Mosaic panel showing two men dressed in togas guiding a yoke of two oxen (bulls?) with four similarly dressed figures following. 3rd century A.D. Found at Aquileia.

At the time is hardly peasant’s working dress, this relief was taken to represent a rural scene by its discoverer, in fact the drawing of the 'lucios præmmanialis', even though the manner of wearing the toga (the heads are not covered) does not conform to the descriptions of the site.

'Notizie Scavi', 1937, p. 472 ff.; 'Archäologischer Anzeiger' 1932, p. 454

Museo Civico, Aquileia
# Contents

List of Illustrations  
Acknowledgments  
Abbreviations  
Preface  

One Town and Rite: Rome and Romulus  
Romulus and Remus  
The Ritual Books  
The New Community  
Planning Techniques: Rational and Irrational  
The Choice of Site  
The Founder and the City  
Recording the Foundation  

Two City and Site  
How to Choose the Site:  
(i) The Theorists  
(ii) The Rites Observed  
Romulus again  
Templum  
The Surveyors  
Haruspication  
Mundus  
Orthogonal Planning and the Surveyors  
The First Furrow  
Castrum  
Destruction Rites  

Three Square and Cross  
The Etruscans  
Terranare  
Marzabotto  
Spina  
Spina and Orthogonal Planning  
Myth and Rite  
The Boundary of the First Rome  
Lupercali and Lupercal  

Four Guardians of Centre, Guardians of Boundaries  
Roma Quadrata  
Vesta  
Boundary and Terminus  
Boundary and Centre: Mundus and Terminus  
Boundary of the Land and Boundary of the People  
Troy: Trojan Horse and Trojan Game  
Mundus and Pomoerium  
Boundary, Strength and Fertility  
The Boundary and the Gate  
The Guardian of the Gate  
The Riddle and the Maze  
Maze, Dance, City  
The Guilty Founder  

Page 13  
Page 17  
Page 19  
Page 23  
Page 27  
Page 29  
Page 30  
Page 31  
Page 33  
Page 34  
Page 39  
Page 41  
Page 44  
Page 45  
Page 49  
Page 51  
Page 58  
Page 59  
Page 65  
Page 68  
Page 70  
Page 72  
Page 74  
Page 75  
Page 79  
Page 82  
Page 85  
Page 88  
Page 91  
Page 93  
Page 97  
Page 99  
Page 106  
Page 117  
Page 126  
Page 127  
Page 129  
Page 132  
Page 133  
Page 139  
Page 144  
Page 148  
Page 153
Preface

We think of the town as a tissue of buildings which grows more or less unpredictably and is traversed by roads, pierced by squares, or else as a mesh of roadways fringed by buildings at the outskirts and webbed by them at the centre. Although we regard them as natural phenomena, governed by an independent, uncontrollable and sometimes unpredictable law of growth or expansion, like that of natural organisms, the truth is that towns do not grow by interior and inscrutable instincts. They are built, piece-meal by individual inhabitants, in larger tracts by speculators or authority. Now and then, particularly when a new town is founded, the authorities, whether local or national, on the advice of their experts treat the public to a display of embarrassment. It appears that civic authorities, or even the planners themselves, are not able to think of the new town as a totality, as a pattern which might carry other meanings that the commonplaces of zoning (industry, habitat, leisure, etc.) or circulation. To consider the town or city a symbolic pattern, as the ancients did, seems utterly alien and pointless. Nowadays if we think of anything as 'symbolic': it is practically always an object or action which can be taken at a single view.

The conceptual poverty of our city discourse is exposed even when we look at the recent past. In the nineteenth century the criteria for establishing its terminology were perhaps still more directly 'positive' than they are now. The distinction between town or city would be made, for instance, in terms of the paving of streets.

Going further back, however, the tone of the discourse changes, as might have been expected. Charles Davier, a French seventeenth-century theorist, defines a town in his dictionary of architectural terms as 'an ordering of blocks and quarters disposed with symmetry and decorum, of streets and public squares opening in straight lines with a fine and healthy orientation and adequate slopes for the draining of water. . . .21 But his description stands at the end of a tradition. 'The city', proposes a recent writer, 'is first of all a physical reality; a more or less sizeable group of buildings, of habitations and public buildings. . . . The city begins only when paths are transformed into roads. . . .22 He follows his nineteenth-century predecessors. This definition is a long way from Nicias's rousing words to the Athenian soldiers on the beach at Syracuse: 'You are yourselves the town, wherever you choose to settle. . . . It is men that make the city, not the walls and ships without them. . . .23

Traffic in cities has today become so thick and clogged that it is hardly surprising to find this concentration on the road pattern among our contemporaries. Traffic engineering is regarded as having superseded town planning; the street pattern, the railway or underground, are superimposed on each other, and together become that aspect of the city which has the greatest notional and conceptual validity. As traffic congestion and the attendant problems mount, so traffic surgery assumes
an increasing importance in the public mind. Nor is this the only aspect of city planning which has turned into a craft of keeping one step only behind current development. Economists have for nearly two hundred years encouraged us to think that the rate of growth of urban populations is to be equated with the growth of the gross national product (which they seem to consider good in itself, however it affects the individual). In spite, therefore, of the complaints about crises in traffic or about the shortage of city space, complaints which planners utter ritually whenever these problems are under discussion, when a town fails to expand at an even rate (as has been the case of the Rhine Randstadt), the same planners confess themselves dismayed by such a symptom of economic crisis.

It is commonly assumed, not only by planners, but by public authorities and even by the general public, that future expansion will go on at the present rate, forecasting the future by simple statistical inference. The possibility of new developments is elided from the argument by silence. The conceptual framework within which planners work has been designed to evade the issue of imposing any order of an extra-economic nature on the city. Fear of restriction often appears in the form of a fear of cramping an autonomous growth. That is why town planners, when talking about the way towns live and grow, invoke images drawn from nature when they consider town plans: a tree, a leaf, a piece of skin tissue, a hand and so on, with excursions into pathology when pointing to crises. But the town is not really like a natural phenomenon. It is an artefact—an artefact of a curious kind, compounded of willed and random elements, imperfectly controlled. If it is related to physiology at all, it is more like a dream than anything else.

Although the last half century has accustomed us to regard dreams as objects susceptible of serious, even scientific, study, yet the suggestion of fantasy which the word implies is regarded as offensive in the context of urban planning. This is partly because it is a matter where capital investment is huge, and partly because the well-being of masses, a well-being equated with physical amenity, is at stake.

Here again we are up against the poverty of much urbanistic discourse. The way in which space is occupied is much studied, but exclusively in physical terms of occupation and amenity. The psychological, the cultural, the juridical, the religious, are not treated as aspects of the ecological space with whose economy the urbanist is concerned. His attention is focused on the more immediate physical problems, the resolution of which seems most urgent. But the solutions proposed, because of their physical presence, impinge on the symbolic world of the citizens; and often the arbitrary forms thrown up by harassed planners and architects are evolved on an irrational residue, motivated by unstated spiritual as well as aesthetic prejudice whose very irrationality contributes further to the instability of the community, and may set up a pattern of interaction between the community and its outward shell which will be disastrous for both.

Such procedures have been criticized by a number of sociologists. It seems to me that they are right: that some consideration must be given to the model, to the conceptual prototype of the town which its inhabitants construe mentally, and which is often exemplified in their homes. So often the home is felt to be a miniature of the city: not as it is, but as we want it. Patterns of behaviour, even of movement may sometimes be explained as being attempts to reconcile such a conceptual model with the actual, with the physical structure of the city, of which the inhabitants may be aware only in the form of diagrams—as of underground trains or bus routes.

The conceptual model I spoke of is rarely derived from such diagrams. More commonly it is related to views we hold about the space and the time we inhabit. And it is intended to accommodate our views to a specific place: a particular home, a particular town.

The very statement of the problem suggests that there is no immediate solution to hand. I therefore propose to examine a closed (because past) situation, which is apparently familiar, and yet full of implications for anyone thinking about the way in which we take possession of our homes. The rectilinear patterns of the Roman towns, which survive in the street patterns and even the country lanes of old imperial lands, from Scotland to Sudan, are often thought to be the by-product of a utilitarian surveying technique. This is not how the Romans themselves saw it: the city was organized according to divine laws. The home was governed by the father of the family as the city was by the magistrates; and the paterfamilias performed in his home the complex rituals of the state religion which the colleges of priests performed for the state. The analogy between city and home, and city and land, was familiar to the Romans as it probably was to the Etruscans before them.

Before the Roman cities assumed the gridiron pattern familiar to us now, the idea of a regular city plan had to be formed in their minds. The rectilinear city was not something at which they arrived by hit-or-miss experimentation, and explained afterwards. On the contrary, it seems to me that such a device would have to have arisen from just such a model as I have mentioned. Its origins are therefore primarily interesting to me because they show the elaborate geometrical and topological structure of the Roman town growing out of and growing round a system of custom and belief which made it a perfect vehicle for a culture and for a way of life.

Over the millennium of Roman imperial rise and decline, the city underwent many changes, interpretations became increasingly elaborate and even conflicting, the rites whose meaning was sometimes forgotten were re-interpreted anachronistically. I will not be concerned with Roman and Etruscan history, except incidentally, as they bear on the development of the model and its transformation in time, which is much slower, much more gradual (as is always the case of ritualized art, ritualized procedure) than the changes in political and sometimes also religious ideas. I have chosen to deal primarily with Roman towns because theirs was an assertively urban civilization, entirely different from the one which we inhabit, and yet very ample, very accessible documented. But I do not think the Romans' customs and ideas can be
understood without comparing them with those of other peoples, usually weaker and sometimes of the most primitive savagery—or so they would have seemed to the Romans. The Romans were not alone among ancient peoples in practising a form of rectilinear planning and orientation. All the great civilizations practise it, all have mythical accounts of its origins, and rituals which guide the planner and the builder. I propose also to consider such parallel accounts to arrive at some estimate of the enormous value which the Romans, and such ancient peoples as have left us records of their beliefs, placed not only on these forms, but also on the procedures by which the forms were drawn. However, always it is the conceptual model and its relation to the place and the plan shape which interest me, rather than the material remains with which the archaeologist must concern himself: definite patterns, definite, assertive configurations of streets and squares, private and public buildings, which will not yield their meaning to the common means of urban analysis.

One Town and Rite: Rome and Romulus

The remains of Roman towns are still visible, are still part of everyday experience in Western Europe and round the Mediterranean; and the more closely they are examined, the more puzzling they appear. In examining them I shall often appeal to associations established by assonance and rhythm, rhyme, alliteration, allusion or simply physical resemblance—all the apparatus of dream analysis, in fact. We have grown so accustomed to one word per meaning, one meaning per word, in any context, that the reader may hesitate to place any reliance on such seemingly vague connections. But in antiquity the idea that everything means itself and something else as well, was general and ingrained; it was taken for granted. In the specific instance of the town plan, its laying-out according to a model was hedged about with elaborate ceremonial, the words and actions of which constituted the conceptual model. The foundation was commemorated in regularly recurring festivals, and permanently enshrined in monuments whose physical presence anchored the ritual to the soil and to the physical shape of the roads and buildings.

Romulus and Remus

The most familiar story connected with such a foundation is the account of the death of Romulus in Plutarch’s ‘Life of Romulus’. ‘As Romulus was casting up a ditch,’ Plutarch says, ‘where he designed the foundation of the city wall, [Remus] turned some pieces of work into ridicule, and obstructed others; at last, as he was in contempt leaping over it, some say Romulus himself struck him, others one of his companions. He fell however...’
There is nothing unusual about the combination of murderer, fratricide and town founder. In scripture, too, the first founder of a town is the archetypal fratricide, Cain. But from the outset there are glaring absurdities in the story: the tiny moat and wall, the gratuitous killing, the hesitant explanation, make one suspect that this is an allusion to a forgotten ritual. The allusion seems reflected in two obscurer legends: firstly Oeneus, the Calydonian wine-god, killed his son Toxeus for jumping over the ditch he had dug round his vineyard, and secondly the hero Poinamander aimed a stone at the cynical architect Polyctethus who jumped over the new walls of his fortress. He missed, however, and hit the architect’s son Leucippus, killing him instead. Plutarch himself knew that his account of this incident in his ‘Life of Romulus’ was inadequate. In another book, Roman Questions, he says of Remus and Romulus: ‘It seemeth that this was the cause why Romulus killed his own brother Remus for that he presumed to leap over an holy and inviolate place...’ Remus then was killed for sacrilege.

This explains the killing, but does not account for the tiny wall, small enough to jump over, nor for its sacred character. In fact, Plutarch is here considering ‘for what reason they (the Romans) considered the walls of the city to be sacred and inviolable, but not their gates...’ and he wonders: ‘Is it (as Varro said) because we ought to think the walls so holy that we will die generously in their defence... on the other hand it was not possible to consecrate and bless the gates, through which many necessities were transported, and in particular the bodies of the dead...’ which does not entirely satisfy him. But the Roman Questions are not intended to be conclusive, and Plutarch says little more on the subject, but describes the foundation rite to which the incident draws attention: ‘and therefore, they who begin to found a city, environ and compass first with a plough all that purpese and pretent wherein they mean to build...’ He refers to this rite in even greater detail in the ‘Life of Romulus’. ‘The founder’, he says, referring to Romulus, ‘fitted a brazen ploughshare to the plough, and, yoking together a bull and a cow, drove himself a deep line or furrow round the bounds; while the business of all those that followed after was to see that whatever was thrown up should be turned all inwards towards the city, and not to let any clod lie outside. With this line they described the wall and called it by a contraction pomerium—that is, porticus, after or besides the wall; where they designed to make a gate, there they took out the share, carried the plough over, and left a space; for which reason they consider the whole wall as holy, except where the gates are...’ And in Roman Questions he ends his more abrupt description with an almost self-evident rider: ‘...because they considered all ploughed land sacred and inviolate...’ Many other Greek and Latin authors allude to or give some account of this rite, which the Romans were said to have imported from Etruria. It was performed at the foundation or re-foundation of any town which aspired to the title of ‘urbs’. The ancients thought it a thing of capital importance for the whole religious and social life of the community; it is difficult for us now to accept their assessment of it. Any account of the ceremony must inevitably begin by setting such ritual formulae against the body of Roman religious literature. The Romans inherited most of their ‘scriptures’ from the Etruscans. They were apparently written down at an early stage of Latin literacy in archaic Latin. They consisted of tablets, presumably of bone or bronze, and were in the care of the pontifical college. These writings took the form of ritual recipes and formulae, forms of contract with divine powers (many Roman prayers were of this kind), and some hymns. Several instances of a pontiff dictating the form of prayer to the officiating praepitales from a written text are recorded by historians, such as Decius Mus’s desatio before his suicidal charge at the battle of Veseris. The ‘Gubbio tablets’ may well be a fragment of the analogous ‘ritual books’ of the Eugive people.

The Ritual Books

The Roman ritual books are usually divided into two portions: the libri Tagetici, called after Tages, a dwarf who jumped from under the plough of the augur or lucumon Tarchon in the morning, dictated his laws and disappeared in the evening, and the libri Veiosianae called after the shadowy nymph Veiovis or Vegoria. The Tagetica books dealt mostly with the reading of omens in general and the appeasing of the gods (libri Fatales), with the dead and the underworld (libri Acherontiae), and with the interpretation of sacrificial entrails (libri Horoscopae). The libri Veiosianae contained instructions about the interpretation of lightning (libri Fulgurales), and the collection of ritual rulings with which I shall be most concerned, the libri Ritualae. The ancient lexicographer Festus says something about their contents: ‘Rituales nominantur Etruscorum libri in quibus praescriptionem est quo ritual conduntur urbes arae aedes sacrentur, qua sanctifice muri, quo iure
Town and Rite: Rome and Romulus

Portae quomodo tribus, curiae centuriae distribuantur, exercitus constituuntur ordinatur, ceteraque eiusmodi ad bellam ac pacem pertinentis... Those books of the Etruscan called ritus in which are set out the rules for the rites by which towns are founded, temples and shrines consecrated, and walls are hallowed, what the laws of the gates are, how tribes, curiae and centuries are to be distributed, the army constituted, and how other things pertaining to war and peace are to be arranged... When compared with Plutarch's or Livy's account of the doings of Romulus, this summary will appear to be a fair abstract of his law-giving. So it is hardly surprising that the first thing mentioned by Festus is the rite by which cities are founded. What happens before this rite is before recorded history began, and belongs to hearsay, to legend. Commenting on a similar matter in another context, the great historian Fustel de Coulanges wrote: 'Ancient history was sacred and local history. It began with the foundation of the city, because everything prior to that was of no interest—that is why the ancients have forgotten the origins of their race. Every city has its own calendar, religion, history.'

The foundation rites of a city provide a key to its history. Ab urbe condita the Romans reckoned theirs. If the annalists' circumstantial account of the foundation is compared with the vague and cursory references to the early days of Romulus and Reims and the even vaguer accounts of their antecedents, it will become evident that for them the rites of foundation really were the key to the town's history. Moreover, many of the puzzling features of ancient towns can be explained if they are related to these rites. Such a confrontation may even provide a guide to the form of the ancient city, because the performing of the rites actually fixed the physical shape of the city.

Plutarch's remarks in his Roman Questions, and in the 'Life of Romulus' are only brief allusions to the rite of foundation. And although he has more to say about it elsewhere, the founding of a Roman or Etruscan town was much more impressive and ceremonious than he might lead one to believe. Unfortunately, it is rather difficult to get a clear picture of what happened on such an occasion. The libri Ritualis are lost; any report must be composed from twenty or so fragmentary descriptions. My account is intended to give some idea of what the ancients thought and felt about their towns, and how these ideas related to their general conception of the world, the dead and the immortals.

Planning Techniques: Rational and Irrational

New communities were begun in various ways. It seemed to be a general custom in Italy, for instance, that victors should impose the surrender of one-third of the vanquished territory, and there found colonies. The Romans vested power first in the king, probably; later proceedings would be initiated by a consul or a tribune of the people, or possibly even by the senate corporately; ultimately it became a prerogative of the emperor. But there was a custom, to which the wide diffusion of the Oscan-Umbrian peoples has been attributed, which is particularly interesting in this connection: the vet sacrum. As its name implies, it was a springtime consecration, and the ritual was, it seems, originally Italic. All the produce of a given town and its territory during a nominated spring was consecrated to a god in some great national emergency. After a time had passed, the animals and corn were sacrificed and the children born during the specified time expelled from the home town. Livy has recorded the details of the rite when describing the last time it was performed in Rome. On this last occasion no human beings were included in the sacrifice. But ancient writers record the normal presence of human victims. And a number of peoples recorded their origin in a vet sacrum, particularly the southern Oscan-Umbrian peoples: the Hirpini, the Sarnii, the Picentes, the Marsi, the Mamertini and the Sacri. In most of these names the reference to Mars and to the animals sacred to him, the wolf and the woodpecker, are reiterated. March was also the month in which the sacrifice was normally performed, and it still bears the name of the god to which it was particularly sacred among the various people in Italy.

The Greeks had no exact corresponding custom. The Chalchidians, at one point, vowed every tenth man to Apollo 'for the fertility of the fields', and sent them off to Delphi where the oracle commanded them to found a new town in Brutium, the modern Calabria; this is the myth of the origin of Reggio. Although Strabo speaks of this as a unique case in Greece, Dionysius of Halicarnassus describes it as most popular among Greeks and barbarians; moreover the sacrifice of a tile was otherwise closely associated with Apollo.

Modern writers will always see irrelevant flummery behind what seem to them pedestrian motives: avoidance of overpopulation or economic expansion. They are right of course, nor do I wish to oppose economic to ritual considerations. But the economic and hygienic factors were always seen by the ancients in mythical and ritual terms. Cicero, for instance, lists the various sensible geographic, economic and hygienic reasons which led Romulus to found his new town where he did, but he prefaxes this account with the legend about the choice of the site, of which I shall speak later.

The relationship between such common-sense factors as those listed by Cicero and the ritual performance is often dispatched summarily by modern writers. They see the religious duties as a perfunctory introduction to the real business in hand. This could never have been the attitude of the ancients. It is remarkable how thorough and rational, if their premises are accepted imaginatively, their treatment of myth and ritual appear, even in a matter as elaborate in point of ritual as the foundation of a town. On the other hand, their treatment of technological points is very often hesitant and elusive. The order sometimes appears to be topsy-turvy. While myth and ritual are discussed rationally and in detail, all that we would explore systematically nowadays seems to be muddied and insecure. The assumption which lies at the base of this confusion is the relatively modern one of continuity between scientific explanation and technological development. This however, was never achieved in antiquity: while scientific thought moved in the precise realm of mathematically formulated explanation,
technology remained in the lesser realm of approximation. In a way, technology was more closely connected with the formulation of ritual, with its interference in the natural order, than with scientific thinking. In any case, even when the two ways of thinking overlapped, their relationship was always articulate. How this was done is demonstrated in an instructive story told by Plutarch in his 'Life of Pericles': my example, therefore, though referring to the classical period in Greece, was written under the Flavian Emperors, even if by a hellenistic intellectual. 'There is a story,' he says, 'that once Pericles had brought to him from a country farm of his a ram's head with one horn, and that Lampon the diviner, on seeing the horn grow strong and solid out of the middle of the forehead, gave it as his judgement that, there being at that time two potent factions ... in the city, the one of Thucydides and the other of Pericles, the government would come to that one of them in whose ground or estate this token or indication of fate had shown itself, but that Anaxagoras, cleaning the skull in sunder, showed to the bystanders that the brain had not filled its natural place, but, being oblong like an egg, had collected, from all parts of the vessel which contained it, in a point to that place from whence the root of the horn took its rise. And that at that time Anaxagoras was much admired for his explanation by those that were present, and Lampon no less a little while after, when Thucydides was overpowered and the whole affairs of the state and government came into the hands of Pericles. 'And yet, in my opinion, it is no absurdity to say that they were both in the right, both natural philosopher and diviner, one justly detecting the cause of this event, by which it was produced, the other the end for which it was designed. For it was the business of the one to find out and give an account of what it was made, and in what manner and by what means it grew as it did, and of the other to foresee to what end and purpose it was so made, and what it might mean or portend. Those who say that to find the cause of a prodigy is in effect to destroy its supposed significative as such, do not take notice that at the same time, together with divine prodigies, they also do away with signs and signals of human art and concert, as for instance the clashing of quails, fire beacons, and the shadows of sundials, every one of which has its cause, and by that cause and contrivance is a sign of something else. ... Plutarch is taking a defensive position on two fronts: natural science is not blasphemous, while divination is not irrational. The defence would have been unthinkable before the rise of the Eleatic school, or even in the time of Pericles, outside intellectual circles with some scientific interest. The belief in divination is one of the most hardy of the primitive beliefs of humanity, and, although it has been frowned upon for the best part of two millennia by the 'major religions', still continues to be practised by a large proportion of humanity in one form or another.

In a sense, statistical forecasting is a schematized form of divination. Being schematic, it leads to a degree of overconfidence which sometimes proves fatal to the calculators. In antiquity the approach to most matters which we treat with systematic assurance was often extremely insecure. Often it could only be by guesswork or by inherited 'knack'; the erratic forces of nature, above all, could only be understood in terms of personality or be dealt with by some form of address or be conciliated in the form of drama.

Modern writers always consider the choice of a site for a town in terms of economy, hygiene, traffic problems and facilities. Whenever the founder of an ancient town thought in those terms he could only do so after having translated them into mythical terms. Even when faced with the matter directly, as Archias and Mycellus were, the choice is of one virtue as against the other. The Pythia at Delphi offered the two potential oeicists a choice between health and wealth. Archias chose wealth (the obvious choice for a Corinthian) and was sent off to Syracuse, while Mycellus became the founder of Croton, the town where Pythagoras settled and which nurtured a famous school of medicine.86

Even if the traditional Delphic pronouncement which Strabo quotes on the authority of Antiochus is a forgery, it is clear that even at a late date the advantages of a particular site were revealed to the colonists as a direct and arbitrary gift of the gods, and not as a calculated gain obtained by the oracles for his colony. Mycellus, according to another tradition, made two further visits to the Delphic oracle, firstly because he could not locate the site which the oracle had 'given' him, and secondly because it looked to him, on reaching it, that the site of Sybaris was altogether preferable. He returned to Delphi, but the oracle snubbed him: 'Mycellus short-in-the-back, hunting for other things besides the gods' command, you are finding lamentations. Praise the gift the gods give.'88

In the story of Archias and Mycellus, the oracles chooses outright for the colonists. The oracles was either the leader of a dissident faction in the metropolis, or, if the metropolis was sending out a colony by legislation, was an appointed magistrate. After his death he was usually paid the honours of a hero, including a state banquet at which he was ritually present. The oracles was himself sometimes overshadowed by an eponymous hero or some other founding hero drawn from myth: Hercules, or one of the Trojan War heroes whether Trojan or Greek, the Nestor, the Argonauts, or even Cretan figures. The eponymous hero or founder was also worshipped in the metropolis. Indeed, when Cleisthenes reformed the Athenian constitution, he appealed to the Pythia to select ten eponymous heroes from a list of a hundred names which he submitted to the oracle.89 There was an altar to these heroes in the Athenian agora, and statues of them by Phidias, so Pausanias said, were also consecrated at Delphi.91 Also in the agora was an altar to the Archaegetes, either the eponyms of the twelve tribes into which the Athenians was organized before the Cleisthenian reform, or of the twelve towns which took part in the Thesaean synukxia. Theseus's tomb and altar were near by.92 Theseus's body had previously been hidden on Skyros where he died and Cimon had brought the relics to Athens as an ancient oracle required.93 But there is some doubt about the twelve
an aspect of the heroic life; they have the strongest connection with all matters concerning death, the hunt, games, divination, healing and mystery cults. City founders, therefore, entering on the status of hero, tended to have such matters associated with them. And there is a corollary to be noted: cities which were not known to have been founded by a ‘historical’ hero may well have devised one from fragments of myth. But historical persons who founded towns were, during their lifetime, given semi-heroic status and honoured as heroes after their death.

It is not a case of arguing causally. The city had to be founded by a hero; only a hero could found a city. In the same way the Pindaric scholar’s assertion implies a polarity: the hero-founder had to be buried at the heart of the city; only the tomb of the hero-founder could guarantee that the city lived. Indeed, the assembly of the primitive agora, in the sense in which the word signifies the men and not the place, was often in early literature attracted to a pre-existing tomb. The Greek agora continued to have connections with funerary cults as long as the polis remained a religious as well as a political force. The founder’s commemoration, which I mentioned earlier, is the most striking instance of this side of civic religious life. At Amphipolis the oecist Brasidas was buried in full armour ‘at a place facing what is now the agora’. Thucydides goes on to describe the monument and the feasts: ‘And they enclosed his monument and have ever since made offerings to him as a hero, offering him worship, and instituting games and yearly sacrifices.’ Brasidas, the victor of the battle of Amphipolis in 422 B.C., was adopted as patron and kites of the city as a declaration of defence by a colony founded by the Athenian Hagnon, whose shrine had been destroyed. Here the ritual act is used to assert political independence. A monument recently discovered at Paestum seems to provide another variant on this feature of the Greek city. Bordering both agora and the great temenos, a little fenced shrine (18 x 15 m), a small independent temenos, was discovered just after the Second World War. Of centre in it was a small building, completely sealed. A short dromos led to an entrance which had been blocked up. A double-pitched roof of stone slabs was covered with tiles. Within was a stone bench, supporting six iron rods to which was attached a metal and leather criss-cross of a kind reminiscent of bed-wetting; on top of that there appears to have been laid a linen sheet. By the walls stood eight bronze amphoras of great beauty, and two bronze hydrias, all of which contained honeycombs, still well-preserved, and an Attic black-figure amphora, representing on one side the apotheosis of Hercules and on the other Hermes and Dionysus watching a satyr dance. The vase had had its foot broken and it had been repaired with lead plugs, clearly before the sealing of the shrine. It may therefore be taken to have been considered an object of great value and particular relevance to its placing. It bears an unmistakable reference to hero-cults: Hercules was, after all, the archetypal hero. The honey in the bronze jars again points to the ‘buried’ shrine as a place connected with the worship of a dead person, a hero, and again the empty bed suggests a cenotaph. The
The Omen that shall make
Thera mother of mighty cities
Was given where Lake Tritonis flows to the sea,
To Euphemus once
a guest, gift from the god in a man’s likeness
A clod: Euphemus, alighting from the bows
Took it, and father Zeus, son of Kronos
Well-pleased rang out in thunder . . .
Eurypylus, son of the undying
Shaker and Holder of earth
. . . knew of our hurry: there and then
Took a clod in his right hand, eager to offer
What gift he could
And the hero did not refuse it
He leaped to the beach, and clapping hand in hand
Took the piece of wonderful earth—
But a wave broke
I hear, and washed it
Overboard into the sea . . . .
Into this isle has been thrown
The undying seed of Libya’s wide meadows
Out of due time.
For had he come home, and cast it
Into hell’s mouth in the earth
in the ancestral shrine of Pythian Apollo. On this stele shall also be
carved the words of the oath which the founders swore when they
took to sea to go to Libya with Battos, leaving Thera for Kyrene.
The moneys necessary for the marble and the carving shall be leived
from those in charge of the accounts of Apollo’s revenues.

The Founder’s Oath

Resolved by the Assembly: since Apollo spontaneously prophesied
to Battos and the Therans to colonize Kyrene, they resolve to send
Battos to Libya as archegetes and king . . . that one son be con-
scripted from each family; that those who sail be in the prime of life.
Of other Therans, every free man who wants to do so may embark.
If the colonists succeed in establishing themselves, each one of their
compatriots who will go to Libya later will enjoy full civil and
political rights, and he shall be assigned by lot a piece of ground
which has no owner. If the colonists do not succeed in establishing
themselves, and if, the Therans being unable to help them, they are
oppressed by necessity for five years, they shall be free to return to
their homeland, Thera, without fear, and they shall recover their
possessions and their civil rights. Who shall refuse to embark when
he has been nominated a colonist by the city shall be liable to the
death penalty and the confiscation of all his goods. Whoever has
sheltered him, or has helped him to escape, even had it been a father
that helped a son or a brother a brother, he shall be punished in the
same way.

Both those who stayed and those who were going away to found
the colony swore the oath according to the decree, and they proclaimed
curses on those who would break the oath and not remain faithful, both
among those who were to dwell in Libya and those who were to stay.
They made images in wax and burnt them, and pronounced curses in
unison; men, women, boys and girls: ‘Who shall not remain faithful to
these oaths, but will break them, let him melt and Equify as these
images, he and his children and his goods. As for those who shall remain
faithful to these oaths, both those who depart for Libya and those who
stay in Thera, let them experience, they and their children, every
prosperity.’

Although this text of the foundation oath of a colony is unique so
far, the various elements of which it is made up are familiar enough in
the literature of Greek religion: imprecations pronounced in unison
against anyone breaking the common oath,2 the use of wax
dolls of the kind the oath suggests, are attested in another Kyrenean
religious document,2 as well as in funerary cults of the Greek main-
land.24

The Les Cathartic, according to its first editor, provides the earliest
written ritual formula in the Greek language.25 Altogether there is
something archaic about Kyrene, this hellenic Kingdom set down in
Libya sometime in the seventh century and governed by kings of its
founding dynasty until the second half of the fifth century B.C. No
doubt it was this archaic character of the town which appealed to
Pindar. But there is little evidence, certainly at that date, of any radical
contamination of Kyrenean religion by African sources;4 the
documents quoted and the myths of the city are part of the common hellen

Unfortunately the other surviving inscriptions referring to foundations
deal mostly with constitutional and legal matters, though they also
propose punishment for and curses on transgressors. The treaty between
Locri and Naupactus is the most explicit and longest of such docu-
ments,27 and the decree concerning the Athenian colony, Brea in
Thrace, has interesting implications. The adjutants of the occia, the
first complete sentence begins, ‘shall make provision for sacrifice in
order to obtain favourable omens for the colony, . . . Ten distributaries
of the land shall be chosen, one from each tribe. . . . Democtides shall
establish the colony with full powers to the best of his ability. The sacred
precincts that have been set apart shall be left as they are, but no further
precinct is to be consecrated. The colony is to offer a cow and panoply
to the great Panathenaic and a phallos to the Dionysia. . . . Thus
this decree is to be written on a stele and placed on the acropolis. The
colonists are to provide the stele at their own cost.28

Of course there was nothing unique or even unusual about these
documents. Plato records the use to which such an inscription was put
by the kings of Atlantis acting on ‘the commands of Poseidon which the
law set down. These were inscribed by the first kings on a pillar of copper
which stood in the middle of the island, at the temple of Poseidon. . . . ’ The kings gather and judge; but before they utter
judgement, they perform a sacrifice as a pledge, in which one of the
free-ranging bulls of the temple is captured with staves and a noose,
without use of weapons, ‘and the bull which they had caught they led
up to that pillar and cut its throat on the top of it so that the blood fell
upon the sacred inscription. Now on the pillar, beside the laws, was
inscribed an oath invoking mighty curses upon the disobedient.’ The
judgement and the oath are then described in detail: the only feature
I wish to cite here is that swearing the laws inscribed on the pillar by
the sacrifice performed before it (a common enough practice in Greece)
and giving judgement was to take place by the light of the sacrificial
fire only, at night.29

The judgement by the light of the fire only points to another
foundation custom, that of transferring fire from the city hearth of the
mother country to that of the new colony. Of the Ionian league of
twelve cities, or dodecapolis, Herodotus says that those Ionians con-
sidered themselves most noble who left ‘from the Prytaneeum of the
Athenians’, the place of the sacred hearth,31 implying what the old
scholiast on Pindar’s Eleventh Nemean ode says explicitly, that the
colonists took fire with them from the mother city to light the fire on
their own sacred hearth.32

The picture I have been able to piece together here is very frag-
mentary. But, even from the fragments I have quoted, it is clear that
the Greeks had established customs in the matter of the founding of
Two City and Site

The Kyrenian oath I described earlier seems a reflection, an analogue of the great oaths and laws inscribed on the copper column which stood at the centre of Plato’s Atlantis. It is an index of an aspect of the problem which modern commentators have, on the whole, preferred to ignore.

Plato and Aristotle are usually quoted in support of a ‘commonsense’ view of ancient planning. In the *Politics*, for instance, Aristotle makes quite explicit recommendations for a site: ‘The land upon which a city is to be sited should be sloping, that we must just hope to find, but we should keep four considerations in mind. First and most essential, the situation must be a healthy one. A slope facing east, with winds blowing from the direction of sunrise, gives a healthy site, rather better than the lee side of north, though this gives good weather. Next it should be well situated for carrying out all its civil and military activities...’ and so on; this passage is echoed by Vitruvius, who also seems familiar with Aristotle’s authority, Hippocrates; though Vitruvius is more circumstantial than the former and less than the latter. ‘The choice of a healthy site must come first,’ he says; ‘such a site will be high, neither misty nor frosty, the climate neither too hot nor too cold, but temperate. Further, there should be no marshes in the neighbourhood... Again, if the town is on the coast and exposed either to the south or the west it will not be healthy... In founding towns, in short, beware of districts where hot winds can blow on the inhabitants...’ and so on.

How to Choose the Site

(i) The Theorists

Although such common sense notions were current enough in Vitruvius’s time, they were not often applied in practice. In the fifth century B.C., when Hippocrates formulated them, they must have seemed eccentric as well as revolutionary: they seemed to go right against the Pythia’s advice to incipient colonists over the past four centuries. Agrigentum (Akragas) for instance, a town founded about 580 B.C. by colonists from Gela, faced directly south-west on to the Mediterranean and was protected by a rocky escarpment, the Athenian rock, along all its northern limit. Some time in antiquity a breach was made through the escarpment to admit the north wind. Popular tradition has it that it was carried out on the advice of Empedocles, about a century and a half after the foundation of the town, which had, however, been founded on a site which would not have satisfied the Hippocratic conditions at all. The same is true of many towns on the southern coast of Sicily, the Tyrrhenian seaboard of Italy, and so on. Rome itself was founded on the Palatine hill, it is true, but overlooking the notorious malarial marsh in the valley of the Forum. On the point of orientation even the theorists are not altogether consistent. Aristotle had himself (in another book) found a site facing only south acceptable; and Xenophon,
City and Site

quoting Socrates, actually recommends it. While there seems, therefore, to have been general agreement about how important it was that the greatest care should be taken to select a very temperate climate for the site of the city, since healthiness is the first requisite, yet there seemed to be a great deal of disagreement among authorities as to the right way to achieve this. Consider another matter, the relation of street layout to the direction of the winds. Vitruvius, again following his Greek preceptors, warns planners that 'if the streets run straight in the direction of the winds then their constant blasts rush in and... sweep the streets with great violence. The lines of houses must therefore be directed away from the quarters from which the winds blow, so that they may strike against the angles of the blocks and their force be broken up and dispersed.' To the planner, Vitruvius described a sixteen-rayed tablet arrangement for orientating the main streets at an oblique angle to the strongest winds. Writing 300 years after Vitruvius, Oribasius, the editor and reviewer of Galen, recommends the exact opposite:

'When streets are parallel in a town, some in length and some in breadth, the first running from east to west, the others from south to north, so that they pierce the town through length and breadth without any obstacles, and none of the winds meets any building which might obstruct its course...[the town will be] well aired and sunny, healthy and clear. For all the winds, Boreas and Notus, Eurus and Zephyrus, which are the dominant and most regular winds, sweep through the streets without meeting obstacles and pass freely without causing any disturbance... This kind of plan also makes the town a good suntrap because at sunrise and sunset the sun lights up the streets which run east-west, and at midday those that run north-south...'

Such matches of medical opinion as we have, therefore, contradict each other directly, clearly there is not enough material to allow any generalized account of town-planning theory in this respect. Nor does archaeology provide the evidence on which theory might be related to practice. There are, in the matter of orientation, plenty of orthogonal plans of all periods, and in all geographical locations, which seem to conform to the Hippocratic rule: Miletus, for instance, Naples, Pompeii, Selinus or Aosta. There are even late imperial foundations of this kind, such as Trier, Avanches, Turin, Zara (Zadar), Carnutum. On the other hand, there seems to be an equal number of orthogonal plans which might accord with Oribasius's formula, some very ancient: Marzabotto, Capua, Laodicea, Priene, Paestum; and, again imperial ones: Cologne, Silchester, parts of Constantinople, Lucca.

It is impossible to conclude, on the basis of what is known at present, whether any systematic relationship was established by the Greeks (or the Romans) between town-orientation and the principal winds, and similar factors. There is no record of any device for doing this. It may well be that if all the material available were adequately tabulated, some indication of a system, or several conflicting systems, would emerge. But on the information available I must conclude that the advice of theorists about the choice of site is a pious gloss without any very radical undertones.

Of course an ideal site would have to be fine and healthy, as Vitruvius says. But the choice, when explicable in rational terms, was often made for quite different reasons than hygiene; for commercial and military reasons, for instance. The injunctions of the theorists do not seem to have been followed. In the legend of Archias and Mycellus we actually have the account of an oecist preferring wealth to health; the theories read more like post-facto rationalizations than direct precept.

Modern writers on town planning who look for the progressive development of a sensible planning method in antiquity, tend to emphasize out of proportion the very little evidence which is available—which is mostly in the form of incidental remarks. They tend to neglect, however, the obscure magical and religious rituals which, with most of our contemporaries, they find unattractive and unedifying as well as irrelevant. Roland Martin, for instance, in the first chapter of his fine book on Greek towns, quotes this passage about the ideal city from the Laws of Plato: 'Some places are subject to strange and fatal influences by reason of diverse winds and violent heat; some by reason of waters; or again from the character of that subsistence which the earth supplies them, which not only affects the bodies of men for good or evil, but produces similar results in them.' There Martin cuts short his quotation, but Plato, who is considering the moral and psychological influence of physical environment, goes on to say: 'In all such qualifications places excel in which there is a divine inspiration, and in which the gods have their appointed lots, and are propitious to the dwellers in them.' It is the good will of the divine powers which is transmitted in the favourable physical conditions. Its assurance might have been more easily obtained, if the recent readings of Platonic urbanism are taken correctly, by establishing harmony between the city and the structure of the created universe rather than by any other means. Even in historical times, the founder of a town would therefore prefer to trust himself blindly to the unpredictable, if approachable, divine powers and follow their dark hints. We have no notice of a founder who sought a site by working out the theoretical advantages of various choices as they are set out by theorists. Herodotus reports an exceptional case. The Spartan Dorieus thought that he could found a town on a site he fancied without worrying about divine sanction or performing the usual rites, though apparently even he had consulted some private diviner. Two years after its foundation his town was wrecked by an alliance of Libyans and Carthaginians, although it had been the 'best site in all Africa'. For his second attempt, although again fortified by private revelation, Dorieus preferred to consult the oracle. The prophecy was 'fulfilled' again in a failure, the death of Dorieus and the dispersal of his second colony, founded this time in western Sicily.

The second failure is not really disconcerting: the myth also recalled, in any case, the premature fulfilment of the prophecy in an incidental victory Dorieus won on his way, so that his ultimate failure was attributable to his not having obeyed the oracle to the letter. Had the
second foundation, however, been an unqualified success, there would not have been a more or less relevant conclusion to draw. But I am not here concerned with how successful the Pythia had been in forecasting the exact future of a colony. On the contrary, what interests me is why the sanction of the oracle was required by a founder, how it related to his own status with his fellow citizens, and how this fitted into the general pattern of town foundation. What the city founder thought he was doing and its mythical ‘rightness’, or what his followers saw him do is more interesting in this context than his historical success or failure. It is the idea of the town which concerns me here: ostensible motives are as valid—or more valid—for this consideration as any arguments that would nowadays be thought convincing by a new town finance committee.

(ii) The Rites Observed

‘The choice of the site’, says Fustel de Coulanges, ‘a serious matter on which the whole fate of the people depended . . . was always left to the decision of the gods’.¹⁴ The historical part which the Delphic oracle played in the foundation of the colonies has been set out in detail by the two authorities I have already cited frequently.¹⁵ Nor does it seem as if the innumerable myths about the intervention of divinity in town foundations, through the agency of a sacrificial animal, for instance, can be reduced to simple aetiological mystification. This intervention was clearly an integral part of the foundation proceedings, and was always incorporated into the notional apparatus of the inhabitants about their home. The animal may have been a common sacrificial animal such as a goat,¹⁶ a cow,¹⁷ a bird, such as a falcon,¹⁸ or a crow,¹⁹ or yet again a creature appertaining to the earth, such as a snake,²⁰ or a swarm of bees;²¹ or even an aquatic beast, such as a dolphin,²² might play this role. In later times even more complex methods of divination were employed, as when animals were sacrificed and pieces of the sacrificial meat were exposed for birds of prey; the site was fixed where the first bird dropped its find.²³ Pius Aemilianus himself followed a pregnant sow to a place where it farrowed, and founded Alba Longa on that spot—which would have been quite unacceptable on health grounds.²⁴

In founding Rome, Romulus also followed this practice. ‘Had Romulus been a Greek,’ says Fustel de Coulanges, ‘he would have consulted the Delphic oracle; had he been a Samnite, he might have followed some sacred animal like the wolf or the woodpecker. Being a Latin, a neighbour of the Etruscans and an initiate in the science of augury, he asked the gods to reveal their will through the flight of birds. . . .’²⁵

On the other hand, two of the authors who tell the story add a further detail, with Italiot overtones; they say that Romulus and Remus agreed to find the city near the place where they had been picked up by the she-wolf. The exact spot where this occurred was said to have been the site of the Lupercal shrine.²⁶ Here the two brothers separated, and each went on a hilltop to watch for the auspicious birds. This was the inauguratio.²⁷ The inauguratio was a complex rite. It consisted of a prayer,²⁸ a naming of signs, and a description of the augur’s field of view. The augur watched for the signs and when they appeared, he determined their exact significance. The specific terms for the culminating acts were conregio, conspicio and curtumio.²¹ This is how the augur carried out his duties. For the conregio the augur drew a diagram on the ground with his curved wand, his litus.²² Livy gives an account of this part of the rite in his description of the inauguration of Numa as king of Rome: ‘The augur, with his head veiled, took a seat on his (Numa’s) left, holding in his hand a crooked and knobless staff called litus. . . .’²³ He prayed to the gods (dies presentis) and fixed the regions from east to west, saying that the southern parts were to the right, and the northern to the left.²⁴ This fixing of the regions, and the naming of landmarks, such as trees, which bounded them, while he pointed to them with his staff, constituted the conregio. The conspicio seems to have been parallel to the conregio. The direction of the augur’s eyes followed his gesture, and by taking in the whole view, town, and country beyond, he contemplated it, and united the four different templia into one great templum by sight and gesture. As Livy puts it: ‘He fixed the guiding mark in his mind²⁵ as far as his eyes could see before him.’²⁶ Marks he determined, though in some cases they were probably traditional, after he had drawn his diagram. And then he spoke the covenant, the legem dixit,²⁷ that is, he announced the matter about which he was to decide and what incidents were to be taken as portents. Livy continues: ‘Having passed his staff (from right hand to the left) the augur put his right hand on Numa’s head and prayed: “Father Jupiter, if it is right (just) that this Numa Pompilius, whose head I touch, should be king of Rome, then let your signs be clear and unmistakable between the boundaries I have made.”’²⁸ He then announced what kind of signs he wished to see.²⁹ These were sent, Numa duly proclaimed king and all went down from the high place where the auspices were taken.
wooden planks for the taking of augury. But this would take me away from the argument, and in any case there clearly is an analogy here. Temples or tabernacles were a piece of land defined by boundaries and devoted to a particular purpose, a shrine. And Varro tells us, when he comes to discuss the terrestrial temple, that it was a ‘place set out according to certain definite forms of words for the taking of auspices or for augury.’

But as Varro implies later in the same passage, the word had wider and more general applications. A temple could be any space set apart for definite functions of state and religion. So for instance a senatusconsultum was not valid unless it had been passed inside a temple, and between sunrise and sunset. As the general’s tent in a Roman camp was called auguraculum, after the augur’s tent, which he set up on the temple sometimes, so the camp itself could be regarded as a temple. It was certainly, as was any properly consecrated town and even certain rural tracts, liberatum et effatum: freed of evil influence and consecrated. The normal temple, as Varro says, ‘ought to have a continuous fence and not more than one entrance.’ Now the town, the urbs, had three entrances ritually, but it was certainly an ager effatus, a ‘place that had been consecrated’, and shared many characteristics with the temple. Without wishing to give the matter too much weight, it is worth emphasizing the importance of this ‘cutting off’. ‘This insistance’, says Kurt Latta, ‘on a purifying enclosure of lands is in any case characteristic of Roman religious thought.’ But the town shared other characteristics with the temple, besides that of being ritually enclosed.

The most important of these was the consecratio, the division into four parts, like those of the diagram the augur drew, and the bringing of the four divisions together again by formula and gesture. In a place which had an unobstructed view of the neighbourhood the augur drew a shape divided into four parts, forward and backward, left and right, divided by lines drawn from east to west, from north to south. I have deliberately kept the description rather clumsy, instead of saying that the circle was divided into four by lines running north-south, east-west, because in the context of divination, the words left and right, forward and backward are technical terms. Which leads to another problem: what shape exactly was it the augur drew and divided? It certainly had an outline, all the directions agree on that. Varro provides the essential clue by implication: he considered the heavenly temple first. This was circular and quartered. Many ancient peoples, including the Romans of course, believed that the earth was circular, and that the sky formed a vault or dome over it, so much has been written about the matter that I need say no more about it here.

The association of the heavenly temple and its dividing lines raises yet another unresolved problem: that of the association between the dividing lines of the temple and the main orientations. This has never been adequately examined. Varro firmly sets the augur at the ‘north’ point of his diagram, facing ‘south’ so, Frontinus, when applying the same terminology to surveying, and claiming to use the system of the haruspex, turns Varro’s scheme at 90°, so that the surveyor, and the haruspex, faced west. While they agree on the terminology for the lines of augury and surveying (cardo and decumanus) they therefore applied the terms for the quarters (left and right, lither and beyond) quite differently. Unfortunately, the system sets even more complex problems, as is shown by Livy’s circumstantial account of the inauguration of King Numa. Explicitly following Romulus’ example at the city founding, Numa ordered that the bird-omens be consulted about him: ‘An augur, whose service on this occasion was afterwards recognized by the grant of a permanent state priesthood, escorted Numa to the citadel (i.e. on the Capitol, presumably where the auguraculum was later situated) where he took his seat on a stone with his face to the south. And so Livy goes on to describe the ceremony which I analyzed earlier. I refer to it again here, as a type of augural procedure, which—in spite of the analysis—remains as hermetic, as the science of the augurs, which was secret. But something has come to light about the nature of the auguraculum: those of certain Roman cities have been examined: like Roman towns, so these auguraculæ did not have a fixed orientation. Indeed it seems as if the dividing lines of the Augurs’ temple were, like those of the surveyors’ guide-lines later, rather haphazardly related to the cardinal points. And yet it would seem—that certainly by imperial times—the terms left-right, forward-backward had passed into ordinary speech, as synonymous with the cardinal points. So how the augur drew the diagram, what position he occupied in relation to it, is not made absolutely explicit by the texts. Sometimes he drew it by gesturing with his staff in the air: Servius explicitly says that it was forbidden to Augurs to do this with the hand alone, but had to be done with the titus; at other times he certainly seems to have drawn it on the ground. It may well be that both operations were essential. Its relation to the cardinal points was essential—notionally at least—to the surveyors at any rate, if not to the augurs. The frontispiece of one of the oldest surveying treats makes this quite clear. It is a starry circle representing the sky which is quartered as the augur quartered his diagrammatic circle. The size of the diagram did not have any relation to its power, since its working was analogous. It worked ex parvo in magnum, the divisions and limits of the sky being transferred from the little diagram which he had drawn onto the landscape the augur saw in his compendio. I take it that the various formulae, such as that of Varro and that of the Iguvine tables, are a record, almost a prompt copy, of what the augur said and cannot be used as evidence about what sort of diagram the augur drew, as some scholars have wanted to use them. The landmarks which the various formulae named are sometimes wide apart. To maintain that each time the augural operation was repeated (and it was daily) it involved the augur in drawing lines several hundred yards long with his stave does not make sense. The purpose of drawing the diagram was to set the general order of the sky in a particular place, with the augur at the heart of it. This was accomplished when the great temple of the sky was first condensed into the ideal form of the augur’s diagram, and then projected on to the tract of land before him by the ritual formula. That is why we are never
told what shape the earthly templum was to take; though Varro does describe it as 'a place set aside for augury or the taking of auspices, limited by an incantation, which was not the same for every place', and in this context records the particular one used in the Capitoline auguraculum. Elsewhere he reports that every templum should have an enclosure broken only at one point. When the templum was fixed in this permanent way with a fence or wall, it was called a templum minus, and this last term came to be applied in an exclusive way (without the minus qualification) to what we now call temples. But the augural templum could be set down anywhere, and did not necessarily need physical enclosure. It might, in certain places, have valid and permanent physical bounds, but its real boundaries were not fixed by them. The templum was bounded by the words of incantation, by certa concepta which drew a magical net round the landmarks the augur named. It is this naming, and not any drawing on the ground with a staff, which actually fixed the boundaries of the templum. These ceremonies and ordinances were not used for special purposes only, but were the common Roman way of dealing with matters of location. The military camp for instance was related to the augural templum. It also had permanent boundaries, and was carefully orientated, so Polibius explained, from a white flagpole which stood in the centre of the praetorium, the camp's staff headquarters. Near the flagpole was the auguraculum, the general's tent, from its door the general read the oracles, and to the left stood the tribune from which he addressed his soldiers after he had ascertained the will of the gods.

Pliny records a primitive method of orientation. Writing about orientation (not for divining, but for the rural common-sense kind of forecasting) he recommends that you should cast your own shadow at the sixth hour (i.e. at midday) facing south, then turn to face north, so as to see the shadow 'through the centre of it make a furrow with a hoe, or drew a line twenty foot long, say, with ash. Half-way along it, that is at the tenth foot, draw a little circle, which is called the navel (umbilicus). The direction of the apex of the shadow will be that of the north wind. . . . Through the middle of it draw another (line) which will run from the direction of the equinoctial sunrise to that of equinoctial sunset. A boundary cutting the field in this direction is called decemans. . . . Two further oblique lines must be drawn through this intersection (dorsula). . . . all running through this same navel, all equal, and with equal distances between them. Pliny finds it necessary to apologize for this method as being fit only for technical simpletons, and suggests that more expert people might have this diagram, essential for determining wind directions, registered permanently on some kind of tablet.

Vitruvius describes the construction of such a 'wind-rose' in great detail. Vitruvius' rose is more detailed than Pliny's, having sixteen divisions instead of eight. These sixteen compartments of the winds relate, of course, to the sixteen divisions of the sky in Etruscan divination, further analogies (such as that to the sixteen names of Qairos) would involve me in too elaborate a speculation.
This is how Roman surveyors worked: a scistherum, an upright bronze rod, was set in the centre of a circle, probably on a marble tablet. The shadow of the rod was then observed, and the two points at which its tip touched the circumference of the circle before and after midday were marked and joined; the chord was bisected, and the line joining the centre point of the chord to the rod was the carda, while the chord itself was the decumanus. Having established the main axes, or else accepted the orientation of some notable feature of the place, such as a main road like the Via Emilia, running through the site, the surveyor operated with an instrument called groma or gnomon (the scistherum was also called gnomon, and this has led to some confusion). This was a composite instrument: a sheet-metal cross (stella) with plumb-lines on each arm of the cross was set horizontally and eccentrically on a wooden frame (ferramentum) so that the cross could be sited directly over a tablet with a cross drawn on it (decussis), one of the main lines of which was made to coincide with the line (carda or decumanus) previously selected by the surveyor. The lines were then established by inspection. The stella on its gnomon was to the surveyor what the templum was for the augur: an ‘essence’ of his method. In fact a stella of bronze appears to have been fixed to the thresholds of templum minora, and it may even be that the augural litus also had a small stella fixed to it.

The auspices were taken. Either that day and on that site, or, if the gods were not agreeable, on another, better site and more favourable day, a sacrifice was offered. The entrails, particularly the liver and perhaps the intestines, of the animal sacrificed were then opened and inspected for further omens. This was done by a special kind of diviner, the haruspex, or liver-diviner. Like the reading of auspices, haruspication was traditionally an Etruscan skill, and remained so well into the Christian era. Inspecting sacrificial entrails for omens was a universal practice. The specific method of divining by the liver seems to have originated in Sumer, and spread to the Hittites and beyond. In the context of primitive religion, this form of divining appears obvious. The liver is a large and delicate organ which at any time contains a sixth of the stuff of life, the body’s blood. So the liver was thought of as the seat of life, and it followed that in any animal consecrated to the gods, and whose every smallest movement was anxiously observed, the liver, as the focus of its being, would in a particular way become a mirror of the world at the moment of sacrifice. It is worth noting that sheep in Mesopotamia (they were the most common sacrificial animal there)
13. A haruspex divining over a sacrificial liver.
The haruspex is called "kalchae" on the mirror.
Bronze mirror of about 400 B.C., found at
Vulci
Museo Etrusco, Villa Giulia, Rome

14. A scene of liver divination; perhaps
Tarchon learning haruspicy from Tages
(? Pava teneras). Bronze mirror found in
Tuscania
Museo Archeologico, Florence

15. Reclining figure holding a divinatory liver, or a model of such a liver: the resemblance to the miniature Placentia liver is evident. Presumably the portrait is of a haruspex. (List of an abbreviated divinatory unit, with some fragments of colour adhering. Known as "La Tomba dell' usurpice"). Early third century B.C.) Museo Guarnacci, Volterra.

were prone to a disease which resulted in strong marking of the liver, and the suggestion has been advanced that a system of 'correspondences' was developed between the markings and external events. At some stage the lore was codified, giving the practice all the semblance of a 'trade' with schools and licensed diviners, case histories and disputes about interpretation. There was nothing 'inspirational' about it at all.

Although several documents relating to it have survived, we know very little of the actual rules and procedure of Mesopotamian liver divination, and even less of the Etruscan system. The most important of the Etruscan documents to survive is the bronze model of a liver, now in the museum at Placentia. Most scholars have thought that this model was used for instruction in a divining school, some others that it was only an amulet. Whatever purpose the object served, round the edge of its more 'populated' surface are sixteen compartments containing names which correspond fairly closely to the names of the sixteen Etruscan gods of the divinatory sky recorded by Martianus Capella. The augur's divisions of the sky correspond to the haruspex's divisions of the liver, both referring to an 'idea', a 'model' of the world, so that it is not surprising to find a haruspex doubling duties as thunder diviner.

Besides the liver, another internal organ was important in augury: the intestines. In augury the intestines were called 'palace of the intestines' or just 'great palace' (the Akkadian edēlu, like the Hebrew עֵדֶל [edēl] means both 'palace' and 'temple'). "Palace of the
intestines' was also the name of the underworld in Mesopotamia, of the region of the demon Humbaba, the intestine-man. Together, the intestines and the liver seem to represent the universe in Mesopotamian divination. What is more, the terms of Mesopotamian divination, 'mountain', 'river', 'station', 'passage', 'fort', 'main gate', and so on, add up to something like the description of a landscape. There seems to have been some sort of direct link between details of a landscape, such as the surroundings of a besieged town, and parts of the sacrificial victim's entrails. In Italy entrail divination in general, though practised, was much less important than it had been in Mesopotamia. The great Etruscan skill concentrated on liver divination.

The founder of the town had already consulted the flight of birds, the movement of stray animals, thunder perhaps, the motion of the clouds, to find out if the site and day were propitious. Why then was divination by the liver so important? It remained an essential part of many ceremonies when auguration had fallen into desuetude. Vitruvius is most insistent that the examination of livers should not be neglected: 'Our ancestors,' he says, 'when they built a town or a military post, sacrificed some of the cattle that fed on the site and examined their livers; if the livers of the first victims were dark or abnormal, they sacrificed others to see whether the peculiarities were due to disease or to their food. They never began building walls in a given place, until they had made several such examinations.'

Even without corroborating evidence, Vitruvius's 'rationalist' statement would have been sufficient to establish the practice of haruspication at the foundations of towns, though his reasons for it may not have appealed to earlier founders or their diviners. The divinatory procedure was lengthy and tedious. Unfavourable omens could be cancelled by a
more favourable configuration of entrails or markings of the liver. Sometimes the entrails were 'dumb' and the sacrifice had to be repeated because of that alone. In any case they could occupy several days. And their results were not taken simply as being the gods' yes or no answer to a specific question, but could give precise indication of action. The presence of these sacrifices in the ritual of town-founding is not in itself significant, since they were one of the most certain ways of asuring the participants of an action that the gods sanctioned what they were doing. But the topographical nature of the divinatory language seems to indicate that the nature of the inquiry regarded the site before them. I do not think that I am stretching the evidence when I suggest that this form of divination may have been practised to determine some of the features of the layout on the site; the terminology of haruspication might have suggested the line of the wall, and the actual layout of some of the principal public buildings of the town.

We have no guide to tell us how the ancients laid out the public buildings and temples in relation to the plan of the town. In the case of a Roman military camp, we know at least that a more or less level site was always selected. But even here, where a strict specification was
given for the layout, this was more a topological indication than an actual layout, even in the form in which it survives in late imperial writings. In a town there were, as a rule, many irregularities of the ground and changes of level to be taken into account, and such irregularities were very difficult for Roman surveyors to chart. Even the largest-scale maps which survive from antiquity, like the Forma Urbis Romae, do not register changes of level. It seems possible, therefore, that when an irregular site had to be laid out this was not done in accordance with a previously established drawing, but carried out on the actual ground, and may have been related in some systematic way to the reading of the victim’s entrails.

There is no direct evidence to support my suggestion. But in other circumstances divination was directly applied to the lie of the land. The Roman augur Actius Navius, for instance, first showed his skill when looking for an extra large cluster of vines in his vineyard to sacrifice to Jupiter. He stood facing south and divided his vineyard into four parts: by observing birds he rejected three of the quarters, and located his offering in the fourth. This is the only clear instance of the augural templum being used for divination referring to exact siting. In the various accounts of Constantine’s foundation of Constantinople, there are stories of his divinely inspired enlargement of the city boundary which had been fixed previously. It is not unnatural, therefore, to assume that divination was applied topographically. But there is little hope of ever discovering in what measure the details of an urban foundation were worked out in consultation with diviners.

**Mundus**

The name had now come to prepare the auspicated site for new occupants. According to one writer, the first step was to light brushwood fires at various points of the site for all the future citizens of the new town to leap over so as to clear themselves of all faults and impurities. It may be that this account merely reflected the custom of leaping over brushwood fires on the feast of Pales, the birthday of Rome. Next a hole, a round hole according to some, was dug in virgin soil (or the solid rock) and into it were cast first fruit, or unspecified and enigmatic ‘good things’, and/or earth from the settlers’

town.

This hole was called mundus; like templum it is a contentious word. In the context of ritual it seems to have signified a hole in the ground leading to a (vaulted?) chamber, or two such chambers one above the other, and was consecrated to infernal gods. It crops up in different guises in Roman religious practice. One appears to have been dug at the foundation of Rome, but even about this the ancient authors disagree. Some say that Romulus’s mundus was on the Palatine, others on the Comitium in the Forum. We know that in some way mundus was a shrine of the mnes, the propitiated souls of the dead. It was opened three times a year, and on the days in which it was opened were dangerous and all sorts of public business, including the joining of battle, were forbidden. On those days the spirits of the dead came among the living. There was also a mundus devoted to Ceres, goddess of the crops, which even had a special priesthood. The cult of the dead, the infernal powers and the deities of vegetation are closely connected of course, and I take it that in general the mundus was, among other things, the mouth of the underworld. That is why attempts to locate the mundus of Rome and to discount the evidence of one group of ancient writers must fail. ‘The soil of Rome’, as one scholar has remarked, ‘was riddled with hollows’.

Though we may never know where Romulus actually dug his hole, it is worth noting that it seems to have been connected with the deus vivus of the cardo et decumanus maximus. Whether it was dug at the actual crossing of the lines, or to the north or west of them cannot be determined. After whatever was to be deposited was put in, it was covered by a stone, and an altar was set upon or beside it, and a fire lit on the altar, perhaps by rubbing firesticks, this fire was the ‘focus’ of the town. At this point the city may also have received its name. The other ancient writer who describes the naming ceremony as part of the foundation is the Byzantine historian John Lydus, who says: ‘Taking the priestly trumpet (which the Romans call litus) in their language, after the word λεη (lit, prayer), he (Romulus) pronounced the name of the town. . . . A town had three names: one secret, one priestly and one public. The secret is Amor. . . . the priestly Flor or Florent (made that is also why this day was commemorated by the feast of Floralia) and the public is Roma.’ Although Lydus is often suspect, there can be little doubt of the fact that Rome had a secret name, for Pliny records the execution of a magistrate who had revealed it. Although many scholars and grammarians have speculated about it, and in spite of the fatal indiscretion of Valerius Soranus, the name remains secret: Lydus’s information is isolated. The assumption has, however, been made recently that it was the name of an androgynous deity. So far Lydus appears to have named correctly, and this deity, who may have appeared openly in the religious life of the town in other guises, also acted as fortune and as genius of the town which it protected.

At this stage in the ceremonies, the town may be said to have been born. The gods had demonstrated their benevolence towards the community, the site had been purified and marked out, and the augur had taken

Orthogonal Planning and the Surveyors
supernatural stock of it. The community had taken possession of the ground by the mixing of the earth from the site with that from the settlers' homes. Perhaps it was at this point that the surveyors took over the site and marked out the streets, and the building plots. It may be, however, that they were working while other parts of the ritual were going on, or they may have started only when the last part of the ritual had finished. Their intrusion here raises the whole vexed issue of the origins of orthogonal planning, which would have been impossible without recourse to some form of surveying technique. Although it is not at all evident whether surveyors operated within or outside the foundation ritual, yet their discipline, (as Roman writers on surveying claimed), had its origin in the divine mysteries, as did the Etruscan rite. In any case, when Roman surveyors appeared on the fresh site with their elaborate and mysterious-looking rig of marble and bronze, they must have looked as solemn and impressive as the augurs. Their method of operation, even if it were performed without any ritual, prayers, sacrifices, etc. (which is very unlikely), must have had something of the character of a mystery. Even nowadays surveyors at their business look as if they were performing a ceremony. And of course, like modern surveyors, the ancient ones also had to start from some form of datum. This, apparently, was the decursis of the cordo maxima and of the decumanus maxima: the umbilicus of the place. There the surveyors' principal instrument, the groma, was auspiciously set. The surveyors' terminology alone would have been enough to connect their operations with the Etruscan rite.

They also appealed to another authority worth mentioning: Mago the Phoenician. Mago was a common Phoenician name; but this particular Mago seems to be the same one as the author of a treatise on agriculture, whom Varro and Columella mention as their most important predecessor. In the Corpus Agrimensorum, however, he appears as a shadowy figure, sharing an opinion on the sanctity of boundaries with Begisa. He seems to re-appear, in that curious document, the Phoenician History of Philo of Byblos, as the co-founder of settlements and of agriculture. These rather scarce fragments do not really help to determine the Roman debt to Carthage in the matter of surveying. But they suggest that some such debt existed. Perhaps when some clearer idea is gained of Phoenician—and Carthaginian—planning and surveying, this debt might be established, and the place of the Etruscans in this connection re-examined.

When the surveyors had finished their work, the land which they had measured out was distributed by the drawing of lots. The exact procedure is uncertain, but it is clear that the surveyor 'handed over' the land to the settler by leading him to it. The ownership of the land lots was recorded by the surveyors on bronze maps, one of which was kept by the community, and another deposited in the Tabularium in Rome. While this procedure seems to have been standard in imperial times, it had solid republican precedent, and must have gone back to a pre-Gracchan antiquity at least.

The maps of the surveyors, the bronze formae which were the
ultimate authority in all disputes about land, show that the agrimensores were concerned with the laws of land tenure as with surveying proper. It has therefore been suggested that the references to the Etruscan rite in the writings of the agrimensores are a later imposition of rather fancy cosmic notions on a pedestrian, though useful, bit of technology.\textsuperscript{108} This would be entirely contrary to all we know about Roman thinking. I would suggest that the rather modest allusion to the cosmic implications of surveying in the agrimensores are a 'rationalized' and weakened survival of the Romano-Etruscan belief in the sacredness of land titles and boundaries. This is very heavily underlined for us by the terrible penalties primitive Roman law imposed on boundary-breakers\textsuperscript{109} as well as the cult of the god Terminus with its repeated blood-sacrifices.\textsuperscript{110} Perhaps a further point is worth noting. No other civilisation, (and most civilizations have very strict regulations about the inviolability of boundaries), had practised, as the Romans did during the late republic and the empire, the imposition of a constant, uniform pattern on the towns, on the countryside, and also on their military establishments, with almost obsessive persistence.

There is about this complex of the laws of property and the techniques of surveying, with its rather indistinct religious echoes, something rigid and inexorable, something unimaginative; as if it were atrophied after a long development. It does not suggest to me a cosmic 'grail' on a pre-existing technique, but on the contrary a move away...
from a complex of religious, scientific and technical opinions and practices.

It was this kind of process, in other scientific disciplines, that Simone Weil noted when she wrote: 'Only such a mystical conception of geometry as that of Pythagoras could have generated the degree of attention necessary in the first days of that science. Anyone will agree that astronomy came from astrology and chemistry from alchemy. But this succession is interpreted as a progress, although it involves a lowering in the degree of attention. Astrology and alchemy, which are transcendent, are the contemplation of eternal truth through the symbols provided by the movement of the stars and the combination of substances. Astronomy and chemistry are degraded forms of these sciences. Astrology and alchemy, become magic, are even lower degradations. There is no perfect attention except religious attention.'

This may be too grandiloquent a statement for my present subject of surveying. The converse, however, is put more succinctly and more acceptably by Claude Lévi-Strauss in another context. Discussing the 'uselessness' of many of the animals or plants which may be found as 'totems' in primitive societies, he points out that they were chosen 'not because they were good to eat, but because they were good to think.'

Astrology, alchemy, a totemic system—all these may be an explanation of the world's working, as may be the amalgam of divine and orientation which performed this most important part for the Etruscans and the Romans.

'There is here, too, a direct link to a notion which exercised the Romans powerfully: 'The striving to delimit boundaries sharply', I quote Kurt Latte again, 'is in any case characteristic of Roman religious thought.' And the most important part of the whole-founding ceremony, to which I now come, was the cutting of the sules primigenius, the initial furrow. This was performed by the founder with a bronze plough to which (Cato reports according to Servius), a white ox and cow were yoked, the ox on the outside of the boundary, the cow on the inside. If therefore the various accounts of Romulus's route may be believed, then the procession must have gone anti-clockwise, starting on the south-western corner of the site. The founder then gathered with his followers at the agreed spot. Having set his plough aslant, so that all the earth would fall inside the furrow, his head covered by the edge of his toga which was wound tightly round him, he ploughed round the site of the city. If any earth happened to fall outside the furrow, the founder's followers would pick it up and throw it inside the city boundary. When he came to the places on the boundary where the gates were to go—there were three of these according to the Etruscan rite—he took the plough out of the ground and carried it over the span of the gate. According to ancient writers it is this carrying (portare) which provides the root of portae; a gate. Also, the walls which followed the line of clods cut by the founder's plough were sacred, while the gates were subject to civil jurisdiction. The new town was now fully constituted. The new inhabitants had taken possession of the site and expelled such
previous ghostly inhabitants as were unfriendly. They had given it a name and invoked a protecting deity, lit the fire on its hearth and set out the boundaries. All this was done publicly. If any of the ceremony was secret, it was the deliberately 'mysterious' element, such as the deliberations of the augur in his tent or the uttering of the town's secret name. From the first moment of drawing the templum, the future inhabitants took part in the rite, if only as witnesses:

Was the city to be called Roma or Remora?  
All were agog to know which of the two  
Shall rule. They watched: as when the consul  
Raises his hand to start the race  
The crowd's eager eyes fix on the mouth of the trap  
Through whose showy door the chariots will rush,  
So the people waited and wondered in fear;  
Whose shall be the victory and the great reign.122

This is how Ennius records the inauguration in his annals, and how it was probably carried out in his day. The city was constituted publicly, its order was accepted and acted out by the whole people in the rites of foundation, and reiterated for them through festivals and the accounts of annalists. It could be inspected daily on those monuments of the town which recalled a legendary past, so that citizens never forgot the
connection between the topography of their city and the rite by which its order had first been established.

\[\text{Castrum}\]

Much of what I have said is in conflict with the conventional account of Roman towns and their planning. The convention is that the Roman town was a more formal version of the military camp. It is quite common to read of the Roman surveyors laying out the military camp orthogonally, and measuring out the land in rectangular fields from the axes of the camp. To some extent this is due to the excellent account of Roman surveying given by Polybius in his account of Roman military organization. There is also the impression created by the word castrum (anglicized as 'chester'), 'a camp', which has insinuated itself into modern place-names: Chester, Cirencester, Winchester, Manchester, Silchester, and so on.

But the convention inverts the truth. The Roman town was not a formalized and enlarged camp. On the contrary, the Roman military camp was a diagrammatic evocation of the city of Rome, an anamnesis of imperium. The Romans did not treat the setting up of the camp as a makeshift for a night's sleep: it was part of the daily military routine that no army was permitted to set down for the night without setting up camp ceremonially.\(^{123}\) The first act was to plant the general's vexillum at a chosen spot. It was from this vexillum that the praetorium was paced out. On the border of the praetorium and the principal road a groma was set to ensure that the streets were laid out at right angles.\(^{124}\) The line between the vexillum and the groma gave the surveyor the main axis of the camp; the groma in the camp, as on the site of a new town, was auspiciously placed.\(^{125}\) It gave the direction of the cardo maximus of the camp, and led to the Porta Praetoria, the principal of the four camp gates. According to one author, this gate always faced the enemy,\(^{126}\) while according to Polybius and the surveyors it was orientated according to the cardinal directions.\(^{127}\) Perhaps both practices were followed.

To the right of the praetorium was the auguraculum, the place where the commander sacrificed and omens were read, so the essential decisions about the future of the campaign were taken according to the will of the gods. Opposite, on the left side, stood the tribunus from which the commander addressed his troops after the decisions had been made and the auspices consulted.

The whole of the praetorium came to be called auguraculum in fact. And this setting of what seems to us a trivial and irrelevant piece of nonsense at the centre of military discipline and decisions on high strategy does re-emphasize the absolutely essential character of divination in Roman life. The senator Appius Claudius Crassus, as quoted by Livy,\(^{128}\) puts it in a sentence: 'It is by auspices, in peace as in war, within as abroad, that all things are governed: everyone knows this.' Consequently the struggle of the plebeians for power, and for military power in particular, focused on the right of the plebian magistrates to divinatory skills and powers.

In all probability the rites for setting up camp were considerably younger than those for founding cities. The rules Polybius sets out are already elaborate, but cut-and-dried. They were practised well into the imperial period, allowing for changes due to growth and development of organization, changes in the structure of command and so on.\(^{129}\) The origin of the camp layout is obscure. Frontinus writes that it was devised by Pyrrhus of Epirus, and that the Romans were so impressed by the camp he abandoned outside Beneventum (then still called Maleventum) in 275 B.C., that they adapted it to their use.\(^{130}\) Plutarch, on the other hand, tells of Pyrrhus admiring 'the order, the appointment of the watches, their method and the general form of their encampment'\(^{131}\) as he inspects the Roman camp across the river Siris (now Sinn); before the battle of Heraclea (the Pyrrhic victory) in 280 B.C. Livy repeats the same story, but about the camp of Sulpicius Galba on the Athacus, during the Macedonian campaign of 200 B.C. against Philip V.\(^{132}\)

Polybius, the earliest and most explicit of the ancient writers on the subject, says nothing about the Greek origins of the Roman camp. Livy, who so often follows him, may be suggesting the very opposite in the passage which I quoted. Inevitably, archaeological material bearing on the matter is rather meagre; however, round the ruins of Numantia, the Celt-Iberian town in Castille, there were found extensive remains of the seven camps Scipio Aemilianus erected round the town for the blockade.\(^{123}\) For all their irregularities, they conform to the description of Polybius, who himself witnessed the siege. It may well be, therefore, that even at the time of Pyrrhus's Tarentine campaign, there were already Roman camps to be admired, as Plutarch suggests. The close correspondence of town and camp foundation inclines me against Frontinus's account.

In any case, during the Early Iron Age in Italy, when Rome was founded, the Roman army probably had little call to set up camp; its enemies were within a day's reach. The declaration of war was made
for the Roman state by a special priest charged with certain official and legal declarations, the Pater patriae, who proclaimed the grievances of the Roman people and declared a war by throwing a spear of dogwood hardened in the fire (or an iron-tipped lance) into the enemy territory. When the lines had moved beyond the daily reach of the Romans, a field by the temple of Bellona near the Circus Flaminius, was nominated a token territory, campus hostili, for the purpose of this ceremony. 

**Destruction Rites**

As the town was constituted ritually, it had a more than physical existence; not only in the obvious sense to which the defeated Athenian general Nicias appealed, encouraging his soldiers before Syracuse: with the ringing phrase about the transcendence of Athens, which I quoted at the opening of this book. The town had a hardy and devious quality of existence, as ancient custom recognized, in that a victorious war-leader was usually not satisfied with burning a town or otherwise razing it; he also had to unmake the town ritually, to disestablish it. Servius mentions 'the custom of the ancients [which decreed] that as a new town was founded by the use of a plough, so it should also be destroyed by the same rite by which it was founded.'

Little is known of the over- or undertones of the greatest destruction of classical legend, that of Troy, as the Odyssey and the Aeneid do not deal with this particular episode, although the Trojan horse has disturbing symbolic connotations. There is, too, a curious allusion in the Iliad to Achilles dragging the body of Hector after his chariot three times round the city walls: 'and with Hector's body the victor purified (iustravit) Troy.' Much more is recorded about the destruction of Carthage, the historical antitype of the fall of Troy. Scipio followed the general Roman custom in assuring his victory; during the siege he 'vowed' his army and the town, summoning its tutelary gods and goddesses ('If there is a god, if there is a goddess...') by an incantation (carmen) to pass over to the side of the Roman people and receive their worship. The augur had to make sure through haruspication that the summons had been heard before the final assault could take place. After the town had been taken and destroyed, its site had to be ploughed, or rather 'unploughed'. Perhaps the plough was drawn clockwise over the ruins, while the founder's plough had been drawn anti-clockwise round the city site. The legal implication of such a ceremony was evidently that: 'if revenue was due to a city, and the city had been ploughed over, this city had no further legal existence. So Carthage ceased to exist and its revenues were treated as those of someone dead.' The ceremony was, of course, not limited to the Roman world. Abimelech, for instance, when he captured Shechem, 'drew the people that was therein, and beat down the city, and sowed it with salt', much as Scipio had cursed Carthage with sterility. Mantinea is a curious example from the Greek world: when the town was captured by the Spartans in 448 B.C., it was not destroyed, but disincised (opposite of synoiced) into four constituent villages, as she had been 'in the old days'.

Returning to the Roman world, the ceremony was familiar enough to make a commonplace poetic reference. Horace went so far as to allude to it casually when disposing of a cross young woman: 'Rage', he says, 'has been the cause for which high cities were blotted out and an insolent array drew a plough over the place where the walls had stood.'
There could have been few towns founded in Italy or the Roman empire in prehistoric and classical times without the performance of some rites of the kind I have described. Their order may well have changed, some ceremonies were no doubt omitted, others added or varied. As I have been very eclectic in my use of sources—from the Igvine tables to John Lydus—my account reads as if there had been no change or development of religious ideas between these terminal documents; but, of course, many changes did take place, and the rite must have been continuously coloured by them. The underlying patterns of the rite seem, however, to be much older than any of the sources I have quoted: long before they were codified most of these ceremonies must have formed an important part of the religious life of Italy, anecdotizing perhaps even the beginnings of urban settlement in the ninth and eighth centuries B.C. As for the origins of the rite, I am not at all sure that anything so complex and at the same time so hoary and vigorous can be traced back to two or three clearly identifiable sources. It is surely a syncretic phenomenon, made up of bits which originated in different parts of the world, which are varied, sometimes unrecognizably transmuted. The whole complex grew and fused over centuries, altering in flavour perhaps and in emphasis as the context of religious ideas changed or developed. Nevertheless, the structure of the rite: divination, limitation, relic-burial, orientation and quartering, are more primitive than the written history of any Italian people. The Romans ascribe its institution to the Etruscans. No evidence is available to date for a different ascription, though it is true that Roman writers had a rather confusing way of referring to all the ancient Italicans as 'Etruscans'. But this munitum has little force against this fixed, traditional appellation.

By raising the problem, I allude, however distantly, to another and far greater one: the origin of the Etruscan nation, and consequently—indirectly—to the source of that religion by which the Etruscans were reckoned, even in the context of antique piety, to be obsessed. Fortunately, a discussion of that vexed and complex issue is out of place here. But another, connected problem, more general and equally involved, does touch on my argument more directly: that of the origin of orthogonal planning in Italy. Orthogonal planning, checkerboard planning of a town or site, is not immediately dependent on the Etruscan or any related rite, so it is a pity that the two problems have become so intimately involved. Orthogonal planning has appeared everywhere, in South America, China, India, Egypt, Mesopotamia, wherever elementary forms of surveying were developed, and in the wake of any system of land tenure. In Italy it appears to have been practised with great sophistication and assurance by the end of the sixth century B.C. The implication therefore is that the technique had been developed over a period of time and had already become perfectly familiar. How long the period of time had been is impossible to assess in the present state of knowledge.

Terramare

It was supposed some eighty years ago that the practice, together with the Etruscan rite, had been brought to Italy by the people of a culture called Terramare, early in the Bronze Age, or even towards the end of the Neolithic period. Rather fanciful attempts were even made to find monumental remains of the practice of the Etruscan rite in its fully mature form among the rather friable remains of various Terramare settlements. Even more questionable now seems the attempt to identify the Terramarecoli with the ancestors of the Latins. Subsequent scholars have re-examined the evidence offered by the excavators between 1860 and 1910, when the material was more or less exhausted, rather than carry out any field research themselves. As against the over-confident assertions of the earlier archaeologists, the most exciting modern scholar in the field, Gösta Säfström, has been over-stringent. His rather sceptical attitude to the material evidence is valuable, but his more general conclusions seem to me questionable in view of his rather rigid, (and unstated), anthropological presuppositions, which appear in comments such as these: 'la raison d'être of the pile structures, sometimes being as long as 5 m) should not be sought in presupposed religious or traditional conceptions, but only in the hydrographic conditions, which made it essential to raise the level of habitations.' Curiously enough, a few paragraphs later, in discussing the absolute chronology of the culture, Säfström gives its terminal date, 700 B.C., not in relation to hydrography, since about this time hydrographic conditions would have been almost at their worst on his showing, but byreference to the beginning of the Celtic invasions. He suggests, therefore, that the Terramare were part of a whole cultural pattern which disappears at the time of the Celtic invasions, and not simply as a result of the hydrographic problem. There is no reason to assume that the inhabitants of these highly organized and technically rather advanced settlements were radically different from the rest of the ancient world or even from their less technologically advanced neighbours in having no rituals of foundation or religious and traditional conceptions related to the forms of their dwellings. While it was foolish of Pigorini and Chierici to see a munitum where they were perhaps simply dealing with a ditch of peculiar shape, the evidence of the roughly rectangular shape of the villages cannot be altogether dismissed. Moreover there is no doubt that in many cases there is evidence of a definite delimiting earthwork, whether dike or defence. And in one definite case, the large settlement at Castrione, the wall was either reinforced by or constituted of large square coffers, about 1.6 m square, and built of roughly worked logs morticed together and packed with clay and rubble. Now Säfström makes much of the uniqueness of this construction, though it had become a commonplace in Later Urnfield and even Celtic Europe, and had plenty of forebears further east, 'the timber-framed wall-rampart',
says Stuart Piggott, ‘could of course be an indigenous invention of Barbarian Europe, but it must also be remembered that such walls have a very long history... in the Near East and in the Aegean.’ Stubbins argues the originality of these ramparts from the absence of similar remains, though such ramparts may well have existed among the many villages destroyed for manuring. This is a curious method of argument that is prepared to infer a whole primitive inhumating phase of this culture in spite of the total absence of any burials from it. On the contrary, I would assume that such an extensive and highly developed piece of construction could not be isolated, and that there must have been other villages with similar coffered earthworks. The presence of square-coffered earthworks, even of rectangular houses within them, is no proof of the rectangular plan of the whole settlement of course: evidence the oval village or town at Biskupin in Poland, which shows this form of construction in its most highly developed form.\textsuperscript{12}

If the Terramare culture cannot be credited with the introduction of both the Etruscan rite and of orthogonal planning, the fact remains that their settlements had approximately trapezoidal outlines, and that the methods of construction they used favoured a rough regularity of plan analogous to that of modern pile-dwellings in South-East Asia. Though the Terramare culture almost certainly practised some form of foundation rite, it may well have had no direct connection with the Ritus Etrusci (though this a priori supposition is not more reasonable than the opposite one). Yet it is also possible that the irregular, roughly circular villages of their Etruscan neighbours in the Bronze Age may have been founded by some such form of rite as the one I have described, and may well have been quadrata in the sense in which I used the word, without the least trace of it showing in the remains of such villages as have been excavated in our times.

The introduction of the orthogonal plan into Italy is often ascribed to Greek influence,\textsuperscript{18} but evidence is not entirely conclusive about this. Recent excavations at Megara Hyblaea, for instance, one of the earliest Greek settlements in Sicily, have shown some archaic dwellings, which seem roughly orientated, and roughly correspond to the traditional date of the founding of the town, in the last quarter of the eighth century. They are very dispersed, however, and their orthogonality...
The area of the cemetery which has been explored so far is about 60 x 40 m, and covers about twenty tombs containing up to twenty-five skeletons, mostly in the ‘womb’ position. The tombs are of a shape known as ‘a forma’ and enclose usually two, sometimes three, chambers divided by heavy partitions. They contain a good deal of pottery of an unusual type for Italy, and stone implements. There is also a little bronze. The tombs are cut in soft rock and are aligned on straight lanes, 40–60 cm wide, also excavated in the rock. These tombs sometimes are connected with the outside by a channel, which may be a libation opening. A mass of stones in the centre of the excavated area has been interpreted as a primitive altar. The lanes are orientated north–south within 5 degrees, and appear to be cut by wider lanes running east–west. Again, according to the excavators, the type of pottery found in the tombs is unique in Italy. The character of this pottery and the physical type of the buried individuals suggests that the necropolis was used by a community of immigrants from the Aegean, perhaps more precisely from Anatolia, who reached Italy sometime before 2000 B.C.

Marzabotto

The salient piece of evidence on the Etruscan practice of orthogonal planning is the remains of an Etruscan town near the village of Marzabotto, in the province of Bologna. This was clearly a sizable settlement, and was almost entirely destroyed early in the fourth century B.C. by the Gauls. It had been laid, if the evidence of Greek ceramic remains may be taken as conclusive, no earlier than the beginning of the sixth century, perhaps the very end of the sixth. It was laid out over a slightly earlier settlement, probably not orthogonally planned; to this the excavators ascribe the small temple over a spring which is the earliest monumental stone building in the north of Italy. Marzabotto
was first excavated in the 1830s and has been studied ever since. In 1961 a similarly orientated, if much smaller, settlement was discovered not far away at Casalecchio di Reno, a village at the Apennine foothills, some 10 km out of Bologna. Like Marzabotto, it was destroyed by the Gauls, who seem to have done a fairly thorough wrecking job. The river Reno has eroded Marzabotto, the railway has caused minor damage; the museum was wrecked by the Germans in 1944, when Marzabotto tragically re-entered history.

After the Gauls destroyed it, Marzabotto, and probably the smaller settlement, were not re-occupied by the Etruscans or the Romans later, and remained completely unknown.

The main outlines of the plan are becoming clear: one main cardo survives, running north-south, and is crossed at right angles by three decumanii, all the main streets being about 15 m broad. The lots between are divided into sections 150–60 m long, of irregular width on average 6 m, taking either a single row or two lines of back-to-back houses, which front alleys 5 m wide parallel to the cardo. The houses were of an impoviate type; in the middle of the house, there is an open court with a well, sometimes also a cistern, sunk in the floor. The living-rooms cluster round the court, while the rooms facing the street are warehouses, shops and workshops. The probable outer bounds of the town are suggested by two necropoli outside the city gates: foundations of one eastern gate, leading to its necropolis have been found. On the hill overlooking the town from the north (or rather NNW) stands a small group of buildings which have a clearly sacral character, the acropolis or sedes deorum. Most of these buildings are again accurately orientated.

The low hill, the apparent lack of any fortification there or in conjunction with the gates, suggest that the town was never a fortress. A curious feature, not so far found elsewhere are cippi, buried at crossroads, in the centre of each crossing. The cippi found at the crossing of the cardo and the decumanus labelled "C" by the excavators was scored with a cross, unlike the other cippi. There seems to have been no sort of sacrificial deposit associated with these cippi; which suggests that they refer to the surveyors' rather than the diviner's proceeding; and it may well be that the scored cippus, at the presumed centre of the town, was where the groma was originally "auspiciously set". The cippi were not, as they would have been in a later Roman town, indicators or markers: the hilly site meant that it would have been difficult, if not impossible, to use with their help. They remained therefore only as buried witnesses to the surveyors' passage: the evidence of a ritual or at least quasi-ritual procedure is clear enough.

This evidence of probable ceremonial practices at the laying-out of Marzabotto is still isolated. In Greece surveying does not seem to have been accompanied by any such practice. Marzabotto was laid out at the end of the 'orientalizing' phase of Etruscan culture, soon after 500 B.C., if the evidence of Greek pottery fragments is to be relied on. More important perhaps, the house plans are quite unlike contemporary Greek house-types. The layout in long insulae, though common in later Greek cities in Magna Gracia, is found commonly elsewhere on
the Mediterranean seaboard. But there is nothing Greek about the mouldings or indeed the general forms of the sacral buildings on the Acropolis: they seem typically Etruscan. The contemporary Greek pottery found over the site in fair quantities is not in itself conclusive evidence of Greek ‘presence’.

The orthogonal and precise character of the plan contrasts with the rather ramshackle nature of the building. The house was built of sun-dried brick over pebble and rubble foundations, the rubble roughly mortarized with mud. The technique is a common Mediterranean one. But the fickle revetments (most of the early ones unfortunately now destroyed), the fickle drains and the character of the stone mouldings of the more permanent buildings on the acropolis do not suggest obvious Greek analogies.

Spina

More puzzling evidence is offered by the recent excavations of Spina: unlike Marzabotto, about which ancient writers were practically silent, Spina was an object of much curiosity to ancient historians and geographers; and much more recently its name was obscure in the local nomenclature.29

But unlike Marzabotto, whose remains have been known since the middle of the sixteenth century, and which has been explored more or less systematically since the 1890s, the remains of Spina were unknown, and its siting misjudged,30 until the first tombs of the cemetery in the Valle Trebbia were struck when an irrigation canal was dug through the necropolis in 1932. By 1953, some 1,200 tombs had been found there; another cemetery, in the Valle Perga near by, was found in 1954 and

53. Spina. Remains of the north embankment piling and of the pilae foundations, probably of a house, near Paganella from the N.W. Courtesy of Soprintendenza alle Antichità, Emilie e Romagna

54. Aerial photograph of the harbour quarter of Spina. After Aran
1. The Ancient Harbour
2. Canals of the ancient city
3. The occupied ‘inlet’
5. Modern irrigation canals

had yielded another 2,400 burials by 1960.31 In 1958, aerial photographs revealed the existence of an ancient, silted-up canal system in the Valle Perga.32

This canal system is now recognized as the harbour and city of Spina, which seems to have been laid out as a group of associated settlements, grouped in the two valleys in a lagoon situation, behind the lido which is now part of the inland sand-dunes. It may well have lain at a point where the Lido was broken. A main canal ran from the Porta Vetus (a branch of the Po delta, whose dry bed is now called Paveri), first sharply north, and then turned eastward and seems to have led into the sea. Opening off it, two systems of canals have been found, about 1½ km apart, which were probably the harbour zones. These and the rest of the settlement seem to have occupied the vast area of 740 ha, and have been said to have accommodated as many as 50,000 inhabitants at the height of the town’s prosperity, towards the end of the fifth century B.C.33

The grave goods are very splendid in the richer burials. Most spectacular are the Attic vases, ranging from the late sixth to the early third century B.C. There was also Etruscan pottery and Etruscan bronzes as well as Tarentine jewellery. Clearly the written and the archaeological evidence concur: Spina was one of the main harbours in the ancient world, and the chief centre for the importation of Greek wares into Etruscan lands—over the Bologna/Florence route on which Marzabotto stood—and beyond, to the Celts of the Po valley and even beyond the Alps. The ancient geographers mention the three-day road from Spina to Pisa as a familiar one.34