopher and theorist on the soul, Albertus has to stop and ask himself what he is doing. These places which are to be so strongly imprinted on memory are corporeal places (*loca corporalia*)[39] therefore in the imagination which receives the corporeal forms from sense impression, therefore not in the intellectual part of the soul. Yes, but we are talking not of memory but of reminiscence which uses the *loca imaginabilia* for rational purposes.[40] Albertus needs to reassure himself about this before he can go on recommending an art which seems to be forcing the lower power of imagination up into the higher rational part of the soul.

And before he comes, as he is about to do, to precepts for images, the second arm of the artificial memory, he has to clear up another knotty point. As he has said in his *De anima* (to which he here refers), memory is the thesaurus not of the forms or images alone (as is the imagination) but also of the *intentiones* drawn from these by the estimative power. In the artificial memory, therefore, does one need extra images to remind of the *intentiones*?[41] The answer, fortunately, is in the negative, for the memory image includes the *intentio* within itself.[42]

This hair-splitting has its momentous side, for it means that the memory image gains in potency. An image to remind of a wolf's form will also contain the *intentio* that the wolf is a dangerous animal from which it would be wise to flee; on the animal level of memory, a lamb's mental image of a wolf contains this *intentio*.[43] And on the higher level of the memory of a rational being, it will mean that an image chosen, say, to remind of the virtue of Justice will contain the *intentio* of seeking to acquire this virtue.[44]

[38] Solution, point 15, *ibid.*, p. 251.
[39] Point 12, *ibid.*, p. 247.
[40] Solution, point 12, *ibid.*, p. 251.
[41] Point 13, *ibid.*, p. 247.
[42] Solution, point 13, *ibid.*, p. 251.
[43] This example is given by Albertus when discussing *intentiones* in his *De anima*; see Albertus Magnus, *Opera omnia*, ed. A. Borgnet, Paris, 1890, V, p. 521.
[44] This is my deduction; this example is not given by Albertus.

Now Albertus turns to the precepts for 'the images which are to be put in the said places'. Tullius says that there are two kinds of images, one for things, the other for words. Memory for things seeks to remind of notions only by images; memory for words seeks to remember every word by means of an image. What Tullius advises would seem to be an impediment rather than a help to memory; first, because one would need as many images as there are notions and words and this multitude would confuse memory; secondly because metaphors represent a thing less accurately than the description of the actual thing itself (*metaphorica minus repraesentant rem quam propria*). But Tullius would have us translate the *propria* into *metaphorica* for the purpose of remembering, saying, for example, that to remember a law-suit in which a man is accused of having poisoned another man for an inheritance, there being many witnesses to his guilt, one should place in memory, images of a sick man in bed, the accused man standing by it holding a cup and a document, and a doctor holding the testicles of a ram. (Albertus has interpreted *medicus*, the fourth finger, as a doctor and so introduced a third person into the scene.) But might it not have been easier to remember all this through the actual facts (*propria*) rather than through these metaphors (*metaphorica*)?[45]

We salute Albertus Magnus across the ages for having had worries about the classical art of memory so like our own. But his solution entirely reverses this criticism on the grounds (1) that images are an aid to memory; (2) that many *propria* can be remembered through a few images; (3) that although the *propria* give more exact information about the thing itself, yet the *metaphorica* 'move the soul more and therefore better help the memory'.[46]

He next struggles with the memory-for-words images of Domitius being beaten up by the Reges, and of Aesop and Cimber dressing up for their parts in the play of *Iphigeneia*.[47] His task was even harder than ours because he was using a corrupt text of *Ad Herennium*. He seems to have had in mind two highly confused images of someone being beaten by the sons of Mars, and of

[45] Point 16, *De bono, ed. cit.*, pp. 247–8.
[46] Solution, points 16 and 18, *ibid.*, p. 251.
[47] Point 17, *ibid.*, p. 248.

Aesop and Cimber and the wandering Iphigeneia.[48] He tries as best he can to make these fit the line to be remembered, but remarks pathetically, 'These metaphorical words are obscure and not easy to remember.' Nevertheless—such was his faith in Tullius—he decides in the solution that *metaphorica* like these are to be used as memory images, for the wonderful moves the memory more than the ordinary. And this was why the first philosophers expressed themselves in poetry, because, as the Philosopher says (referring to Aristotle in the *Metaphysics*), the fable, which is composed of wonders, moves the more.[49]

What we are reading is very extraordinary indeed. For scholasticism in its devotion to the rational, the abstract, as the true pursuit of the rational soul, banned metaphor and poetry as belonging to the lower imaginative level. Grammar and Rhetoric which dealt with such matters had to retreat before the rule of Dame Dialectic. And those fables about the ancient gods with which poetry concerned itself were highly reprehensible morally. To move, to excite the imagination and the emotions with *metaphorica* seems a suggestion utterly contrary to the scholastic puritanism with its attention severely fixed on the next world, on Hell, Purgatory, and Heaven. Yet, though we are to practise the artificial memory as a part of Prudence, its rules for images are letting in the metaphor and the fabulous for their moving power.

And now the *imagines agentes* make their appearance, quoted in full from Tullius.[50] Remarkably beautiful or hideous, dressed in crowns and purple garments, deformed or disfigured with blood or mud, smeared with red paint, comic or ridiculous, they stroll mysteriously, like players, out of antiquity into the scholastic treatise on memory as a part of Prudence. The solution emphasises

[48] Albertus was using a text in which *itionem* (in the line of poetry to be memorised) was read as *ultionem* (vengeance); and which instead of *in altero loco Aesopum et Cimbrum subornari ut ad Iphigeniam in Agamemnonem et Menelaum—hoc erit 'Atridae parant'* read *in altero loco Aesopum et Cimbrum subornari vagantem Iphigeniam, hoc erit 'Atridae parant'*. Marx's notes to his edition of *Ad Herennium* (p. 282) show that some manuscripts have such readings.

[49] Solution, point 17, *De bono, ed. cit.*, p. 251. Cf. Aristotle, *Metaphysics*, 982^{b} 18–19.

[50] Point 20, *De bono, ed. cit.*, p. 248.

that the reason for the choice of such images is that they 'move strongly' and so adhere to the soul.[51]

The verdict in the case for and against the artificial memory, which has been conducted in strict accordance with the rules of scholastic analysis, is as follows:

> We say that the *ars memorandi* which Tullius teaches is the best and particularly for the things to be remembered pertaining to life and judgment (*ad vitam et iudicium*), and such memories (i.e. artificial memories) pertain particularly to the moral man and to the speaker (*ad ethicum et rhetorem*) because since the act of human life (*actus humanae vitae*) consists in particulars it is necessary that it should be in the soul through corporeal images; it will not stay in memory save in such images. Whence we say that of all the things which belong to Prudence the most necessary of all is memory, because from past things we are directed to present things and future things, and not the other way round.[52]

Thus the artificial memory achieves a moral triumph; it rides with Prudence in a chariot of which Tullius is the driver, whipping up his two horses of the First and Second Rhetorics. And if we can see Prudence as a striking and unusual corporeal image—as a lady with three eyes, for example, to remind of her view of things past, present, and future—this will be in accordance with the rules of the artificial memory which recommends the *metaphorica* for remembering the *propria*.

As we have realised from *De bono*, Albertus relies much on Aristotle's distinction between memory and reminiscence in his arguments in favour of the artificial memory. He had carefully studied the *De memoria et reminiscentia* on which he wrote a commentary and had perceived in it what he thought were references to the same kind of artificial memory as that described by Tullius. And it is true, as we saw in the last chapter, that Aristotle does refer to the mnemonic to illustrate his arguments.

In his commentary on the *De memoria et reminiscentia*,[53] Albertus goes through his 'faculty psychology' (more fully described in his *De anima* and developed, of course, out of Aristotle and Avicenna) by which sense impressions pass by various stages

[51] Solution, point 20, *ibid.*, p. 252.

[52] *Ibid.*, p. 249. These are the first words of the Solution.

[53] Albertus Magnus, *De memoria et reminiscentia*, *Opera omnia*, ed. Borgnet, IX, pp. 97 ff.

from *sensus communis* to *memoria* being gradually dematerialised in the process.[54] He develops Aristotle's distinction between memory and reminiscence into a division between memory, which although more spiritual than the preliminary faculties is still in the sensitive part of the soul, and reminiscence which is in the intellectual part, though still retaining traces of the corporeal forms. The process of reminiscence therefore demands that the thing which it is sought to recall should have passed beyond the successive faculties of the sensitive part of the soul and should have reached the domain of the distinguishing intellect, with reminiscence. At this point, Albertus introduces the following astonishing allusion to the artificial memory:

> Those wishing to reminisce (i.e. wishing to do something more spiritual and intellectual than merely to remember) withdraw from the public light into obscure privacy: because in the public light the images of sensible things (*sensibilia*) are scattered and their movement is confused. In obscurity, however, they are unified and are moved in order. This is why Tullius in the *ars memorandi* which he gives in the Second Rhetoric prescribes that we should imagine and seek out dark places having little light. And because reminiscence requires many images, not one, he prescribes that we should figure to ourselves through many similitudes, and unite in figures, that which we wish to retain and remember (*reminisci*). For example, if we wish to record what is brought against us in a law-suit, we should imagine some ram, with huge horns and testicles, coming towards us in the darkness. The horns will bring to memory our adversaries, and the testicles the dispositions of the witnesses.[55]

This ram gives one rather a fright! How has it managed to break loose from the lawsuit image to career dangerously around on its own in the dark? And why has the rule about places being not too dark and not too light been combined with the one about memorising in quiet districts,[56] to produce this mystical obscurity and retirement in which the *sensibilia* are unified and their underlying order perceived? If we were in the Renaissance instead of in the

[54] For an account of the faculty psychology of Albertus, see M. W. Bundy, *The Theory of Imagination in Classical and Mediaeval Thought*, University of Illinois Studies, XII (1927), pp. 187 ff.

[55] Borgnet, IX, p. 108.

[56] Both these rules were quoted correctly by Albertus in *De bono*, *ed. cit.*, p. 247.

Middle Ages, we might wonder whether Albertus thought that the ram was Aries, the sign of the zodiac, and was using magical images of the stars to unify the contents of memory. But perhaps he had merely been doing too much memory work in the night, when silence spreads far and wide, as advised by Martianus Capella, and his worries about the lawsuit image began to take strange forms!

Another feature of Albertus' commentary on the *De memoria et reminiscentia* is his allusion to the melancholy temperament and memory. According to the normal theory of humours, melancholy, which is dry and cold, was held to produce good memories, because the melancholic received the impressions of images more firmly and retained them longer than persons of other temperaments.[57] But it is not of ordinary melancholy that Albertus is speaking in what he says of the type of melancholy which is the temperament of *reminiscibilitas*. The power of reminiscence, he says, will belong above all to those melancholics of whom Aristotle speaks 'in the book of the *Problemata*' who have a *fumosa et fervens* type of melancholy.

> Such are those who have an accidental melancholy caused by an adustation with the sanguine and choleric (temperaments). The phantasmata move such men more than any others, because they are most strongly imprinted in the dry of the back part of the brain: and the heat of the *melancholia fumosa* moves these (*phantasmata*). This mobility confers reminiscence which is investigation. The conservation in the dry holds many (*phantasmata*) out of which it (reminiscence) is moved.[58]

Thus the temperament of reminiscence is not the ordinary dry-cold melancholy which gives good memory; it is the dry-hot melancholy, the intellectual, the inspired melancholy.

Since Albertus insists so strongly that the artificial memory

[57] On melancholy as the temperament of good memory, see R. Klibansky, E. Panofsky, F. Saxl, *Saturn and Melancholy*, Nelson, 1964, pp. 69, 337. The stock definition is given by Albertus in *De bono* (*ed. cit.*, p. 240): 'the goodness of memory is in the dry and the cold, wherefore melancholics are called the best for memory.' Cf. also Boncompagno on melancholy and memory, above p. 59

[58] Borgnet, IX, p. 117. On Albertus Magnus and the 'inspired' melancholy of the Pseudo-Aristotelian *Problemata*, see *Saturn and Melancholy*, pp. 69 ff.

belongs to reminiscence, would his *ars reminiscendi* therefore be a prerogative of inspired melancholics? This would seem to be the assumption.

Early biographers of Thomas Aquinas say that he had a phenomenal memory. As a boy at school in Naples he committed to memory all that the master said, and later he trained his memory under Albertus Magnus at Cologne. 'His collection of utterances of the Fathers on the Four Gospels prepared for Pope Urban was composed of what he had *seen*, not *copied*, in various monasteries' and his memory was said to be of such capacity and retentive power that it always retained everything that he read.[59] Cicero would have called such a memory 'almost divine'.

Like Albertus, Aquinas treats of the artificial memory under the virtue of Prudence in the *Summa Theologiae*. Like Albertus, too, he also wrote a commentary on Aristotle's *De memoria et reminiscentia* in which there are allusions to the art of Tullius. It will be best to look first at the allusions in the commentary since these help to explain the precepts for memory in the *Summa*.

Aquinas introduces what he has to say about Aristotle on memory and reminiscence[60] with a reminder of the First Rhetoric on memory as a part of Prudence. For he opens the commentary with the remark that the philosopher's statement in his *Ethics* that reason which is peculiar to man is the same as the virtue of Prudence, is to be compared with the statement of Tullius that the parts of Prudence are *memoria, intelligentia, providentia*.[61] We are on familiar ground and wait expectantly for what is sure to come. It is led up to by analysis of the image from sense impression as the ground of knowledge, the material on which intellect works. 'Man cannot understand without images (*phantasmata*); the image is a similitude of a corporeal thing, but understanding is of universals which are to be abstracted from particulars.'[62] This formulates the fundamental position of the theory of knowledge of both Aristotle and Aquinas. It is constantly repeated on the early

[59] E. K. Rand, *Cicero in the Courtroom of St. Thomas Aquinas*, Milwaukee, 1946, pp. 72–3.

[60] Edition used, Thomas Aquinas, *In Aristotelis libros De sensu et sensato, De memoria et reminiscentia commentarium*, ed. R. M. Spiazzi, Turin-Rome, 1949, pp. 85 ff.

[61] *Ibid.*, p. 87.

[62] *Ibid.*, p. 91.

pages of the commentary: 'Nihil potest homo intelligere sine phantasmate.'[63] What then is memory? It is in the sensitive part of the soul which takes the images of sense impressions; it therefore belongs to the same part of the soul as imagination, but is also *per accidens* in the intellectual part since the abstracting intellect works in it on the phantasmata.

> It is manifest from the preceding to what part of the soul memory belongs, that is to say to the same (part) as phantasy. And those things are *per se* memorable of which there is a phantasy, that is to say, the sensibilia. But the intelligibilia are *per accidens* memorable, for these cannot be apprehended by man without a phantasm. And thus it is that we remember less easily those things which are of subtle and spiritual import; and we remember more easily those things which are gross and sensible. And if we wish to remember intelligible notions more easily, we should link them with some kind of phantasms, as Tullius teaches in his Rhetoric.[64]

It has come, the inevitable reference to Tullius on the artificial memory in the Second Rhetoric. And these phrases, curiously overlooked by modern Thomists but very famous and forever quoted in the old memory tradition, give the Thomist justification for the use of images in the artificial memory. It is as a concession to human weakness, to the nature of the soul, which will take easily and remember the images of gross and sensible things but which cannot remember 'subtle and spiritual things' without an image. Therefore we should do as Tullius advises and link such 'things' with images if we wish to remember them.

In the later part of his commentary, Aquinas discusses the two main points of Aristotle's theory of reminiscence, that it depends on association and order. He repeats from Aristotle the three laws of association, giving examples, and he emphasises the importance of order. He quotes Aristotle on mathematical theorems being easy to remember through their order; and on the necessity of finding a

[63] *Ibid.*, p. 92. The commentary should be read in conjunction with the psychology expounded in Aquinas' commentary on the *De anima*. Aquinas was using the Latin translation of Aristotle by William of Moerbeke in which Aristotle's statements are rendered as *Numquam sine phantasmate intelligit anima* or *intelligere non est sine phantasmate*. An English translation of the Latin translation which Aquinas used is given in *Aristotle's 'De anima' with the Commentary of St. Thomas Aquinas*, trans. Kenelm Foster and Sylvester Humphries, London, 1951.

[64] Aquinas, *De mem. et rem.*, *ed. cit.*, p. 93.

starting-point in memory from which reminiscence will proceed through an associative order until it finds what it is seeking. And at this point, where Aristotle himself refers to the τόποι of Greek mnemonics, Aquinas brings in the *loci* of Tullius.

> It is necessary for reminiscence to take some starting-point, whence one begins to proceed to reminisce. For this reason, some men may be seen to reminisce from the places in which something was said or done, or thought, using the place as it were as the starting-point for reminiscence; because access to the place is like a starting-point for all those things which were raised in it. Whence Tullius teaches in his Rhetoric that for easy remembering one should imagine a certain order of places upon which images (*phantasmata*) of all those things which we wish to remember are distributed in a certain order.[65]

The places of the artificial memory are thus given a rational grounding in Aristotelian theory of reminiscence based on order and association.

Aquinas thus continues Albertus' conflation of Tullius with Aristotle, but more explicitly and in a more carefully thought out way. And we are at liberty to imagine the places and images of the artificial memory as in some way the 'sensible' furniture of a mind and a memory directed towards the intelligible world.

But Aquinas does not make the hard and fast distinction between memory in the sensitive part, and reminiscence (including the artificial memory as an art of reminiscence) in the intellectual part of the soul on which Albertus had insisted. Reminiscence is indeed peculiar to man, whereas animals also have memory, and its method of proceeding from a starting-point can be likened to the method of the syllogism in logic, and 'syllogizare est actus rationis'. Nevertheless the fact that men in trying to remember strike their heads and agitate their bodies (Aristotle had mentioned this) shows that the act is partly corporeal. Its superior and partly rational character is due—not to its being in no way in the sensitive part—but to the superiority of the sensitive part in man, to that in animals, because man's rationality is used in it.

This caution means that Aquinas does not fall into the trap, into which Albertus is beginning to fall, of regarding the artificial

[65] *Ibid.*, p. 107. Immediately following this passage, Aquinas gives an interpretation of the Aristotle passage on transition from milk, to white, to air, to autumn (see above, p. 34) as illustrating the laws of association.

memory with superstitious awe. There is nothing comparable in Aquinas to Albertus's transformation of a memory image into a mysterious vision in the night. And although he, too, alludes to memory and melancholy, he does not refer to the melancholy of the *Problemata*, nor assume that this 'inspired' type of melancholy belongs to reminiscence.

In the second portion of the second part—the *Secunda Secundae* —of the *Summa*, Aquinas treats of the four cardinal virtues. As Albertus had done he takes his definitions and naming of these virtues from the *De inventione*, always called the Rhetoric of Tullius. To quote E. K. Rand on this, 'He (Aquinas) begins with Cicero's definition of the virtues and treats them in the same order . . . His titles are the same, Prudentia (not Sapientia), Justitia, Fortitudo, Temperantia.'[66] Like Albertus Aquinas is using many other sources for the virtues but the *De inventione* provides his basic framework.

In discussing the parts of Prudence,[67] he mentions the first three parts which Tullius gives; then the six parts assigned to it by Macrobius; then one other part mentioned by Aristotle but not by his other sources. He takes as his basis the six parts of Macrobius; adds to these *memoria* given as a part by Tullius; and *solertia* mentioned by Aristotle. He thereupon lays down that Prudence has eight parts, namely, *memoria, ratio, intellectus, docilitas, solertia* (skill), *providentia, circumspectio, cautio*. Of these, Tullius alone gave *memoria* as a part, and the whole eight parts can really be subsumed under Tullius' three of *memoria, intelligentia, providentia*.

He begins his discussion of the parts with *memoria*.[68] He must first of all decide whether memory is a part of Prudence. The arguments against are:

(1) Memory is in the sensitive part of the soul says the Philosopher. Prudence is in the rational part. Therefore memory is not a part of Prudence.
(2) Prudence is acquired by exercise and experience; memory is in us by nature. Therefore memory is not a part of Prudence.
(3) Memory is of the past; Prudence of the future. Therefore memory is not a part of Prudence.

[66] Rand, *Op. cit.*, p. 26.
[67] *Summa Theologiae*, II, II, quaestio XLVIII, *De partibus Prudentiae.*
[68] Quaestio XLIX, *De singulis Prudentiae partibus*: articulus I, *Utrum memoria sit pars Prudentiae.*

BUT AGAINST THIS THERE IS THAT TULLIUS PUTS MEMORY AMONG THE PARTS OF PRUDENCE.

To agree with Tullius, the above three objections are answered:

(1) Prudence applies universal knowledge to particulars, which are derived from sense. Therefore much belonging to the sensitive part belongs to Prudence, and this includes memory.
(2) As Prudence is both a natural aptitude but increased by exercise so also is memory. 'For Tullius (and another authority) says in his Rhetoric that memory is not only perfected from nature, but also has much of art and industry.'
(3) Prudence uses experience of the past in providing for the future. Therefore memory is a part of Prudence.

Aquinas is partly following Albertus but with differences; as we should expect, he does not rest the placing of memory in Prudence on a distinction between memory and reminiscence. On the other hand, he states even more clearly than Albertus that it is the artificial memory, the memory exercised and improved by art, which is one of the proofs that memory is a part of Prudence. The words quoted on this are a paraphrase of *Ad Herennium* and are introduced as deriving from 'Tullius (alius auctor)'. The 'other authority' probably refers to Aristotle, whose advice on memory is assimilated to that given by 'Tullius' in the memory rules as formulated by Thomas Aquinas.

It is in his reply to the second point that Aquinas gives his own four precepts for memory which are as follows:

> Tullius (and another authority) says in his Rhetoric that memory is not only perfected from nature but also has much of art and industry: and there are four (points) through which a man may profit for remembering well.
>
> (1) The first of these is that he should assume some convenient similitudes of the things which he wishes to remember; these should not be too familiar, because we wonder more at unfamiliar things and the soul is more strongly and vehemently held by them; whence it is that we remember better things seen in childhood. It is necessary in this way to invent similitudes and images because simple and spiritual intentions slip easily from the soul unless they are as it were linked to some corporeal similitudes, because human cognition is stronger in regard to the sensibilia. Whence the memorative (power) is placed in the sensitive (part) of the soul.

(2) Secondly it is necessary that a man should place in a considered order those (things) which he wishes to remember, so that from one remembered (point) progress can easily be made to the next. Whence the Philosopher says in the book *De memoria*: 'some men can be seen to remember from places. The cause of which is that they pass rapidly from one (step) to the next.'

(3) Thirdly, it is necessary that a man should dwell with solicitude on, and cleave with affection to, the things which he wishes to remember; because what is strongly impressed on the soul slips less easily away from it. Whence Tullius says in his Rhetoric that 'solicitude conserves complete figures of the simulachra'.

(4) Fourthly, it is necessary that we should meditate frequently on what we wish to remember. Whence the Philosopher says in the book *De memoria* that 'meditation preserves memory' because, as he says 'custom is like nature. Thence, those things which we often think about we easily remember, proceeding from one to another as though in a natural order.'

Let us consider with care Thomas Aquinas's four precepts for memory. They follow in outline the two foundations of the artificial memory, places and images.

He takes images first. His first rule echoes *Ad Herennium* on choosing striking and unusual images as being the most likely to stick in memory. But the images of the artificial memory have turned into 'corporeal similitudes' through which 'simple and spiritual intentions' are to be prevented from slipping from the soul. And he gives again here the reason for using 'corporeal similitudes' which he gives in the Aristotle commentary, because human cognition is stronger in regard to the sensibilia, and therefore 'subtle and spiritual things' are better remembered in the soul in corporeal forms.

His second rule is taken from Aristotle on order. We know from his Aristotle commentary that he associated the 'starting-point' passage, which he here quotes, with Tullius on places. His second rule is therefore a 'place' rule though arrived at through Aristotle on order.

His third rule is very curious, for it is based on a misquotation of one of the rules for places in *Ad Herennium*, namely that these should be chosen in deserted regions 'because the crowding and passing to and fro of people confuse and weaken the impress of the images while solitude keeps their outlines sharp (*solitudo conservat*

integras simulacrorum figuras).'[69] Aquinas quotes this as *sollicitudo conservat integras simulacrorum figuras*, turning 'solitude' into 'solicitude', turning the memory rule which advised solitary districts in which to make the effort of memorising places in order to avoid distraction from the mnemonic effort, into 'solicitude'. It might be said that it comes to the same thing, since the object of the solitude was to be solicitous about memorising. But I do *not* think that it comes to the same thing, because Aquinas' 'solicitude' involves 'cleaving with affection' to the things to be remembered, introducing a devotional atmosphere which is entirely absent from the classical memory rule.

Aquinas' mistranslation and misunderstanding of the place rule is all the more interesting because we had a similar kind of misunderstanding of place rules in Albertus, who turned the 'not too dark or too light' and the 'solitude' place rules into some kind of mystical retirement.

The fourth rule is from Aristotle's *De memoria* on frequent meditation and repetition, advice which is also given in *Ad Herennium*.

To sum up, it would seem that Thomas' rules are based on the places and images of the artificial memory, but that these have been transformed. The images chosen for their memorable quality in the Roman orator's art have been changed by mediaeval piety into 'corporeal similitudes' of 'subtle and spiritual intentions'. The place rules may also have been somewhat misunderstood. It seems that the mnemotechnical character of the place rules, chosen for their dissimilarity, clear lighting, in quiet districts, all with a view to helping memorisation, may not have been fully realised by either Albertus or Thomas. They interpret the place rules also in a devotional sense. And, particularly in Thomas, one gains the impression that the important thing is order. His corporeal similitudes would perhaps be arranged in a regular order, a 'natural' order, not according to the studied irregularity of the rules, the meaning of which—in the case of *solitudo-sollicitudo*—he has transformed with devotional intensity.

How then are we to think of a scholastic artificial memory, a memory following to some extent the rules of Tullius but transforming these with moralising and pietistic intentions? What

[69] *Ad Herennium*, III, xix, 31. See above p. 7.

becomes of the strikingly beautiful and strikingly hideous *imagines agentes* in such a memory? The immediately pre-scholastic memory of Boncompagno suggests an answer to this question, with its virtues and vices as 'memorial notes' through which we are to direct ourselves in the paths of remembrance, reminding of the ways to Heaven and to Hell. The *imagines agentes* would have been moralised into beautiful or hideous human figures as 'corporeal similitudes' of spiritual intentions of gaining Heaven or avoiding Hell, and memorised as ranged in order in some 'solemn' building.

As I said in the first chapter, it is a great help to us in reading the memory section of *Ad Herennium* to be able to refer to Quintilian's clear description of the mnemotechnical process—the progress round the building choosing the places, the images remembered on the places for reminding of the points of the speech The mediaeval reader of *Ad Herennium* did not have that advantage. He read those queer rules for places and images without the assistance of any other text on the classical art of memory, and, moreover, in an age when the classical art of oratory had disappeared, was no longer practised. He read the rules, not in association with any living practice of oratory, but in close association with the teaching of Tullius on ethics in the First Rhetoric. One can see how misunderstandings might have arisen. And there is even the possibility, as already suggested, that an ethical, or didactic, or religious use of the classical art might have arisen much earlier, might have been used in some early Christian transformation of it of which we know nothing but which might have been handed on to the early Middle Ages. It is therefore probable that the phenomenon which I call 'the mediaeval transformation of the classical art of memory' was not invented by Albertus and Thomas but was already there long before they took it up with renewed zeal and care.

The scholastic refurbishing of the art and strong recommendation of it marks a very important point in its history, one of the great peaks of its influence. And one can see how it belongs into the general picture of thirteenth-century effort as a whole. The aim of the learned Dominican friars, of whom Thomas and Albertus were such notable representatives, was to use the new Aristotelian learning to preserve and defend the Church, and absorb it into the Church, to re-examine the existing body of learning in its light.

The immense dialectical effort of Thomas was, as everyone knows, directed towards answering the arguments of the heretics. He it was who turned Aristotle from a potential enemy into an ally of the Church. The other great scholastic effort of incorporating the Aristotelian ethics into the already existing virtue and vice system is not so much studied in modern times but may have seemed equally, if not more, important to contemporaries. The parts of the virtues, their incorporation into the existing Tullian scheme, their analysis in the light of Aristotle on the soul—all this is as much a part of the *Summa Theologiae*, a part of the effort to absorb the Philosopher, as are the more familiar aspects of Thomist philosophy and dialectics.

Just as the Tullian virtues needed overhauling with Aristotelian psychology and ethics, so would the Tullian artificial memory need such an overhaul. Perceiving the references to the art of memory in the *De memoria et reminiscentia*, the friars made that work the basis of their justification of the Tullian places and images through re-examining the psychological *rationale* of places and images with the help of Aristotle on memory and reminiscence. Such an effort would be parallel to their new examination of the virtues in the light of Aristotle. And the two efforts were closely linked because the artificial memory was actually a part of one of the cardinal virtues.

It has sometimes been a matter for surprised comment that the age of scholasticism, with its insistence on the abstract, its low grading of poetry and metaphor, should also be an age which saw an extraordinary efflorescence of imagery, and of new imagery, in religious art. Searching for an explanation of this apparent anomaly in the works of Thomas Aquinas, the passage in which he justifies the use of metaphor and imagery in the Scriptures has been quoted. Aquinas has been asking the question why the Scriptures use imagery since 'to proceed by various similitudes and representations belongs to poetry which is the lowest of all the doctrines'. He is thinking of the inclusion of poetry with Grammar, the lowest of the liberal arts, and enquiring why the Scriptures use this low branch of knowledge. The reply is that the Scriptures speak of spiritual things under the similitude of corporeal things 'because it is natural to man to reach the intelligibilia through the sensibilia because all our knowledge has its beginning in sense.'[70]

[70] *Summa theologiae*, I, I, quaestio I, articulus 9.

This is a similar argument to that which justifies the use of images in the artificial memory. It is extremely curious that those in search of scholastic justification of the use of imagery in religious art should have missed the elaborate analyses of why we may use images in memory given by Albertus and Thomas.

Something has been left out all along the line and it is Memory. Memory which not only had immense practical importance for the men of ancient times, but also a religious and ethical importance. Augustine, the great Christian rhetor, had made Memory one of the three powers of the soul, and Tullius—that Christian soul before Christianity—had made it one of the three parts of Prudence. And Tullius had given advice as to how to make 'things' memorable. I make so bold as to suggest that Christian didactic art which needs to set forth its teaching in a memorable way, which must show forth impressively the 'things' which make for virtuous and unvirtuous conduct, may owe more than we know to classical rules which have never been thought of in this context, to those striking *imagines agentes* which we have seen trooping out of the rhetoric text book into a scholastic treatise on ethics.

The high Gothic cathedral, so E. Panofsky has suggested, resembles a scholastic summa in being arranged according to 'a system of homologous parts and parts of parts'.[71] The extraordinary thought now arises that if Thomas Aquinas memorised his own *Summa* through 'corporeal similitudes' disposed on places following the order of its parts, the abstract *Summa* might be corporealised in memory into something like a Gothic cathedral full of images on its ordered places. We must refrain from too much supposition, yet it remains an undoubted fact that the *Summa* contained, in an unnoticed part of it, justification and encouragement for the use of imagery, and the creation of new imagery, in its recommendation of the artificial memory.

On the walls of the Chapter House of the Dominican convent of Santa Maria Novella in Florence, there is a fourteenth-century fresco (Pl. I) glorifying the wisdom and virtue of Thomas Aquinas. Thomas is seated on a throne surrounded by flying figures representing the three theological and the four cardinal virtues. To right and left of him sit saints and patriarchs and

[71] E. Panofsky, *Gothic Architecture and Scholasticism*, Latrobe, Pennsylvania, 1951, p. 45.

beneath his feet are the heretics whom he has crushed by his learning.

On the lower level, placed in niches or stalls, are fourteen female figures symbolising the vast range of the saint's knowledge. The seven on the right represent the liberal arts. Beginning on the extreme right is the lowest of the seven, Grammar; next to her is Rhetoric; then Dialectic, then Music (with the organ), and so on. Each of the arts has a famous representative of it sitting in front of her; in front of Grammar sits Donatus; in front of Rhetoric is Tullius, an old man with a book and upraised right hand; in front of Dialectic is Aristotle, in a large hat and with a forked white beard; and so on for the rest of the arts. Then come seven other female figures which are supposed to represent theological disciplines or the theological side of Thomas's learning, though no systematic attempt has been made to interpret them; in front of them sit representatives of these branches of learning, bishops and others, who again have not been fully identified.

Obviously the scheme is far from being entirely original. What could be less novel than the seven virtues? The seven liberal arts with their representatives was an ancient theme (the reader may think of the famous porch at Chartres), the seven additional figures symbolic of other disciplines, with representatives, is merely an extension of it. Nor would the mid-fourteenth-century designers of the scheme have wished to be original. Thomas is defending and supporting the traditions of the Church, using his vast learning to that end.

After our study of the mediaeval Tullius in this chapter we may look with renewed interest at Tullius, sitting modestly with Rhetoric in his right place in the scheme of things, rather low down in the scale of the liberal arts, only one above Grammar, and below Dialectic and Aristotle. Yet he is, perhaps, more important than he seems? And the fourteen female figures sitting in order in their places, as in a church, do they symbolise not only the learning of Thomas but also his method of remembering it? Are they, in short, 'corporeal similitudes', formed partly out of well known figures, the liberal arts, adapted to a personal use, and partly of newly invented figures?

I leave this only as a question, a suggestion, emphasising only that the mediaeval Tullius is a character of considerable importance in the scholastic scheme of things. Certainly he is a character

of major importance for the mediaeval transformation of the classical art of memory. And though one must be extremely careful to distinguish between art proper and the art of memory, which is an invisible art, yet their frontiers must surely have overlapped. For when people were being taught to practise the formation of images for remembering, it is difficult to suppose that such inner images might not sometimes have found their way into outer expression. Or, conversely, when the 'things' which they were to remember through inner images were of the same kind as the 'things' which Christian didactic art taught through images, that the places and images of that art might themselves have been reflected in memory, and so have become 'artificial memory'.

Chapter IV

MEDIAEVAL MEMORY AND THE FORMATION OF IMAGERY

THE tremendous recommendation of the art of memory, in the form of corporeal similitudes ranged in order, by the great saint of scholasticism was bound to have far reaching results. If Simonides was the inventor of the art of memory, and 'Tullius' its teacher, Thomas Aquinas became something like its patron saint. The following are a few examples, culled from a much larger mass of material, of how the name of Thomas dominated memory in later centuries.

In the middle of the fifteenth century, Jacopo Ragone wrote an *Ars memorativa* treatise; the opening words of its dedication to Franceso Gonzaga are: 'Most illustrious Prince, the artificial memory is perfected through two things, namely *loci* and *imagines*, as Cicero teaches and as is confirmed by St. Thomas Aquinas.'[1] Later in the same century, in 1482, there appeared at Venice an early and beautiful specimen of the printed book; it was a work on rhetoric by Jacobus Publicius which contained as an appendix the first printed *Ars memorativa* treatise. Though this book looks like a Renaissance product it is full of the influence of Thomist artificial memory; the rules for images begin with the words: 'Simple and spiritual intentions slip easily from the memory unless joined to corporeal similitudes.'[2] One of the fullest and most widely cited of

[1] Jacopo Ragone, *Artificialis memoriae regulae*, written in 1434. Quoted from the manuscript in the British Museum, Additional 10, 438, folio 2 *verso*.

[2] Jacobus Publicius, *Oratoriae artis epitome*, Venice, 1482 and 1485; ed. of 1485, sig. G 4 *recto*.

the printed memory treatises is the one published in 1520 by Johannes Romberch, a Dominican. In his rules for images, Romberch remarks that 'Cicero in *Ad Herennium* says that memory is not only perfected from nature but also has many aids. For which St. Thomas gives a reason in II, II, 49 (i.e. in this section of the *Summa*) where he says that spiritual and simple intentions slip easily from the soul unless they are linked with certain corporeal similitudes.'[3] Romberch's rules for places are based on Thomas's conflation of Tullius with Aristotle, for which he quotes from Thomas's commentary on the *De memoria et reminiscentia*.[4] One would expect that a Dominican, like Romberch, would base himself on Thomas, but the association of Thomas with memory was widely known outside the Dominican tradition. The *Piazza Universale*, published by Tommaso Garzoni in 1578, is a popularisation of general knowledge; it contains a chapter on memory in which Thomas Aquinas is mentioned as a matter of course among the famous teachers of memory.[5] In his *Plutosofia* of 1592, F. Gesualdo couples Cicero and St. Thomas together on memory.[6] Passing on into the early seventeenth century we find a book, the English translation of the Latin title of which would be 'The Foundations of Artificial Memory from Aristotle, Cicero, and Thomas Aquinas.'[7] At about the same time a writer who is defending the artificial memory against attacks upon it, reminds of what Cicero, Aristotle, and St. Thomas have said about it, emphasising that St. Thomas in II, II, 49 has called it a part of Prudence.[8] Gratarolo in a work which was Englished in 1562 by William Fulwood as *The Castel of Memory* notes that Thomas Aquinas advised the use of places in memory,[9] and this was quoted from Fulwood in an *Art of Memory* published in 1813.[10]

[3] J. Romberch, *Congestorium artificiosa memorie*, ed. of Venice, 1533, p. 8.

[4] *Ibid.*, p. 16 etc.

[5] T. Garzoni, *Piazza universale*, Venice, 1578, Discorso LX.

[6] F. Gesualdo, *Plutosofia*, Padua, 1592, p. 16.

[7] Johannes Paepp, *Artificiosae memoriae fundamenta ex Aristotele, Cicerone, Thomae Aquinatae, aliisque praestantissimis doctoribus*, Lyons, 1619.

[8] Lambert Schenkel, *Gazophylacium*, Strasburg, 1610, pp. 5, 38 etc.; (French version) *Le Magazin de Sciences*, Paris, 1623, pp. 180 etc.

[9] W. Fulwood, *The Castel of Memorie*, London, 1562, sig. Gv, 3 *recto*.

[10] Gregor von Feinaigle, *The New Art of Memory*, third edition, London, 1813, p. 206.

Thus a side of Thomas Aquinas who was venerated in the ages of Memory was still not forgotten even in the early nineteenth century. It is a side of him which, so far as I know, is never mentioned by modern Thomist philosophers. And though books on the art of memory are aware of II, II, 49 as an important text in its history,[11] no very serious enquiry has been undertaken into the nature of the influence of the Thomist rules for memory.

What were the results of the momentous recommendation by Albertus and Thomas of their revisions of the memory rules as a part of Prudence? An enquiry into this should begin near the source of the influence. It was in the thirteenth century that the scholastic rules were promulgated, and we should expect to find their influence at their greatest strength beginning at once and carrying on in strength into the fourteenth century. I propose in this chapter to raise the question of what was the nature of this immediate influence and where we should look for its effects. I cannot hope to answer it adequately, nor do I aim at more than sketching possible answers, or rather possible lines of enquiry. If some of my suggestions seem daring, they may at least provoke thought on a theme which has hardly been thought about at all. This theme is the rôle of the art of memory in the formation of imagery.

The age of scholasticism was one in which knowledge increased. It was also an age of Memory, and in the ages of Memory new imagery has to be created for remembering new knowledge. Though the great themes of Christian doctrine and moral teaching remained, of course, basically the same, they became more complicated. In particular the virtue-vice scheme grew much fuller and was more strictly defined and organised. The moral man who wished to choose the path of virtue, whilst also remembering and avoiding vice, had more to imprint on memory than in earlier simpler times.

The friars revived oratory in the form of preaching, and

[11] For example, H. Hajdu, *Das Mnemotechnische Schrifttum des Mittelalters*, Vienna, Amsterdam, Leipzig, 1936, pp. 68 ff.; Paolo Rossi, *Clavis Universalis*, Milan-Naples, 1960, pp. 12 ff. Rossi discusses Albertus and Thomas on memory in their *Summae* and in their Aristotle commentaries. His treatment is much the best hitherto available, but he does not examine the *imagines agentes* nor raise the question of how these were interpreted in the Middle Ages.

preaching was indeed the main object for which the Dominican Order, the Order of Preachers, was founded. Surely it would have been for remembering sermons, the mediaeval transformation of oratory, that the mediaeval transformation of the artificial memory would have been chiefly used.

The effort of Dominican learning in the reform of preaching is parallel to the great philosophical and theological effort of the Dominican schoolmen. The *Summae* of Albertus and Thomas provide the abstract philosophical and theological definitions, and in ethics the clear abstract statements, such as the divisions of the virtues and vices into their parts. But the preacher needed another type of *Summae* to help him, *Summae* of examples and similitudes[12] through which he could easily find corporeal forms in which to clothe the spiritual intentions which he wished to impress on the souls and memories of his hearers.

The main effort of this preaching was directed towards inculcating the articles of the Faith, together with a severe ethic in which virtue and vice are sharply outlined and polarised and enormous emphasis is laid on the rewards and punishments which await the one and the other in the hereafter.[13] Such was the nature of the 'things' which the orator-preacher would need to memorise.

The earlist known quotation of Thomas's memory rules is found in a summa of similitudes for the use of preachers. This is the *Summa de exemplis ac similitudinibus rerum* by Giovanni di San Gimignano, of the Order of Preachers, which was written early in the fourteenth century.[14] Though he does not mention Thomas by name, it is an abbreviated version of the Thomist memory rules which San Gimignano quotes.

> There are four things which help a man to remember well.
> The first is that he should dispose those things which he wishes to remember in a certain order.
> The second is that he should adhere to them with affection.

[12] Many such collections for the use of preachers were compiled; see J. T. Welter, *L'exemplum dans la littérature religieuse et didactique du Moyen Age*, Paris-Toulouse, 1927.

[13] See G. R. Owst, *Preaching in Mediaeval England*, Cambridge, 1926.

[14] See A. Dondaine, 'La vie et les œuvres de Jean de San Gimignano', *Archivum Fratrum Praedicatorum*, II (1939), p. 164. The work must be later than 1298 and is probably earlier than 1314. It was enormously popular (see *ibid.*, pp. 160 ff.).

The third is that he should reduce them to unusual similitudes. The fourth is that he should repeat them with frequent meditation.[15]

We have to make clear to ourselves a distinction. In a sense, the whole of San Gimignano's book with its painstaking provision of similitudes for every 'thing' which the preacher might have to treat is based on the memory principle. To make people remember things, preach them to them in 'unusual' similitudes for these will stick better in memory than the spiritual intentions will do, unless clothed in such similitudes. Yet the similitude spoken in the sermon is not strictly speaking the similitude used in artificial memory. For the memory image is invisible, and remains hidden within the memory of its user, where, however, it can become the hidden generator of externalised imagery.

The next in date to quote the Thomist memory rules is Bartolomeo da San Concordio (1262–1347) who entered the Dominican Order at an early age and spent most of his life at the convent in Pisa. He is celebrated as the author of a legal compendium, but what interests us here is his *Ammaestramenti degli antichi*,[16] or 'teachings of the ancients' about the moral life. It was written early in the fourteenth century, before 1323.[17] Bartolomeo's method is to make an improving statement and then support it with a string of quotations from the ancients and the Fathers. Though this gives a discursive, almost an early humanist, flavour to his treatise, its groundwork is scholastic; Bartolomeo is moving among the Aristotelian ethics guided by the ethic of Tullius in the *De inventione* after the manner of Albertus and Thomas. Memory is the subject of one set of quotations, and the art of memory of another; and since the immediately following sections of the book are recognisably concerned with *intelligentia* and *providentia*, it is certainly of *memoria* as a part of Prudence that the devout Dominican author is thinking.

One gains the impression that this learned friar is close to the

[15] Giovanni di San Gimignano, *Summa de exemplis ac similitudinibus rerum*, Lib. VI, cap. xlii.

[16] I have used the edition of Milan, 1808. The first edition was at Florence in 1585. The edition of Florence, 1734, edited by D. M. Manni of the Academia della Crusca, influenced later editions. See below, p. 88, note 20.

[17] It could be almost exactly contemporary with San Gimignano's *Summa*, and not later than that work.

well-head of an enthusiasm for artificial memory which is spreading through the Dominican Order. His eight rules for memory are mainly based on Thomas, and he is using both 'Tommaso nella seconda della seconda' (i.e. *Summa Theologiae*, II, II, 49) and 'Tommaso d'Aquino sopra il libro de memoria' (i.e. Thomas's commentary on the *De memoria et reminiscentia*). That he does not call him Saint Thomas is the evidence that the book was written before the canonisation in 1323. The following are Bartolomeo's rules which I translate, though leaving the sources in the original Italian:

(On order).
Aristotile in libro memoria. Those things are better remembered which have order in themselves. Upon which Thomas comments: Those things are more easily remembered which are well ordered, and those which are badly ordered we do not easily remember. Therefore those things which a man wishes to retain, let him study to set them in order.
Tommaso nella seconda della seconda. It is necessary that those things which a man wishes to retain in memory he should consider how to set out in order, so that from the memory of one thing he comes to another.
(On similitudes).
Tommaso nella seconda della seconda. Of those things which a man wishes to remember, he should take convenient similitudes, not too common ones, for we wonder more at uncommon things and by them the mind is more strongly moved.
Tommaso quivi medesimo (i.e. *loc. cit.*). The finding out of images is useful and necessary for memory; for pure and spiritual intentions slip out of memory unless they are as it were linked to corporeal similitudes.
Tullio nel terzo della nuova Rettorica. Of those things which we wish to remember, we should place in certain places images and similitudes. And Tullius adds that the places are like tablets, or paper, and the images like letters, and placing the images is like writing, and speaking is like reading.[18]

Obviously, Bartolomeo is fully aware that Thomas's recommendation of order in memory is based on Aristotle, and that his recommendation of the use of similitudes and images is based on *Ad*

[18] Bartolomeo da San Concordio, *Ammaestramenti degli antichi*, IX, viii (*ed. cit.*, pp. 85–6).

Herennium, refered to as 'Tullius in the third book of the New Rhetoric'.

What are we, as devout readers of Bartolomeo's ethical work intended to do? It has been arranged in order with divisions and sub-divisions after the scholastic manner. Ought we not to act prudently by memorising in their order through the artificial memory the 'things' with which it deals, the spiritual intentions of seeking virtues and avoiding vices which it arouses? Should we not exercise our imaginations by forming corporeal similitudes of, for example, Justice and its sub-divisions, or of Prudence and her parts? And also of the 'things' to be avoided, such as Injustice, Inconstancy, and the other vices examined? The task will not be an easy one, for we live in new times when the old virtue-vice system has been complicated by the discovery of new teachings of the ancients. Yet surely it is our duty to remember these teachings by the ancient art of memory. Perhaps we shall also more easily remember the many quotations from ancients and Fathers by memorising these as written on or near the corporeal similitudes which we are forming in memory.

That Bartolomeo's collection of moral teachings of the ancients was regarded as eminently suitable for memorisation is confirmed by the fact that in two fifteenth-century codices[19] his work is associated with a 'Trattato della memoria artificiale'. This treatise passed into the printed editions of the *Ammaestramenti degli antichi* in which it was assumed to be by Bartolomeo himself.[20] This was an error for the 'Trattato della memoria artificiale' is not an original work but an Italian translation of the memory section of *Ad Herennium* which has been detached from the Italian translation of the rhetoric made, probably by Bono Giamboni, in the thirteenth century.[21] In this translation, known as the *Fiore di Rettorica*, the memory section was placed at the end of the work,

[19] J.I. 47 and Pal. 54, both in the Bibliotheca Nazionale at Florence. Cf. Rossi, *Clavis universalis*, pp. 16–17, 271–5.

[20] The first to print the 'Trattato della memoria artificiale' with the *Ammaestramenti* was Manni in his edition of 1734. Subsequent editors followed his error of assuming that the 'Trattato' is by Bartolomeo; it was printed after the *Ammaestramenti* in all later editions (in the edition of Milan, 1808, it is on pp. 343–56).

[21] The two rhetorics (*De inventione* and *Ad Herennium*) were amongst the earliest classical works to be translated into Italian. A free translation of the parts of the first Rhetoric (*De inventione*) was made by Dante's

and so was easily detachable. Possibly it was so placed through the influence of Boncompagno, who stated that memory did not belong to rhetoric alone but was useful for all subjects.[22] By placing the memory section at the end of the Italian translation of the rhetoric it became easily detachable, and applicable to other subjects, for example to ethics and the memorising of virtues and vices. The detached memory section of *Ad Herennium* in Giamboni's translation, circulating by itself,[23] is an ancestor of the separate *Ars memorativa* treatise.

A remarkable feature of the *Ammaestramenti degli antichi*, in view of its early date, is that it is in the vulgar tongue. Why did the learned Dominican present his semi-scholastic treatise on ethics in Italian? Surely the reason must be that he was addressing himself to laymen, to devout persons ignorant of Latin who wanted to know about the moral teachings of the ancients, and not primarily to clerics. With this work in the *volgare* became associated Tullius on memory, also translated into the *volgare*.[24] This suggests that the artificial memory was coming out into the world, was being recommended to laymen as a devotional exercise. And this tallies

[22] This is my suggestion. It is however recognised that there is an influence of the Bolognese school of *dictamen* on the early translations of the rhetorics; see Maggini, *Op. cit.*, p. I.

[23] It is to be found by itself in the fifteenth-century Vatican manuscript Barb. Lat. 3929, f. 52, where a modern note wrongly attributes it to Brunetto Latini.

There is much confusion about Brunetto Latini and the translations of the rhetorics. The facts are that he made a free version of *De inventione* but did not translate *Ad Herennium*. But he certainly knew of the artificial memory to which he refers in the third book of the *Trésor*: 'memore artificiel que l'en aquiert par ensegnement des sages' (B. Latini, *Li Livres dou Tresor*, ed. F. J. Carmody, Berkeley, 1948, p. 321).

[24] This association is only found in two codices which are both of the fifteenth century. The earliest manuscript of the *Ammaestramenti* Bibl. Naz., II. II. 319, dated 1342) does not contain the 'Trattato'.

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teacher, Brunetto Latini. A version of the Second Rhetoric (*Ad Herennium*) was made between 1254 and 1266 by Guidotto of Bologna, with the title *Fiore di Rettorica*. This version omits the section on memory. But another translation, also called *Fiore di Rettorica*, was made at about the same time by Bono Giamboni, and this does contain the memory section, placed at the end of the work.

On the Italian translations of the two rhetorics, see F. Maggini, *I primi volgarizzamenti dei classici latini*, Florence, 1952.

with the remark of Albertus, when he is concluding triumphantly in favour of the *Ars memorandi* of Tullius, that the artificial memory pertains both 'to the moral man and to the speaker'.[25] Not only the preacher was to use it but any 'moral man' who, impressed by the preaching of the friars, wished at all costs to avoid the vices which lead to Hell and to reach Heaven through the virtues.

Another ethical treatise which was certainly intended to be memorised by the artificial memory is also in Italian. This is the *Rosaio della vita*,[26] probably by Matteo de' Corsini and written in 1373. It opens with some rather curious mystico-astrological features but consists mainly of long lists of virtues and vices, with short definitions. It is a mixed collection of such 'things' from Aristotelian, Tullian, patristic, Scriptural, and other sources. I select a few at random—Wisdom, Prudence, Knowledge, Credulity, Friendship, Litigation, War, Peace, Pride, Vain Glory. An *Ars memorie artificialis* is provided to be used with it, opening with the words 'Now that we have provided the book to be read it remains to hold it in memory.'[27] The book provided is certainly the *Rosaio della vita* which is later mentioned by name in the text of the memory rules, and we thus have certain proof that the memory rules were here intended to be used for memorising lists of virtues and vices.

The *Ars memorie artificialis* provided for memorising the virtues and vices of the *Rosaio* is closely based on *Ad Herennium* but with expansions. The writer calls 'natural places' those which are memorised in the country, as trees in fields; 'artificial places' are those memorised in buildings, as a study, a window, a coffer, and the like.[28] This shows some real understanding of places as used in the mnemotechnic. But the technique would be being used with the moral and devotional purpose of memorising corporeal similitudes of virtues and vices on the places.

There is probably some connection between the *Rosaio* and the *Ammaestramenti degli antichi*; the former might almost be an

[25] See above, p. 67.

[26] A. Matteo de' Corsini, *Rosaio della vita*, ed. F. Polidori, Florence, 1845.

[27] The *Ars memorie artificialis* which is to be used for memorising the *Rosaio della vita* has been printed by Paolo Rossi, *Clavis universalis*, pp. 272–5.

[28] Rossi, *Clavis*, p. 272.

abridgement or a simplification of the latter. And the two works and the memory rules associated with them are found in the same two codices.[29]

These two ethical works in Italian, which we may envisage laymen labouring to memorise by the artificial memory, open up the possibility that tremendous efforts after the formation of imagery may have been going on in the imaginations and memories of many people. The artificial memory begins to appear as a lay devotional discipline, fostered and recommended by the friars. What galleries of unusual and striking similitudes for new and unusual virtues and vices, as well as for the well known ones, may have remained forever invisible within the memories of pious and possibly artistically gifted persons! The art of memory was a creator of imagery which must surely have flowed out into creative works of art and literature.

Though always bearing in mind that an externalised visual representation in art proper must be distinguished from the invisible pictures of memory—the mere fact of external representation so distinguishes it—it can be a new experience to look at some

[29] The contents of Pal. 54 and of J.1. 47 (which are identical, except that some works of St. Bernard are added at the end of J.1. 47) are as follows:—

(1) The *Rosaio della vita.*
(2) The *Ttattato della memoria artificiale* (that is, Bono Giamboni's translation of the memory section of *Ad Herennium*).
(3) The Life of Jacopone da Todi.
(4) The *Ammaestramenti degli antichi.*
(5) The *Ars memorie artificiali* beginning 'Poi che hauiamo fornito il libro di leggere resta di potere tenere a mente' and later mentioning the *Rosaio della vita* as the book to be remembered.

In other codices the *Rosaio della vita* is found with one or both of the two tracts on memory but without the *Ammaestramenti* (see for example Riccardiana 1157 and 1159).

Another work which may have been thought suitable for memorisation is the ethical section of Brunetto Latini's *Trésor*. The curious volume entitled *Ethica d'Aristotele, ridotta, in compendio da ser Brunetto Latini* published at Lyons by Jean de Tournes in 1568 was printed from an old manuscript volume, otherwise lost. It contains eight items amongst which are the following: (1) An *Ethica* which is the ethical section from the *Trésor* in Italian translation; (4) A fragment which appears to be an attempt to put the vices with which the *Ethica* ends into images; (7) The *Fiore di Rettorica*, i.e., Bono Giamboni's translation of *Ad Herennium*, with the memory section at the end, in a very corrupt version.

early fourteenth-century works of art from the point of view of memory. See for example the row of virtuous figures (Pl. 2) in Lorenzetti's presentation of Good and Bad Government (commissioned between 1337 and 1340) in the Palazzo Communale at Siena.[30] On the left sits Justice, with secondary figures illustrating her 'parts', after the manner of a composite memory, image. On the couch, to the right, sits Peace (and Fortitude, Prudence, Magnanimity, Temperance, not here reproduced). On the bad side of the series (not here reproduced), with the diabolical horned figure of Tyranny, sit the hideous forms of tyrannical vices, whilst War, Avarice, Pride, and Vain Glory hover like bats over the grotesque and dreadful crew.

Such images, of course, have most complex derivations, and such a picture can be studied in many ways, by iconographers, historians, art historians. I would tentatively suggest yet another approach. There is an argument behind this picture about Justice and Injustice, the themes of which are set out in order and clothed in corporeal similitudes. Does it not gain in meaning after our attempts to imagine the efforts of Thomist artificial memory to form corporeal similitudes for the moral 'teachings of the ancients'? Can we see in these great monumental figures a striving to regain the forms of classical memory, of those *imagines agentes*—remarkably beautiful, crowned, richly dressed, or remarkably hideous and grotesque—moralised by the Middle Ages into virtues and vices, into similitudes expressive of spiritual intentions?

With yet greater daring, I now invite the reader to look with the eyes of memory at those figures sacred to art historians, Giotto's virtues and vices (probably painted about 1306) in the Arena Capella at Padua (Pl. 3). These figures are justly famous for the variety and animation introduced into them by the great artist, and for the way in which they stand out from their backgrounds, giving an illusion of depth on a flat surface which was altogether new. I would suggest that both features may owe something to memory.

The effort to form similitudes in memory encouraged variety and individual invention, for did not Tullius say that everyone must form his memory images for himself? In a renewed return to the text of *Ad Herennium* aroused by the scholastic insistence on

[30] On the iconography of this picture, see N. Rubinstein, 'Political Ideas in Sienese Art', *Journal of the Warburg and Courtauld Institutes*, XXI (1958), pp. 198–227.

artificial memory, the dramatic character of the images recommended would appeal to an artist of genius, and this is what Giotto shows so brilliantly in, for example, the movement of Charity (Pl. 3a), with her attractive beauty, or in the frenzied gestures of Inconstancy. Nor has the grotesque and the absurd as useful in a memory image been neglected in Envy (Pl. 3b) and Folly. And the illusion of depth depends on the intense care with which the images have been placed on their backgrounds, or, speaking mnemonically, on their *loci*. One of the most striking features of classical memories as revealed in *Ad Herennium* is the sense of space, depth, lighting in the memory suggested by the place rules; and the care taken to make the images stand out clearly on the *loci*, for example in the injunction that places must not be too dark, or the images will be obscured, nor too light lest the dazzle confuse the images. It is true that Giotto's images are regularly placed on the walls, not irregularly as the classical directions advise. But the Thomist emphasis on regular order in memory had modified that rule. And Giotto has interpreted the advice about variety in *loci* in his own way, by making all the painted backgrounds of the pictures different from one another. He has, I would suggest, made a supreme effort to make the images stand out against the carefully variegated *loci*, believing that in so doing he is following classical advice for making memorable images.

WE MUST ASSIDUOUSLY REMEMBER THE INVISIBLE JOYS OF PARADISE AND THE ETERNAL TORMENTS OF HELL, says Boncompagno with terrible emphasis in the memory section of his rhetoric, giving lists of virtues and vices as 'memorial notes . . . through which we may frequently direct ourselves in the paths of remembrance'.[31] The side walls of the Arena Capella on which the virtues and vices are painted frame the Last Judgment on the end wall which dominates the little building. In the intense atmosphere aroused by the friars and their preaching, in which Giotto was saturated, the images of the virtues and vices take on an intense significance, and to remember them, and to take warning by them in time, is a matter of life and death importance. Hence the need to make truly memorable images of them in accordance with the rules of artificial memory. Or rather, the need to make truly memorable corporeal similitudes of them infused with spiritual intentions, in accordance

[31] See above, p. 59

with the purpose of artificial memory as interpreted by Thomas Aquinas.

The new variety and animation of Giotto's images, the new way in which they stand out from their backgrounds, their new spiritual intensity—all these brilliant and original features could have been stimulated by the influences of scholastic artificial memory and its powerful recommendation as a part of Prudence.

That the remembering of Paradise and Hell, such as Boncompagno emphasised under memory, lay behind the scholastic interpretation of artificial memory is indicated by the fact that later memory treatises in the scholastic tradition usually include remembering Paradise and Hell, frequently with diagrams of those places, as belonging to artificial memory. We shall meet examples of this in the next chapter where some of the diagrams are reproduced.[32] I mention here, however, because of their bearing on the period under discussion, the remarks of the German Dominican Johannes Romberch, on this subject. As already mentioned, Romberch's memory rules are based on those of Thomas Aquinas and as a Dominican he was naturally in the Thomist memory tradition.

In his *Congestorium artificiose memorie* (first edition in 1520), Romberch introduces remembering Paradise, Purgatory, and Hell. Hell, he says, is divided into many places which we remember with inscriptions on them.

> And since the orthodox religion holds that the punishments of sins are in accordance with the nature of the crimes, here the Proud are crucified . . . there the Greedy, the Avaricious, the Angry, the Slothful, the Envious, the Luxurious (are punished) with sulphur, fire, pitch, and that kind of punishments.[33]

This introduces the novel idea that the places of Hell, varied in accordance with the nature of the sins punished in them, could be regarded as variegated memory *loci*. And the striking images on those places would be, of course, the images of the damned. We may now look with the eyes of memory at the fourteenth-century painting of Hell in the Dominican church of Santa Maria Novella (Pl. 8a). Hell is divided into places with inscriptions on them

[32] See below, pp. 108–11, 115–16, 122 (Pl. 7).

[33] Johannes Romberch, *Congestorium artificiose memorie*, ed. of Venice, 1533, p. 18.

(just as Romberch recommends) stating the sins being punished in each, and containing the images to be expected in such places. If we were to reflect this picture in memory, as a prudent reminder, should we be practising what the Middle Ages would call artificial memory? I believe so.

When Ludovico Dolce made an Italian translation (published in 1562) of Romberch's treatise, he made a slight expansion of the text at the point where Romberch is treating of the places of Hell, as follows:

> For this (that is for remembering the places of Hell) the ingenious invention of Virgil AND DANTE will help us much. That is for distinguishing the punishments according to the nature of the sins. Exactly.[34]

That Dante's *Inferno* could be regarded as a kind of memory system for memorising, Hell and its punishments with striking images on orders of places, will come as a great shock, and I must leave it as a shock. It would take a whole book to work out the implications of such an approach to Dante's poem. It is by no means a crude approach, nor an impossible one. If one thinks of the poem as based on orders of places in Hell, Purgatory, and Paradise, and as a cosmic order of places in which the spheres of Hell are the spheres of Heaven in reverse, it begins to appear as a summa of similitudes and exempla, ranged in order and set out upon the universe. And if one discovers that Prudence, under many diverse similitudes, is a leading symbolic theme of the poem,[35] its three parts can be seen as *memoria*, remembering vices and their punishments in Hell, *intelligentia*, the use of the present for penitence and acquisition of virtue, and *providentia*, the looking forward to Heaven. In this interpretation, the principles of artificial memory, as understood in the Middle Ages, would stimulate the intense visualisation of many similitudes in the intense effort to hold in memory the scheme of salvation, and the complex network of virtues and vices and their rewards and punishments—the effect of a prudent man who uses memory as a part of Prudence.

[34] L. Dolce, *Dialogo nel quale si ragiona del modo di accrescere et conservar la memoria* (first edition 1562), ed. of Venice, 1586, p. 15 *verso*.

[35] This can be worked out from the similitudes of Prudence given in San Gimignano's *Summa*. I hope to publish a study of this work as a guide to the imagery of the *Divine Comedy*.

The *Divine Comedy* would thus become the supreme example of the conversion of an abstract summa into a summa of similitudes and examples, with Memory as the converting power, the bridge between the abstraction and the image. But the other reason for the use of corporeal similitudes given by Thomas Aquinas in the *Summa*, besides their use in memory, would also come into play, namely that the Scriptures use poetic metaphors and speak of spiritual things under the similitudes of corporeal things. If one were to think of the Dantesque art of memory as a mystical art, attached to a mystical rhetoric, the images of Tullius would turn into poetic metaphors for spiritual things. Boncompagno, it may be recalled, stated in his mystical rhetoric that metaphor was invented in the Earthly Paradise.

These suggestions as to how the cultivation of images in devout uses of the art of memory could have stimulated creative works of art and literature still leave unexplained how the mediaeval art could be used as a mnemonic in a more normal sense of the word. How, for example, did the preacher memorise the points of a sermon through it? Or how did a scholar memorise through it texts which he desired to hold in memory? An approach to this problem has been provided by Beryl Smalley in her study of English friars in the fourteenth century,[36] in which she draws attention to a curious feature in the works of John Ridevall (Franciscan) and Robert Holcot (Dominican), namely their descriptions of elaborate 'pictures' which were not intended to be represented but which they were using for purposes of memorisation. These invisible 'pictures' provide us with specimens of invisible memory images, held within the memory, not intended to be externalised, and being used for quite practical mnemonic purposes.

For example, Ridevall describes the image of a prostitute, blind, with mutilated ears, proclaimed by a trumpet (as a criminal), with a deformed face, and full of disease.[37] He calls this 'the picture of Idolatry according to the poets'. No source is known for such an image and Miss Smalley suggests that Ridevall invented it. No doubt he did, as a memory image which follows the rules in being strikingly hideous and horrible and which is being used to

[36] Beryl Smalley, *English Friars and Antiquity in the Early Fourteenth Century*, Oxford, 1960.

[37] Smalley, *English Friars*, pp. 114–15.

remind of points about the sin of Idolatry; which is painted as a harlot because idolaters leave the true God to fornicate with idols; who is shown as blind and deaf because she sprang from flattery which blinds and deafens its objects; who is proclaimed as a criminal because evil doers hope to obtain forgiveness by worshipping idols; who has a sad and disfigured face because one of the causes of idolatry is inordinate grief; who is diseased because idolatry is a kind of unregulated love. A mnemonic verse sums up the features of the image:

> Mulier notata, oculis orbata,
> aure mutilata, cornu ventilata,
> vultu deformata et morbo vexata.

This seems unmistakably identifiable as a memory image, designed to stir memory by its strikingness, not intended to be represented save invisibly in memory (the memorisation of it being helped by the mnemonic verse), used for the genuine mnemonic purpose of reminding of the points of a sermon about idolatry.

The 'picture' of idolatry comes in the introduction to Ridevall's *Fulgentius metaforalis*, a moralisation of the mythology of Fulgentius designed for the use of preachers.[38] This work is very well known, but I wonder whether we have fully understood how the preachers were to use these unillustrated 'pictures'[39] of the pagan gods. That they belong within the sphere of mediaeval artificial memory is strongly suggested by the fact that the first image to be described, that of Saturn, is said to represent the virtue of Prudence, and he is soon followed by Juno as *memoria*, Neptune as *intelligentia*, and Pluto as *providentia*. We have been thoroughly trained to understand that memory as a part of Prudence justifies the use of the artificial memory as an ethical duty. We have been taught by Albertus Magnus that poetic metaphors, including the fables of the pagan gods, may be used in memory for their 'moving' power.[40] Ridevall is, it may be suggested, instructing the preacher

[38] J. Ridevall, *Fulgentius Metaforalis*, ed. H. Liebeschütz, Leipzig, 1926. Cf. J. Seznec, *The Survival of the Pagan Gods*, trans. B. Sessions, Bollingen Series, 1953, pp. 94–5.

[39] Though the work was eventually illustrated (see Seznec, Pl. 30) this was not originally intended (see Smalley, pp. 121–3).

[40] See above, p. 66.

how to use 'moving' inner memory images of the gods to memorise a sermon on the virtues and their parts. Each image, like the one of Idolatry, has attributes and characteristics, carefully described and memorised in a mnemonic verse, which serve to illustrate—or rather, as I think, to memorise—points in a discourse on the virtue concerned.

Holcot's *Moralitates* are a collection of material for the use of preachers in which the 'picture' technique is lavishly used. Efforts to find the sources of these 'pictures' have failed, and no wonder, for it is clear that, as in the case of Ridevall's similar efforts, they are invented memory images. Holcot often gives them what Miss Smalley calls a 'sham antique' flavour, as in the 'picture' of Penance.

> The likeness of Penance, which the priests of the goddess Vesta painted, according to Remigius. Penance used to be painted in the form of a man, his whole body naked, who held a five-thonged scourge in his hand. Five verses or sentences were written on it.[41]

The inscriptions about Penance on the five-thonged scourge are then given, and this use of inscriptions on, and surrounding, his images is characteristic of Holcot's method. The 'picture' of Friendship, for example, a youth strikingly attired in green, has inscriptions about Friendship on it and around it.[42]

None of the numerous manuscripts of the *Moralitates* are illustrated; the 'pictures' which they describe were not meant for external representation; they were invisible memory images. However, Saxl did find some representations of Holcot's images in two fifteenth-century manuscripts, including a representation of his 'Penance' (Pl. 4c).[43] When we see the man with the scourge with the inscriptions on it, we recognise the technique of an image with writing on it as something fairly normal in mediaeval manuscripts. But the point is that we ought not to be seeing this image represented. It was an invisible memory image. And this suggests to me that the memorising of words or sentences as placed or written on the memory images was perhaps what the Middle Ages understood by 'memory for words'.

[41] Smalley, p. 165.

[42] *Ibid.*, pp. 174, 178–80.

[43] F. Saxl, 'A Spiritual Encyclopaedia of the Later Middle Ages', *Journal of the Warburg and Courtauld Institutes*, V (1942), p. 102, Pl. 23a.

Another very curious use of memory images is described by Holcot. He places such images, in imagination, on the pages of a Scriptural text, to remind him of how he will comment on the text. On a page of the prophet Hosea he imagines the figure of Idolatry (which he has borrowed from Ridevall) to remind him of how he will expand Hosea's mention of that sin.[44] He even places on the text of the prophet an image of Cupid, complete with bow and arrows![45] The god of love and his attributes are, of course, moralised by the friar, and the 'moving' pagan image is used as a memory image for his moralising expansion of the text.

The preference of these English friars for the fables of the poets as memory images, as allowed by Albertus Magnus, suggests that the artificial memory may be a hitherto unsuspected medium through which pagan imagery survived in the Middle Ages.

Though directions for placing a memory 'picture' on a text are given, these friars do not seem to indicate how their composite memory images for remembering sermons are to be placed. As I have suggested earlier, the Middle Ages seem to have modified the 'Ad Herennian' place rules. The emphasis of the Thomist rules is on order, and this order is really the order of the argument. Provided the material has been placed in order, it is to be memorised in this order through orders of similitudes. To recognise Thomist artificial memory, therefore, we do not necessarily have to seek for figures on places differentiated after the classical manner; such figures can be on a regular order of places.

An Italian illustrated manuscript of the early fourteenth century shows representations of the three theological and the four cardinal virtues seated in a row; also the figures of the seven liberal arts similarly seated.[46] The victorious virtues are shown as dominating

[44] Smalley, pp. 173–4.

[45] *Ibid.*, p. 172.

[46] Vienna National Library, ms. 2639, f. 33 *recto* and *verso*. For a discussion of these miniatures, which may reflect a lost fresco at Padua, see Julius von Schlosser, 'Giusto's Fresken in Padua und die Vorläufen der Stanza della Segnatura', *Jahrbuch der Kunsthistorischen Sammlungen der Allerhöchsten Kaiserhauses*, XVII (1896), pp. 19 ff. They are related to those illustrating a mnemonic poem on the virtues and the liberal arts in a manuscript at Chantilly (see L. Dorez, *La canzone delle virtu e delle scienze*, Bergamo, 1894). There is another copy of them in Bibl. Naz., Florence, II, I, 27.

the vices, which crouch before them. The liberal arts have representatives of those arts seated before them. As Schlosser has pointed out, these seated figures of virtues and liberal arts are reminiscent of the row of theological disciplines and liberal arts in the glorification of St. Thomas in the fresco of the Chapter House of Santa Maria Novella (Pl. 1). Reproduced here (Pl. 4a, b) are the figures of the four cardinal virtues as shown in this manuscript. Someone has been using these figures to memorise the parts of the virtues as defined in the *Summa Theologiae*.[47] Prudence holds a circle, symbol of time, within which are written the eight parts of this virtue as defined by Thomas Aquinas. Besides Temperance is a complicated tree on which are written the parts of Temperance as set out in the *Summa*. The parts of Fortitude are written on her castle and the book which Justice holds contains definitions of that virtue. The figures and their attributes have been elaborated in order to hold—or to memorise—all this complicated material.

The iconographer will see in these miniatures many of the normal attributes of the virtues. The art historian puzzles over their possible reflection of a lost fresco at Padua and over the relationship which they seem to have to the row of figures symbolising theological disciplines and liberal arts in the glorification of St. Thomas in the Chapter House of Santa Maria Novella. I invite the reader to look at them as *imagines agentes*, active and striking, richly dressed and crowned. The crowns symbolise, of course, the victory of the virtues over the vices, but these enormous crowns are surely also rather memorable. And when we see that sections on the virtues of the *Summa Theologiae* are being memorised through the inscriptions (as Holcot memorised the sentences about Penance on the scourge of his memory image) we ask ourselves whether these figures are something like Thomist artificial memory—or as close to it as an external representation can be to an inner invisible and personal art.

Orders of figures expressive of the classifications of the *Summa* and of the whole mediaeval encyclopaedia of knowledge (the liberal arts, for example) ranged in order in a vast memory and having written on them the material relating to them, might be the foundation of some phenomenal memory. The method would be not unlike that of Metrodorus of Scepsis who is said to have written

[47] Schlosser points out (p. 20) that the inscriptions on the figures record the parts of the virtues as defined in the *Summa*.

on the order of the images of the zodiac all that he wanted to remember. Such images would be both artistically potent corporeal similitudes arousing spiritual intentions, and yet also genuinely mnemonic images, used by a genius with an astounding natural memory and intense powers of inner visualisation. Other techniques more closely approximating to the memorising of differentiated places in buildings may also have been used in combination with this method. But one is inclined to think that the basic Thomist method may have been orders of images with inscriptions on them memorised in the order of the carefully articulated argument.[48]

So might the vast inner memory cathedrals of the Middle Ages have been built.

Petrarch is surely the person with whom we should expect a transition from mediaeval to Renaissance memory to begin. And the name of Petrarch was constantly cited in the memory tradition as that of an important authority on the artificial memory. It is not surprising that Romberch, the Dominican, should cite in his memory treatise the rules and formulations of Thomas; but what does surprise us is that he should also mention Petrarch as an authority, sometimes in association with Thomas. When discussing the rules for places, Romberch states that Petrarch has warned that no perturbation must disturb the order of the places. To the rule that places must not be too large nor too small, but proportionate to the image which they are to contain, it is added that Petrarch 'who is imitated by many' has said that places should be of medium size.[49] And on the question of how many places we should employ, it is stated that:

> Divus Aquinas counsels the use of many places in II, II, 49, whom many afterwards followed, for example Franciscus Petrarcha . . .[50]

This is very curious, for Thomas says nothing about how many places we should use in II, II, 49. and, further, there is no extant work by Petrarch giving rules for the artificial memory with the detailed advice about places which Romberch attributes to him.

Perhaps through the influence of Romberch's book, Petrarch's

[48] See further below, pp. 120–1.
[49] Romberch, *Congestorium*, pp. 27 *verso*–28.
[50] *Ibid.*, pp. 19 *verso*–20.

name is continually repeated in sixteenth-century memory treatises. Gesualdo speaks of 'Petrarch whom Romberch follows on memory'.[51] Garzoni includes Petrarch among the famous 'Professors of Memory'.[52] Henry Cornelius Agrippa after giving the classical sources for the art of memory, mentions as the first of the modern authorities, Petrarch.[53] In the early seventeenth century, Lambert Schenkel states that the art of memory was 'avidly revived' and 'diligently cultivated' by Petrarch.[54] And the name of Petrarch is even mentioned in the article on Memory in Diderot's Encyclopaedia.[55]

There must therefore have been a side of Petrarch for which he was admired in the ages of memory but which has been totally forgotten by modern Petrarchan scholars—a situation parallel to the modern neglect of Thomas on memory. What was the source in Petrarch's works which gave rise to this tenacious tradition? It is, of course, possible that Petrarch wrote some *Ars memorativa* treatise which has not come down to us. It is not, however, necessary to suppose this. The source is to be found in one of Petrarch's extant works which we have not read, understood, and memorised as we ought to have done.

Petrarch wrote a book called 'Things to be Remembered' (*Rerum memorandarum libri*), probably about 1343 to 1345. This title is suggestive, and when it transpires that the chief of the 'things' to be remembered is the virtue of Prudence under her three parts of *memoria*, *intelligentia*, *providentia*, the student of artificial memory knows that he is on familiar ground. The plan of the work, only a fraction of which was executed, is based on the definitions in Cicero's *De inventione* of Prudence, Justice, Fortitude, and Temperance.[56] It opens with 'preludes to virtue', which are leisure, solitude, study, and doctrine. Then comes Prudence and her parts, beginning with *memoria*. The sections on Justice and Fortitude are missing, or were never written; of the section on

[51] Gesualdo, *Plutosofia*, p. 14.

[52] Garzoni, *Piazza universale*, *Discorso* LX.

[53] H. C. Agrippa, *De vanitate scientiarum*, 1530, cap. X, 'De arte memorativa'.

[54] Lambert Schenkel, *Gazophylacium*, Strasburg, 1610, p. 27.

[55] In Diodati's note to the entry 'Mémoire' in the edition of Lucca, 1767, X, p. 263. See Rossi, *Clavis*, p. 294.

[56] F. Petrarca, *Rerum memorandarum libri*, ed. G. Billanovich, Florence, 1943, Introduction, pp. cxxiv–cxxx.

Temperance, only a fragment of one of its parts appears. The books on the virtues would probably have been followed by books on the vices.

It has, I believe, never been noticed that there is a strong resemblance between this work and Bartolomeo de San Concordio's 'Teachings of the Ancients'. The *Ammaestramenti degli antichi* begins with exactly the same 'preludes to virtue', then reviews the Ciceronian virtues in a discursive and expanded manner, then comes to the vices. This would have been the plan of Petrarch's book, had he completed it.

There is an even more significant resemblance—namely that both Bartolomeo and Petrarch refer under *memoria* to the artificial memory. Bartolomeo, as we saw, gave the Thomist memory rules under that heading. Petrarch makes his allusions to the art by introducing examples of men of antiquity famed for good memories and associating these with the classical art. His paragraph on the memories of Lucullus and Hortensius begins thus:—'Memory is of two kinds, one for things, one for words.'[57] He tells of how the elder Seneca could recite backwards and repeats from Seneca the statement that the memory of Latro Portius was 'good both by nature and by art'.[58] And of the memory of Themistocles he repeats the story told by Cicero in *De oratore* of how Themistocles refused to learn the 'artificial memory' because his natural memory was so good.[59] Petrarch would of course have known that Cicero in this work does not approve the attitude of Themistocles, and describes how he himself uses the artificial memory.

I suggest that these references to artificial memory in a work in which the parts of Prudence and other virtues are the 'things to be remembered' would be enough to class Petrarch as belonging to the memory tradition,[60] and to class the *Rerum memorandarum libri* as an ethical treatise designed for memorisation, like the *Ammaestramenti degli antichi*. And this is probably what Petrarch himself intended. In spite of the humanist flavour of the work, and the use of *De oratore* rather than solely *Ad Herennium* on the artificial memory, Petrarch's book comes straight out of scholasticism with its pious use of artificial memory as a part of Prudence.

[57] *Ibid.*, p. 44. [58] *Ibid.*, p. 45. [59] *Ibid.*, p. 60.

[60] Though the *Rerum memorandarum libri* is the most obvious of Petrarch's works to be interpreted as referring to artificial memory, it is possible that others were so interpreted.

What were they like, the corporeal similitudes, the invisible 'pictures' which Petrarch would have placed in memory for Prudence and her parts? If, with his intense devotion to the ancients he chose pagan images to use in memory, images which would 'move' him strongly because of his classical enthusiasms, he would have had behind him the authority of Albertus Magnus.

One wonders whether the virtues rode through Petrarch's memory in chariots, with the famous 'examples' of them marching in their train as in the *Trionfi*.

The attempt made in this chapter to evoke mediaeval memory can be, as I said at the beginning, but partial and inconclusive, consisting of hints for further exploration by others of an immense subject rather than in any sense a final treatment. My theme has been the art of memory in relation to the formation of imagery. This inner art which encouraged the use of the imagination as a duty must surely have been a major factor in the evocation of images. Can memory be one possible explanation of the mediaeval love of the grotesque, the idiosyncratic? Are the strange figures to be seen on the pages of manuscripts and in all forms of mediaeval art not so much the revelation of a tortured psychology as evidence that the Middle Ages, when men had to remember, followed classical rules for making memorable images? Is the proliferation of new imagery in the thirteenth and fourteenth centuries related to the renewed emphasis on memory by the scholastics? I have tried to suggest that this is almost certainly the case. That the historian of the art of memory cannot avoid Giotto, Dante, and Petrarch is surely evidence of the extreme importance of this ubject.

From the point of view of this book, which is mainly concerned with the later history of the art, it is fundamental to emphasise that the art of memory came out of the Middle Ages. Its profoundest roots were in a most venerable past. From those deep and mysterious origins it flowed on into later centuries, bearing the stamp of religious fervour strangely combined with mnemotechnical detail which was set upon it in the Middle Ages.