

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,<sup>1</sup> 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<sup>2</sup> (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

<sup>1</sup> Quintilian says (*Institutio oratorio*, XI, ii, r4~i6) 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.'

<sup>2</sup>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.'<sup>3</sup>

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*.\*

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

<sup>1</sup> Plutarch, *Glory of Athens*, 3; cf. R. W. Lee, 'Ut pictura poesis: The Humanistic Theory of Painting', *Art Bulletin*, XXII (1940), p. 197.

<sup>4</sup> 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 Aristogiton, 213 years (i.e. 477 B.c.).<sup>5</sup>

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.

<sup>5</sup> 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, Χρυσαιττιος (Chrysippus) is to be remembered; we place it on χρυαος (gold) and ιττιος (horse). Another example: we place μπιΧΑυ-μρις (glow-worm) on μ/π (fire) and ΑΑΥΤΙΕΥ (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.<sup>6</sup>

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 *Diakxeis* is thought to reflect sophist teaching, and its memory section may refer to the mnemonics of the sophist Hippias of Elis,<sup>7</sup> 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

<sup>6</sup> 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.

<sup>7</sup> See Gomperz, pp. 179 ff.

and men, the foundations of cities, and much other material.<sup>8</sup> 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<sup>9</sup>) 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 (ΤΟΤΤΟΙ), 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.<sup>10</sup>

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' — rather a warning, one

<sup>8</sup> *Greater Hippias*, 285D-286A; *Lesser Hippias*, 368D.

<sup>9</sup> 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 reminiscencia*.

<sup>10</sup> *Topica*, 163" 24-30 (translated by W. A. Pickard-Cambridge in *Works of Aristotle*, ed. W. D. Ross, Oxford, 1928, Vol. I).

<sup>11</sup> *De insomnis*, 458" 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.'<sup>12</sup>

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 reminiscencia*. The great scholastics, Albertus Magnus and Thomas Aquinas, with their proverbially acute minds perceived that the Philosopher in his *De memoria et reminiscencia* 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';<sup>31</sup> the thinking faculty thinks of its forms in mental pictures';<sup>14</sup> '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.'<sup>15</sup>

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

<sup>11</sup> *De anima* 427" 18-22 (Hen's translation).      <sup>3</sup> *Ibid.*, 432\* 17.  
M *Ibid.*, 431" 2.      's *Ibid.*, 432' 9.

to put things before our eyes just as those do who invent mnemonics and construct images.'<sup>16</sup> 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 reminiscencia* 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.'<sup>17</sup> 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';<sup>18</sup> 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."

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

<sup>16</sup> Already quoted above.

" *De memoria et reminiscencia*, 449" 31 (translated, as one of the *Parva Naturalia*, by W. S. Hett in the Loeb volume cited).

<sup>18</sup> *Ibid.*, 450" 30.

•• *Ibid.*, 450<sup>6</sup> 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'<sup>20</sup> 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.<sup>21</sup> 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 (ἰοτικῶν) 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.<sup>22</sup>

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.<sup>23</sup> 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

<sup>20</sup> *Ibid.*, 451" 18-20.

<sup>21</sup> 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.

<sup>22</sup> *De mem. et rem.*, 452" 8-16.

<sup>23</sup> For a discussion of the passage, see Ross's note in his edition of *die 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.<sup>24</sup>

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 reminiscencia* 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

<sup>24</sup> *De mem. et rem.*, 452" 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.<sup>25</sup>

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.<sup>25</sup>

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.<sup>27</sup> 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

<sup>25</sup> *Institutio oratorio*, XI, ii, 4.

<sup>26</sup> *Theaetetus*, 191 C-D.

<sup>27</sup> *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.'<sup>28</sup>

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

<sup>28</sup> *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.<sup>129</sup>

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.'<sup>30</sup>

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

<sup>129</sup> See below p. 138

<sup>30</sup> *Phaedrus*, 274 C-275 B (quoted in the translation by H. N. Fowler in the Loeb edition).

come into common use.<sup>31</sup> 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.<sup>32</sup> 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.<sup>33</sup>

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.<sup>34</sup> 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.<sup>35</sup> 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 role at the court of Mithridates with whom he was for a

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

<sup>32</sup> 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.

<sup>33</sup> See below, p. 268

<sup>34</sup> See above, p. 23

<sup>35</sup> 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.'<sup>36</sup> 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-figur. 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."

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

<sup>36</sup> Strabo, *Geography*, XIII, i, 55 (quoted in the translation in the Loeb edition).

» 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.<sup>38</sup>

<sup>38</sup> 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,<sup>39</sup> 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.<sup>40</sup>

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-

<sup>39</sup> Philostratus and Eunapius, *The Lives of the Sophists* (Life of Dionysius of Miletus), trans. W. C. Wright, Loeb Classical Library, pp. 91-3.

<sup>40</sup> 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.<sup>41</sup>

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*<sup>2</sup> 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.<sup>43</sup>

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.<sup>44</sup>

<sup>41</sup> *Ibid.*, III, 16, 41; translation cited, pp. 71, 85-6.

<sup>42</sup> On the *Ars Notoria*, see Lynn Thorndike, *History of Magic and Experimental Science*, II, Chap. 49.

<sup>43</sup> See below, p. 204.

<sup>44</sup> *Institutio oratorio*, 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 Scepheus 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.<sup>45</sup>

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;<sup>46</sup> 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

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

<sup>46</sup> *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 . . .<sup>47</sup>

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

<sup>47</sup> *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.<sup>48</sup>

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'

<sup>48</sup>\* *Confessions*, X, 8 (Pusey's translation).

of memory (*in aula ingenti memoriae*), in its 'large and boundless chamber' (*penetrabile 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.<sup>49</sup>

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 innumerable 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.<sup>50</sup>

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 »f 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 . . .<sup>51</sup>

<sup>49</sup>» *Ibid.*, X, 9.   »° *Ibid.*, X, 17.   »» *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.'<sup>53</sup>\* 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'."

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

" *De Trinitate*, IX, 6, xi.

<sup>53</sup> *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.