CONCEPT AND DEVELOPMENT IN
ROMAN FRONTIERS

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THE progress of Roman arms in Britain has been so exhaustively and minutely discussed that perspective is now difficult to achieve. Add to this the sometimes myopic concentration on the minutiae of the Hadrianic and Antonine Walls and the somewhat claustrophobic murological world that has resulted. There is a danger that the constructional details and the tactical oscillations of the Hadrianic and Antonine Walls may come to hold no more than highly technical or antiquarian interest. This may be a currently fashionable view that at times afflicts ancient historians and archaeologists alike, especially those interested in other periods. For this Romano-British archaeologists are partly to blame in emphasizing the

\[1\] This article is substantially the paper delivered in the John Rylands University Library Lecture Series on Wednesday, 11th January 1978. It is respectfully dedicated to Edward Luttwak, author of The Grand Strategy of the Roman Empire (Johns Hopkins University Press, Baltimore, 1976). This remarkable work of synthesis (from which the quotations in the text derive) by a strategic planner, as opposed to an archaeologist or ancient historian, became available in Britain at the time of this paper’s preparation. It brought not only freshness of view to a massive subject but also showed this author’s dissatisfaction with certain current historico-archaeological approaches to frontier studies, notably inadequate appreciation of changing concepts of defence across a span of four centuries. This paper is, therefore, principally concerned with identifying the periods when concepts of frontier defence changed and developed by means of examining various provinces of the Empire and applying the consequent ideas to Roman Britain. From this work, hopefully, may emerge a clearer understanding of the significance of the Flavian contribution to this process and the ramifications of the strategy of defence-in-depth in the later Empire. References are kept limited in size and are used less to cite primary sources than to quote modern interpretations.

\[2\] J. C. Mann, Aufstieg und Niedergang der römischen Welt (ed. H. Temporini), II.i, 508.
monumentality of the Roman empire, the inevitability of conquest (more of this in a moment), the invincibility of the Roman army against the unnecessarily restrictive backcloth of Roman Britain alone. Indeed, Collingwood and others unwittingly shaped and fostered just this approach. In attacking certain other kinds of excavation, Collingwood, for instance, wrote in his autobiography: "Haverfield and his colleagues of the Cumberland Excavation Committee [were] completely Baconian in their methods. They never dug a trench without knowing exactly what information they were looking for; they knew both that this information was the next thing they needed for the progress of their study and also that this trench would give it to them. That is why they could settle highly intricate and abstruse problems at a cost of never more, and often much less, than thirty or forty pounds a year. Their successors in the north adopted and continued to apply their principles". Collingwood’s words perhaps convey a feeling of inevitability derived from Roman stereotypes, and inevitability is the first cousin of boredom.

Nowadays, therefore, partisan academics, or unimaginative teaching, at times combine to present Roman military studies in the light of a repetitive stereotype—less informedly still as a repetitive stereotype across nearly four centuries. Yet a glance at fort plans culled from those four centuries probably shows, on the contrary, the most exciting development and change in the history of ancient fortification that one can obtain from so short a period. No, the stereotyped approach just will not do. If, on the other hand, the archaeologist cleans off his trowel and attempts to redress the imbalance by restating a broader view, then he perhaps runs the risk of appearing simply to emulate the ancient historian.

Yet it is high time that broader views were re-emphasized, and in a way this takes us back to Agricola, straight back to the problem of perspective that effectively began with him and his

historian son-in-law. Opinion in the first century A.D. seems to have expected complete conquest of this island. Total conquest is automatically assumed in the Agricola and the achievement of Agricola in advancing north used to compare favourably with those of previous slower-footed governors.\footnote{Tacitus, Agricola, 18.}

The Roman military progress was, therefore, presented on the same basis as an American football game—yardage gained. It reflected the expression of an age of supreme military confidence, prior to the creation of the static frontier in its more evolved forms, prior to the strategic stagnation of the later second century, the loss of initiative and mobility in the later Empire related in part to the restructuring of army organization. Furthermore, such an approach obscured the vastly different attitude to military conquests and frontiers inherited from the late Republic by the early Principate. To us the word Roman frontier suggests a picture of an organized disposition of forces that, whether or not demarcated by a finite barrier like Hadrian's Wall, was "nevertheless static, a spacial distribution of men and fortifications often taken to symbolize the strength and dominance of Rome", just the point I mentioned before. Yet static frontiers had no place in strategic thinking in the late Republican period. Just as there was a revolution in the development of fortifications over a longer period, so across an even shorter span was there a complete revolution in strategic thinking that finds all too little echo in the histories of Roman Britain and makes nonsense of some received dogma. The competing magnates of the later Republic, and likewise Augustus himself, would not easily have understood the change. Whatever the immediate propaganda aspects, the Res Gestae of Augustus reflects a policy bent on the domination of the known world, or those parts of it thought worth dominating.\footnote{Fully discussed by Luttwak, op. cit. pp. 20 ff.} I use the word domination rather than subjugation or conquest with special emphasis. The trail of client kings and tribal chieftains shown traipsing through Rome and the pages of the Res Gestae emphasizes that the suasion of client states was a vital factor, despite the great legionary armies that Augustus could assemble.
Although (in comparison with the minimum of territorial aggrandisement and the maximum extension of diplomatic control that had characterized certain late Republican campaigns) the reign of Augustus admittedly marked a perceptible acceleration in the rhythm of territorial expansion, the facts still bear closer analysis to uncover an attitude of a mind. The annexation of manageable and efficient client states was not Augustan policy except in the last resort; witness Judaea in A.D. 6 when there was no successor to Archelaus. In politico-military terms, where possible Augustus preferred an inverted version of the "domino theory". But where this would not work, where glory or the control of especially profitable trade routes beckoned, the system allowed a concentration of legionary strength that would maintain expansion. In A.D. 6 no fewer than twelve out of twenty-eight legions were concentrated along the Rhine-Danube border for the offensive into Bohemia against the Marcomanni, albeit at excessive risk to the balance of the system as a whole. If Augustus singularly failed to practice his famous injunction against further territorial expansion, then in reality he did so in some spectacularly dangerous ways early in a reign that was unexpectedly protracted—after all, he commissioned his own mausoleum as early as 28 B.C. Also in the same period two long-range expeditions revise our estimates both of Augustus' military bravura and the standard of military logistics. Aelius Gallus' disastrous and little understood Arabian expedition followed an inland route that bears a close relationship both to the prehistoric trade route south to Arabia, later formalized by the pilgrims of the Hadj, and also to the major mineral resources of the country. A few years later, the ex-Antonian sympathizer Cornelius Balbus, carefully chosen as dispensable in case the expedition failed, successfully marched 400 miles south from Tripolitania over desert to the capital of the Garamantes in the Fezzan to bring the tribe to heel and also, I suspect, to carve a slice in the profitable trade route south to Chad and the Upper Niger.\(^1\) The concentration of a large

legionary army in North-West Spain at the same time in order to control this important gold-producing area of Asturias shows the same emphasis on economic motives. These are conversely apparent in Strabo’s evidence for Augustus’ motives for abandoning the conquest of Britain and preference for deriving an income from the enforcement of heavy tariff rates. Clearly the young Augustus set himself no limits to long-range endeavour and the system could sprout further expansion, as with the case of Britain. As long as there existed states “susceptible to the armed suasion of Rome’s military power”, and so convertible into dependable client states capable of absorbing the security problems engendered by previous expansion, then further expansion remained possible.

What happened, then, between Augustus and Hadrian, between the development of hegemonic and territorial empire, between the legionary concentrations and client kingdoms employed by Augustus and the “scientific” frontiers of Hadrian? The annexation of Britain and Mauretania (Caesariensis) are two roughly contemporary events and it is rewarding, I think, to compare the developments in Mauretania and its environs, not least as a useful corrective to what is sometimes received opinion in this country (Diag. 1).

The annexation of North Africa was a protracted process and there was over a century between the creation of the provinces of Africa Vetus and the annexation of Africa Nova, or Numidia, by Caesar. It was not until 33 B.C. that the kingdom of Mauretania to the west fell to Rome and between 31 and 25 B.C. a series of colonies for veterans was established along the coast. They were also doubtless intended to forward the organization of a new province. But in 25 B.C. Augustus decided on a change of policy and Mauretania reverted to its former status as a client kingdom with two capitals at


2 Strabo, IV.5.3. For the imposition of import tariffs see S. J. de Laet, Portorium, passim.

Numidia and Mauretania Caesariensis

Diagram 1. General map of Roman sites in Algeria and Tunisia.
Iol-Caesarea and Volubilis. The Roman colonies, however, remained outside the jurisdiction of the restored monarchy and it seems to have been regarded as inevitable that the extended maintenance of the client kingdom was simply a temporary measure before the final absorption into Empire, which came with Caligula in A.D. 39. The parallels with the entry of Britain into the Roman political orbit after the Caesarian campaigns are clear enough. Throughout the first century the Romans were confident of their military superiority: the large military base at Iol-Caesarea, the provincial capital, was able to maintain security not only in the coastal areas but as far south as the northern edges of the high plains. The southern frontier of Mauretania Caesariensis, therefore, was simply a broad zone where only general control could be claimed. At this stage it was presumably felt unnecessary to define exactly where Roman authority ended and that of the barbarian tribes began, because the Empire was still in an expanding state and even areas that lay beyond effective Roman control at that time were regarded as potentially conquerable—in much the same way as Augustus clearly regarded Britain as lying within the Roman orbit. Like Mauretania, it was only a matter of time before it was absorbed into the Empire. During the troubled second century there was, as stated, a change in the deployment of the Roman military forces after revolts in 145-7, 167 and the late 170s. The large force based at Iol-Caesarea was separated into its constituent units and stationed along the longitudinal trough that runs across the area. The responsibility for a new line of forts linked by a lateral military road belongs to several emperors from Trajan to Commodus, but the road as such should not necessarily be seen as marking the southern limit of the province, as the Fosse Way has been interpreted as marking a western frontier of Roman Britain at one stage. It is better regarded as a strategic cordon. The real limits of effective Roman control lay some distance further south, perhaps, as in the first century, along the northern edges of the high plains. This reorganization

1 Cagnat, op. cit. pp. 47 ff. See also A.E., 1931, 36 for troop reinforcements c. A.D. 145; and for trouble in the 170s SHA Severus, 2.3 (cf. ILS, 1327) and ILS, 1354, 1354a together with SHA Marcus Antoninus, 21.i.
was significant because it represented a phase in the movement away from the concept of the frontier as a broad zone, where only general control was maintained, towards a new concept of a rigidly defined line.

Conditions were changing. The Empire had stopped expanding and the Romans were less confident of military superiority. As the initiative passed to the barbarians it became essential to define in strict terms the limits of Roman jurisdiction. The Severan reorganization of the defences of the province between A.D. 198 and 201 should be seen not as a conquest of territory which had until then been outside Roman control, but rather as a wish to establish a carefully controlled line separating and regulating detailed contact between Roman and barbarian. The new military line corresponded more closely to the southern limit of the province and represented a frontier in the sense in which we use the word today.

Recent work by Lawless¹ suggests that prior to the Roman period there existed a relatively stable peasant civilization in the southern area, that is, the Atlas Tabulaire, the Sersou Plain and the Monts des Ouled Nail. This culture, in fact, continued until the later medieval period when Arab tribal movements from the East converted settled communities to a nomadic or semi-nomadic basis. In northern Algeria there is plenty of evidence to attest that Berbers settled in the *vici* attached to Roman forts. Further south settled native communities existed at the time of the Roman conquest and many of the inhabitants must have become to some degree Romanized, if not initially then certainly by the period of Septimus Severus’ establishment of a forward *limes*. This naturally leads us to the question of resistance in the frontier area. Courtois maintained that the less-Romanized areas supported a substantial population and it was these mountain peoples who were the principal enemies of Roman rule in Mauretania Caesariensis from the third century onwards. Urban centres throughout the province, he points out, were defended by ramparts—an argument that has familiar difficulties in Britain. Other French scholars have followed this line by suggesting that the danger from the mountain

peoples increased in seriousness in the early Empire but that later the principal danger came from nomadic groups.¹

Most French scholars, however, have treated the danger threatening the province as being derived from outside. Their work was profoundly shaped by the thinking of the colonial period recently passed. Tribes of camel nomads, the Cherage, the Gheraba, the Said Akba, the Ouled Nail, and the Arbaa, with their large flocks of sheep spend the winter months in the southern Sahara, to the south of the Aures Mountains of the Ouled Nail and on the southern edge of the Gebel Amour. Severe summer droughts in these areas make the tribes migrate north in search of fresh pasture. It was natural for scholars to envisage a similar situation when Rome created the provinces of Numidia and Mauretania Caesariensis, and so the theory took ground that pressure from nomadic tribes from the south was the chief danger to the security of the province. The implications of this theory, of course, extend well to the east into Numidia. We might regard the fossatum Africæ as a physical barrier (of which more later) set up in a transhuming area where considerable pressures were encountered.² On this view, the fossatum was principally designed to prevent movement of tribes from the northern Sahara through the corridors across the Aures to the fertile high plains of Constantine, which were, of course, densely settled from an early date with Roman cities, villages and farms, and defended by the carefully placed fortress at Lambaesis, evidently an area where the pressures were less intense, and Leschi, in particular, suggested that a linear system of defences, such as the fossatum, a linear barrier, was not justified in this content.³ He preferred to see the early third-century Severan frontier as marking the northern limit of nomadic migrations and the units established

along the new line intended to survey tribal movements further
south and prevent pillaging of the province proper. In a
development of these ideas Salama suggested that the third-
century frontier was established to prevent collusion between
the mountain peoples within the province and the nomads
outside it. These theories, which can be grouped together as
a family of ideas, see the problem of native resistance in terms
of a conflict between the nomadic and the settled way of life—a
viewpoint which is clearly coloured by French military expe-
riences in the late nineteenth and early twentieth centuries. The
difficulties associated with the theory have been a long time in
becoming recognized. It is now known that there were in fact
settled native communities, relying on irrigated agriculture and
livestock production, actually well to the south of the *limes*;
that is, in the Atlas Tabulaire, the high plain of Sersou and the
Mont des Ouled Nail. Indeed these communities only appear
to have become entirely nomadic late in the Arab period. The
nomadic way of life which characterizes much of this zone
today appears to be of relatively recent origin. Furthermore,
the nomadic theory presupposes the widespread use of the
camel, a beast that appears to have only been widely diffused
in this area in the late Empire when mobile tribal nomads such
as the Austuriani first appeared. They, however, do not appear
to have penetrated further west than Numidia. Even without
these factors, however, the nomadic theory is open to certain
basic questions. The viewpoint that sees native resistance to
Rome in Mauretania as essentially a conflict between the nomadic
and the settled glosses over the interdependent relationship
between the two. The nomads who migrate to the high plain
of Sersou each summer, for example, are dependent for their
grain supplies on the settled farming communities and sell their
own products, principally wool and hides, in return. Further-
more, the Severan *limes* was not established at the northern

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1 See Lawless, op. cit.; also G. Camps, "Recherches sur les origines des
cultivateurs noirs du Sahara", *R. de l'Occident musulman et de la Méditerranée*,

Civ., i, 209 ff.; cf. O. Brogan", *Henscir el Ausaf by Tigi and some related
limit of nomadic movements as known in the last century and there is evidence that nomads regularly moved as far north as the coast in their summer migration.¹

On the present evidence, therefore, firm conclusions seem difficult to reach. Some native resistance to Rome in Caesariensis clearly lay within the mountain peoples of the province, who were at some stage openly hostile to Roman control; as well, that is, as certain detailed evidence that suggests that there was a threat to overall security outside the province altogether to the south-west, where Rome made special efforts to maintain friendly relations with the confederation of the Baquates of the northern parts of the Middle Atlas.² The precise form of the opposition, of course, remains obscure in the absence of detailed archaeological or literary evidence. Native tribal groupings are unlikely, however, to have remained constant across a period over three centuries in length and the attested cases of large tribal federations appear late and may have been a direct response to Roman policies, a point that needs stressing in the light of later policies involving defence in depth.

Desert areas, where control of roads, settlements and cases means control of everything worth controlling, are, of course, markedly different from European provinces. Nonetheless, I have dwelt on the example of Mauretania because, while the level of archaeological information is lower than in Britain, the general thrust of the arguments is at times more helpful than the bleak recitals recording the overrunning of Hadrian’s Wall that punctuate the histories of Roman Britain. We see the recognition of more sophisticated factors than the strictly Roman military strategy. First, and inadequately emphasized in Roman Britain, the recognition of areas of internal opposition. Second, the presence of a nomadic or transhuming element in the population which had an interdependence with parts of the settled community, a factor that actively promotes population movement, whether on an annual basis or not. Next comes the

¹ Lawless, op. cit.
creation of frontiers promoting the growth of tribal federations outside and the recognition of settled, rather than nomadic, occupation to a larger degree outside the frontiers. The former appears to have been the case in Scotland, through an increasing paucity of tribal names attested north of Hadrian's Wall; and recent advances in aerial photography survey in Scotland have highlighted our previous underestimate of native settlement.

If, therefore, it is easier to see some of the trends in certain other areas of the Roman Empire, can we see any chronological points of development along the way to the preclusive linear frontier by the end of the first century? Undoubtedly the Flavian period, with the dwindling of client states and the development of occupation in depth, is of particular significance. The mechanics of the system depended on an integrated system of roads and forts. The importance of Wales, finally brought under control in a few years following A.D. 74, was first brought out by Richmond.\(^1\) The road and fort system, if available today, would probably take two hours' driving time off the north–south journey across the Principality! But the major controls, the legionary fortresses, lay outside the area, so I prefer to take my example of a tight network established in a few brief years from a politically far more sensitive area, the frontier against Armenia (Diag. 2).

The structure of the eastern frontier in Cappadocia and the forces required to garrison it were dictated almost entirely by geographical and topographical considerations. It is a land of mountains, reaching a height of over 10,000 feet in places, and the difficulties of the terrain mean that the journey from the Euphrates at Melitene to Satala, a distance as the crow flies of a mere 200 miles, is more than doubled on foot. To the north the coastal ranges above the Black Sea rise to over 10,000 feet behind Trebzon. In the centre the Antitaurus climbs north-east towards Erzerum, dividing the basin of the Halys or Kizilirmak from that of the Euphrates. To the south the Kerdish Taurus extends the Cilician Mountains towards Lake Van. Only the Euphrates cuts significantly across the east–west axis of the mountain structure, carving enormous gorges through

\(^{1}\) I. A. Richmond, *Roman Britain*, p. 39.
Diagram 2. General map of the Cappadocian Frontier.
the Antitaurus and the Kerdish Taurus. Much of Armenia lies in its upper basin and beyond the river into the headwaters of the Araxes the Armenian Highlands stretch on to the border with Georgia and Iran. Strategically, as a northward continuation of the Roman frontier in Syria, the Euphrates Valley was the obvious choice. It is not my purpose here to assess the Roman political and military attempts to solve the Armenian question.¹ I wish rather to concentrate on the establishment of the formalized frontier system in the Flavian period and to look at its implications.² The annexation of Osrhoene in A.D. 72 gave a southern fixed point from which any formal extension of an Armenian frontier could be drawn. The annexation of Pontus Polemionacus in A.D. 64 and then Armenia Minor in A.D. 72 allowed the northern termination of the frontier to be set along the Black Sea. While the Euphrates Valley offered a logical choice of a kind, it remained at times extremely difficult and the Pontic Ranges impeded communication badly, while much of the Euphrates Gorge in the Antitaurus and Kerdish Taurus sections presented extreme topographical difficulties. However, these difficulties had one advantage in that organized invaders from Armenia, like later Turkish caravans, were forced to cross the frontier area through a very limited number of focal points; thus, the route along the southern foothills of the Kerdish Taurus was blocked at Samosata while in the central sector the invasion route from Armenia towards Kaisari was blocked at Melitene. In the Pontic Ranges the Ottoman caravan route from northern Persia to the Aegean was controlled by the little-known legionary fortress of Satala and the Black Sea coast was controlled by the legionary base at Trapezum. While the strategic importance of Samasata, Melitene and Trapezum is self-evident, Satala is less immediately understandable. The Pontic Ranges are an extremely formidable obstacle and Ottoman caravan routes are an indication of how they were

¹ Latatwak, op. cit. pp. 106 ff.
² See now T. B. Mitford, “Some Inscriptions from the Cappodocian Limes”, JRS, lxiv (1974), 160 ff., esp. 167, for the Satala fortress. I have also had the benefit of reading the same author’s unpublished D.Phil. thesis. See also A. B. Bosworth “Vespasian’s Reorganisation of the North-East Frontier”, Antichthon, x (1976), 63 ff.
traversed; indeed, until the construction of the railway linking Erzerum and Sivas only a single route passed along the Pontic Ranges. It was a route of great strategic importance in that it carried the historic caravan route from Persia to the Aegean via the headwaters of the Lycus. This east–west route was complemented by a second north–south route leading south from Trapezum over the Sipikor Pass down to the Plain of Erzincan. The legionary base at Satala sat at the junction of these two roads. Satala thus commanded the strategic crossroads of north-east Anatolia. Immediately below the fortress in the valley of the Sadakçay lay the intersection of the natural historic routes between east and west, from Persia to the Aegean, and north and south, from the Black Sea to the Euphrates Valley and Syria. It was a position of crucial importance in Roman times for the defence of the eastern frontier against Armenia.

When was the frontier established? The importance of Satala must have been realized during Corbulo’s campaigns into Armenia and Nero’s innovatory policy in Armenia demanded a new system of frontier defence, instituted apparently as a single concept by Vespasian without delay. By the end of A.D. 72 the outline of a new frontier system was probably established with the creation of a combined province of Galatia–Cappadocia. The initial governors seem to have been Vespasian’s subordinates in Judaea and Syria. The first of these, Pompeius Collega, constructed the arterial road leading to Satala early in A.D. 76 (Pl. 1). A third, Caesennius Gallus, constructed under Titus and Domitian the *vias provinciarum Galatiae, Cappadociae, Ponti Armeniae Minoris* and also the military installations Dascusa in the Euphrates Gorge.¹ He was a great road builder and one of the principal architects of the Flavian initiative on the eastern frontier; and the records of his road building activities show that within a few years the layout of the frontier was painted in broad, sweeping brushstrokes with the help of the XVI Flavia Firma (formed in A.D. 70) and stationed soon afterwards at Satala.

Armenia, therefore, provides an example of the creation of a frontier without an artificial barrier, although Vespasian is

¹ *ILS*, 268; cf. *PIR*, C. 170; for Dascusa see Mitford, op. cit. p. 172.
known to have provided a special defence of the Darial Pass blocking the major western exit from the Caucasus for the King of Albani in A.D. 74-75.\(^1\) The circumstances outlined above show that its unitary foundation and development was the result of deliberate strategic decision. The state of archaeological exploration in the area does not allow us to take the argument an important stage further to the micro-scale. Precisely that, however, is available from the Flavian invasion of north-eastern Scotland in the eighties. I refer not so much to the *limes* of marching camps and auxiliary forts along Strathallan, Strathearn and Strathmore, which provide an archaeological counterpoint to the Flavian advance into the Black Forest. These have been intensively studied from a variety of standpoints.\(^2\) Less is generally understood of the core of the strategy deployed, the army base of Inchtuthil at the foot of the Dunkeld Gorge, now probably to be identified with Ptolemy’s *Victoria* (Diag. 3).\(^3\) The site complex is unique in the Roman world as illustrating the development of a campaigning base into a permanent legionary fortress, while the plan of the legionary fortress probably built c. A.D. 83 and carefully demolished by A.D. 87-88 has long been known, albeit not in fully published form;\(^4\) it is perhaps the overall context that has not been appreciated, as so much of the picture depends on air photographic evidence. In particular the role of the Cleaven Dyke is as much a part of the overall layout as the other defensive arrangements. The fortress, it is clear, was built from the temporary camp that was itself reduced in size, presumably as the legionaries moved into the partially completed fortress. The size and density of the rubbish pits revealed by crop marks argues for a period of use measured in weeks or months rather than days. The continued existence of the Senior Officer’s Compound and the absence of

\(^1\) *IGR*, 3, p. 133.


Diagram 3. Inchtuthil and the Cleaven Dyke.
the legionary residence from the main fortress shows, of course, that the fortress proper was never fully completed; nevertheless, to the west end of the temporary camps, signalled by the creation of the Western Vallum, a ditch and bank were cut to defend the western flank. This feature is dwarfed in size and scale by the Cleaven Dyke, now sadly and inexcusably obliterated in its upstanding sections by forestry development; inexcusably, because its central bank and twin lateral ditches were recognized forty years ago by Richmond as the earliest Roman substantial defence in Britain. Now its true length (and the possibility of internal towers in the central bank) can only be appreciated from the air. To the north-west it is tempting to argue that it related to a temporary camp (rather than fort) on the Hill of Gourdie overlooking Inchtuthil, but this cannot yet be borne out by the evidence which stops short some 3 km. away. Either the linear earthwork was unfinished or possibly took an abrupt turn to the west at the end of North Wood. To the south-east, however, aerial photography allows the distinctive double ditches of the running earthwork to be followed to within a few hundred metres of the River Isla above its confluence with the River Tay, so far as this is known. These rivers form the southern defence of the fortress complex. Yet it is worth investigating the possibility that the line of the Cleaven Dyke was continued eastwards across the Isla to form a linear barrier blocking the whole of Strathmore, a physical delineation between a militarily-controlled area and the native territory to the north. Whatever its original scale, the Cleaven Dyke has a place in the conceptual development of such features which finds a close parallel to the southern end of Africa Vetus in the fossatum known to block the broad Wadi El Hamma controlling the approaches to Gabes between the Djebel Tebaga and the Djebel Melab. Augustan involvement in Gabes as a legionary base protecting the sensitive area between the Chott Djerid, the Chott el Fedjadj and the coast makes it likely that this fossatum

1 I. A. Richmond, PSAS, lxxiv (1940), 45 ff.; Crawford, op. cit. pp. 75.
2 Crawford, op. cit. pp. 75 ff.
3 P. Trouset, Recherches sur le Limes Tripolitanus (Etudes d'Antiquités Africaines), 1974, with full bibliography.
is one of the earliest in the North Africa series, belonging perhaps to the Trajanic period. At this stage it is worth emphasizing the relative simplicity of the structures in question and their possible parallels in time with the rampart and ditch across the Dobruja in Rumania, which takes a more southerly line than its successors, whatever their date. Its role, as the Adamklissi reliefs clearly imply, lay in restricting tribal migration south from Bessarabia. Both the Tunisian and Rumanian examples find a further parallel in the little known fossatum of the Wadi Khabour in northern Iraq. If the latter is assignable to a Trajanic origin on historical grounds, then we are probably correct in seeing all three as Late-Flavian-Trajanic in origin with the best known of the African fossata, that studied by Baradez east and west of Gemellae, perhaps representing a Hadrianic elaboration of the concept. Whatever the precise dates, however, the two points are worth emphasizing. Unlike Hadrian's Wall, where differences in structural materials and methods have been accorded great emphasis, both the Taurus limes in Germany and the clausura of the Djebel Tebaga in Tunisia exhibit frequent changes from stone to earth and from ditched to walled construction, respectively, within defensive stretches of the same period. Like the Tunisian example, the Wadi Khabour limes apparently alternated between the form of a fossatum and a narrow wall built in the orthostatic manner familiar from the Algerian frontier. This apparent interchangability of constructional modes carries its own warning. On Hadrian's Wall, for instance, greater complexity of development should be expected both structurally, in areas where stone is not readily available, and conceptually, in the incorporation of features that are familiar elsewhere, particularly in Germany, but still to seek in this country. It is with these questions in mind that we may now turn to Roman Britain.

1 Trousset, op. cit. 146 ff.
3 A. Poidebard, La trace de Rome dans le désert de Syrie, p. 152.
4 Baradez, op. cit. pp. 102 ff.
5 E.g. in the fort two kilometres west of Saalburg.
6 Trousset, op. cit. pp. 139.
What, then, are the lessons of the early and middle Empire that we might expect to apply to this country? In the early phase, maps of the progress of the Roman army in Britain are inevitable in trying to demonstrate the military situation particularly in the Julio-Claudian invasion. Yet they have neither reality in terms of the tribal treaty arrangements that we know existed nor, on closer inspection, do they have any great actuality in terms of military presence, potential or real. They smack of the Agricolan approach, the emphasis on mileage gained and held by auxiliary forts rather than the ebb and flow that I prefer to see characterizing the pre-Flavian campaigns. In Britain there was little question of establishing a formalized frontier at this stage. The frontier that emerged was constituted by the extent to which tribes submitted to Rome by conquest or suasion. Thus, as soon as the Dobunni or Cornovii submitted, i.e. placed themselves in her clientela, then the limit of the area for which Rome assumed responsibility moved to the western border of the tribal territory concerned. As we have seen from the valley of the Chelif in Mauretania, an obvious natural feature or line marked by a road like the Fosse Way need not constitute a frontier in the later, deemed normal, sense. I have used the Cornovii deliberately because the recent discovery of the major campaign base at Rhyn Park, at the natural north-western limit of Cornovian territory against the Welsh mountain massif, makes precisely this point. The proximity of the present English-Welsh border, and the re-use of the position by Wat’s Dyke, hint that we are seeing there an area that marked the terminus of Cornovian tribal territory. Surely one should be looking for similar tribal relationships in the siting of the large, unexplored bases at Kingsholm and Newton-on-Trent (that preceded the legionary fortresses at Gloucester and Lincoln), respectively, and the better-known

1 E.g. G. Webster, “The Claudian Frontier in Britain”, Studien zu den Militärgrenzen Roms, pp. 42 ff.
2 Mann, op. cit. pp. 524.
vexillation fortress at Longthorpe, so clearly related to the edge of the Fenlands, though whether to the limits of the Coritani or more probably the northern Catuvellauni one does not know. But the Rhyn Park fortress illustrates another point. The provisional dating links the main site with the campaign into North Wales undertaken by Ostorius Scapula in A.D. 48. Thus we have an earlier, more northerly base than the legionary fortress that developed to the south at Wroxeter by the late fifties. Ebb and flow, not mileage gained; and a precise parallel to Corbulo in Armenia probing towards Artaxata, from a base around Erzincan or the plain of Erzerum, i.e. in advance of the eventual legionary fortress at Satala.

And what of the later scientific frontiers? Surely the message is one of uniformity of concept, of comparable constructional development and complexity across widely separated areas. Conceptually Gillam is surely right to seek evidence of an organized pattern in the evolution of the Antonine Wall based on the four demonstrably earlier large forts at Mumrills, Castleary, Balmuidy and Old Kirkpatrick. And not only this but the possibility of a system of milecastles hinted at by the sites at Glasgow Bridge, Wilderness Plantation, Watling Lodge, Croy Hill, Seabegs Wood, and possibly Rough Castle. On both the macro- and micro-scales the gaps in the development of the Hadrianic Wall system are all too clear and have remained so, one must admit, since the great pioneer work of Simpson, Richmond and Birley nearly forty years ago. The forerunner of the formalized mural barrier, the Stanegate system, has so stood in need of fleshing out that its very existence has been doubted. Yet the lessons of Numidia, Germany and, if we knew the truth, probably the Wadi Khabour in Iraq, would accentuate the need to look for the Stanegate system in full. On the Solway at any rate this process is now proceeding with the discovery of a pre-Wall fort at Burgh-by-Sands (Pl. 2) and the clarification of the role of Kirkbride at the seaward end of the system. Conformity suggests the additional presence of signalling posts and some kind of lateral barrier. Evidence of both is just coming to light in the form of a watch-tower underlying

the Stanegate fort at Burgh and a linear defence approaching it from the east, but both could long ago have been expected from parallel developments on the Taunus frontier in Germany.\(^1\)

And what of the Hadrianic barrier? Again we have suffered from a lack of perspective. Concentration on, at times relatively unimportant, constructional details often easily explained by the availability of building materials, has perhaps obscured the fact that again on the west (where, after all, unlike the industrialized east, there is more hope of useful evidence surviving) structural complexity, the long accepted concomitant of mural debate in the central sector, has not been sufficiently forthcoming. The structural development so long known on the German Taunus and Raetian *limes* certainly makes one expect far more than has hitherto been seen—or perhaps looked for. On the Solway coastline the development of timber towers, palisade and, finally, the long-known stone towers is at last filling up the picture to proportions expectable from similar, more thoroughly explored sequences on the Taunus and Raetian frontier. On the Solway coastal frontier, for example, although the pattern of milefortlets and towers had been recognized by Collingwood by 1928,\(^2\) the German parallels always suggested the unlikelihood of these features originally occurring in isolation without the lateral connecting defences eventually located in 1975 (Pl. 3).\(^3\) Likewise the concentration of the physical remains of stone towers led to neglect of the possible survival of timber equivalents nearby on the German pattern, an omission that was rapidly corrected when, in 1977, area excavation at Cardunnock established the presence of a timber tower and associated palisade as the earliest stage of the defensive sequence (Diag. 4).\(^4\)

When we turn to the later Roman Empire it can readily be seen that the dynastic turmoil of the third century was bound to invite aggression from without. There is also reason to believe

2. *CW*, xxviii.
Plate 1. A well-preserved section of the Roman road running from Sivas to the Cappadocian frontier.
Plate 2. Burgh-by-Sands I: the photograph shows a newly-discovered fort belonging to the western Stanegate system. A linear ditch runs from the upper corner of the fort and may be associated not with the fort proper but the watch-tower indicated by the circular crop-mark.
Plate 3. The double-ditched line to the Solway coastal defences approaching Milefortlet 1 (Biglands).
Plate 4. *Housesteads*: the photograph shows the recently excavated late barrack block with its individual units. Note the evidence of cultivation terraces outside the fort which, with changes in the nature of the army, might aptly be described as a fortified village in the fourth century.
Diagram 4. The Development of the Solway Frontier System.
that the magnitude and organization of the opposition had also increased. On the Rhine and upper Danube and equally in Scotland and North Africa the fragmented neighbours along the frontiers had begun the process of federation into larger and more dangerous agglomerations further to complicate the dynastic uncertainties of empire. Instead of Frisii, Bructeri, Chatti, Tencteri, Usipi and Hermunduri we see the larger federations of Alamanni and Franks. To this was added the overthrow of the weak Arsacid empire in the east in A.D. 224 and its replacement by the Sassanid dynasty, who embarked on an attacking policy along the Parthian frontiers. The history of the third century is largely one of invasion. At the end of that century the empire was revitalized under the Diocletianic Tetrarchy. The ideal of a unitary empire was still dominant and meant that it was restored as a fortress supported by taxation in kind that supplied the financial and logistic needs of the late Roman army. In the process the role of the frontiers inevitably changed from the confident territorial defence of the second century to the defence-in-depth of the declining empire. Faced with an enemy of sufficient mobility and strength to break through a defensive perimeter, the defence has, as Luttwak recognized, in principle two alternatives. Elastic defence entails the abandonment of the defensive perimeter and its infrastructure in order to rely on a mobile field army to match that of the invaders, at the cost of sacrificing many of the tactical advantages inherent in its previous dispositions. We might like to see the emperors Decius and Valerian subscribing to this pattern in 251 and 260 against the Goths and the Persians at the cost of their lives.

The other response to attack was the development of defence in depth based on the combination of self-contained strongholds with mobile forces deployed somewhere to the rear. The method is variable but the contest no longer between like and like. While the attack was able to retain impetus, the defence on the other hand had the advantage of mutual support between both self-sufficient and mutually supporting strongpoints and

1 For Scotland v. J. C. Mann, forthcoming; for N. Africa v. Rachet, op. cit.
2 Luttwak, pp. 127 ff. for a full treatment.
mobile forces in the field. The strongholds needed to be sufficiently resilient to survive attack without requiring the presence of the mobile army; while the latter, often based on a major defended town or city, had to resist and counter attack before the enemy succeeded in reducing the strongholds that control led the food supply. Under these circumstances successful defence-in-depth was possible. It did not, of course, offer the tight security of a preclusive perimeter defence, but this is just what archaeologists and historians have tended to neglect in viewing late imperial developments as a continuous decline from a subjective high point based on aggression and rigid demarcation instead of as a continuously-evolving response to changing circumstances. The adoption of defence-in-depth was long disguised by remedial growth, like Marcus Aurelius' two new legions raised for the defence of Raetia and Noricum. Nor was the conventional perimeter defence approach abandoned when, at the start of the third century, Septimus Severus formed the basis of the first strategic reserve. But the great crisis of the third century forced change. When provinces were overrun remedy could only in the first place take the form of elastic defence. When choice returned, the principal strategy that emerged relied on defence-in-depth based on a combination of static frontier forces and mobile field armies. Yet the adoption of a defence-in-depth strategy was neither total nor definitive. Indeed one could argue that under Diocletian and Valentinian I (364-75), when the strategy showed most signs of enduring success, it was abandoned in favour of a stricter preclusive frontier strategy. That is an argument I shall leave historians to ponder while we look briefly at the physical concommitants of defence-in-depth.

I hope that I have been able to explain the conceptual and practical components of the defence in depth that characterizes much of the frontier arrangements in the later Empire.¹ I think the concept can be particularly helpful to Wall studies in this

¹ The concept has been particularly well brought out in the work of Israeli archaeologists in the Negev, v. M. Gichon, Studien zu den Militärgrenzen Roms, pp. 175 ff.; and Israel and her Vicinity in the Roman and Byzantine Periods, pp 35 ff.
country at the present juncture. In recent years, to my mind, Wall Periods III and IV, conventionally spanning the fourth century, have taken over an impression of some unreality as archaeologists have on the one hand continued to place the emphasis on the mural barrier proper while their excavations have shown the very varying histories of the forts associated directly with it. I think it is more helpful, therefore, to look at the frontier zone on a broader scale. For north-eastern Britain we are fortunate in having available a list of occupied forts to be found in the Notitia Dignitatum, that tantalizing cross between a Michelin Guide and an Army List which, to cut a long story short, we may take as containing the stratum of information that relates to the final quarter of the fourth century in this country. Plotted out in plan form, the forts on the eastern approaches to the Wall show the way in which military strongpoints existed at the time. If we compare it with the concept of defence in depth shown on the lower part of the plan, then we can see obvious points of similarity. But in dealing with this particular area perhaps the most notable point of similarity was omitted in the upper plan. I refer to the town of Catterick. Catterick was the strategic nerve-centre of northern warfare, for it commanded Scotch Corner where the road from York branches north-west over Stainmore by the Bowes Pass to Carlisle and northward to the Tyne. Its strategic importance is emphasized by a major battle fought near the town around 590; but earlier than that we know that it was occupied into the early fifth century and moreover finds suggest the presence of troops within the settlement. If we add, therefore, Catterick as an essential component of a frontier defended in depth but omitted from the Notitia as being of civilian status, then I think we will have gone some way to seeing how the northern frontier operated in reality by the late fourth century (Diag. 5).

Enemy incursions would inevitably take place and, unless

1 Notably in the chronology of Haltonchesters, where there is evidence for a period of abandonment.
2 For the British section v. S. S. Frere, Britannia, pp. 188 f.; for a recent survey of the Notitia overall v. G. Clemente, La "Notitia Dignitatum", 1968.
Diagram 5. The strategy of Defence-in-Depth as applied to northern Britain.
very feeble, could no longer be prevented by interception on the
actual frontier line, for its garrisons were thinned out. Meeting
only static guardposts and weak patrol forces on the frontier, the
enemy could frequently cross the line with little or virtually no
opposition, but in the context of defence-in-depth this no longer
meant that the defenced system had been turned and overrun.
Instead the enemy would find himself in a peripheral combat
zone of varying depth within which strongholds large and small,
including fortified towns and granaries (which are still to seek
in Britain), would survive, each capable of sustained resistance
against enemies unequipped with siege machines. Within and
beyond this zone were the mobile forces of a defence deployed
to fight in the open with the support of the fortified strongholds.
Such support could take several distinct forms. Naturally the
fortified strongholds must have served as supply depots. We
would do well to view fourth century Housesteads with its
garrison of *limitanei* as a fortified village (Pl. 4). Food and fodder
stores in such strongholds were, therefore, at once denied to the
enemy and readily available to the defence when the latter
advanced to recover territory that was temporarily lost. Second-
ly, and practically, the fixed defences of the frontier could
usefully serve as obstacles even when the perimeter as a whole
was not manned in sufficient strength to deny passage absolutely.
At the same time, self-contained fortifications within a scheme
of defence in depth provided an area of security and intelligence
that could be used by the mobile field army. In particular,
the provision of small road stations manned by necessarily
small detachments could not effectively oppose the passage of
large enemy forces but could at least intercept stray groups and
impose time-consuming detours. And delay was the object of
the exercise in anticipation of eventual counter-attack. Further-
more, the strongholds and road stations could provide effective
sallying bases and, if need arise, temporary refuge for mobile
detachments. In contrast, under a purely elastic defensive
strategy, outnumbered defence forces simply faced the stark
choice of escape or defeat. I hope that with these situations
in mind we can come to see something of the actuality of the
late frontier in the north-east.
Our problem all along has been to distinguish the gradations between the three systems of frontier policy that built up first in the late Republic and early Principate, then the confident years of the late first and second century, and the third system organized in the wake of the great crisis of the third century when the nature of the frontier policy changed to evolve defence-in-depth. Part of the problem, of course, is the sheer mass of material arising from the devoted labours of archaeologists, epigraphists, numismatists and ancient historians, and the subjective strategic notions applied at times by scholars to their evidence. It is not that some of the scholars concerned (and indeed some, especially recent Israeli archaeologists, have been active army officers) were unaware of modern strategic thinking, or, indeed, failed to fill out their pictures by inductive rather than deductive processes. Their shortcomings, to my mind, stem from their being children of their time, their strategic assumptions still being those of the century before the Second World War. "Until Hiroshima, modern strategic thought has been dominated by Clausewitzian approaches". Such ideas, as Luttwak pointed out, stress the conflict of nations, "the primacy and desirability of offensive warfare in pursuit of decisive results", and a consequent "aversion to defensive strategies". More subtly, "they imply a sharp division between a state of peace and a state of war" and grant "primacy to the active use of military force". After the Second World War we should be in a better position to reduce the influence of anachronistic strategic outlook and, indeed, colonial histories and understand that Romans, particularly in the later Empire, faced "the prospect not of decisive conflict but of a permanent state of war, however limited". This is a fundamental difference of approach but one effectively understood by the present generation of Israeli archaeologists in their studies of the development of the Negev frontier. Yet the full impact for this interpretation of the later Empire is still to seek. It could be argued, as I hinted, that Diocletian and, to a lesser extent, Valerian revived and re-emphasized the role of preclusive

1 Luttwak, op. cit. xi, xii, on which this section is based.
2 Gichon, op. cit.
linear barriers at times when defence-in-depth was working tolerably well. Likewise, old ideas die hard and, like Offa, the Byzantines followed the linear frontier mentality by such constructions as the walls around Sebastopolis, or indeed the little known Sea-Walls that cut off the whole promontary on which Constantinople stands. Further north in the Dobruja, near the mouth of the Danube, they recreated a linear frontier just a few yards from its Roman precursor. Such linear thinking is hard to dissolve, so hard, indeed, that it is still in part treated as a sensitive military area in modern Rumania. Old ideas die hard.¹

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