

SURVIVAL OF THE SLIMMEST? THE EARLY ISLAMIC CONQUESTS AND THE SURVIVAL OF THE ROMAN STATE IN THE EAST

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Until the extinction of the Sassanid empire by the Islamic armies in the 630s and early 640s, the Persian state had been the main rival of the Roman Empire in the East. Thereafter, the Umayyad (661-750) and then Abbasid (751-1258) Caliphates posed a constant threat.¹ The relationship between these two powers, each representing a major monotheistic religion, entailed both military conflict as well as peaceful cultural exchange, technological borrowing, philosophical debate, and ideological confrontation. Given the nature of this special issue, the present contribution will focus on aspects of the military confrontation in Anatolia and at sea, which dominates the political and to some degree the cultural history of the Eastern Roman world across these centuries. The Islamic conquests of the 630s and 640s radically transformed the later Roman state in the East (**Fig. 1-2**). By 642 all of Egypt and the Middle Eastern provinces had been lost, Arab forces had penetrated deep into Asia Minor and Libya, and imperial forces had been withdrawn into Anatolia. The Eastern Roman Empire became a rump of its former self, consisting of a radically slimmed-down state: central and northern Asia Minor, the southern Balkan coastal regions, the Aegean, and in the West, parts of Italy, Sardinia and the central and western North African provinces. North Africa was entirely lost by 700, while imperial territory in Italy was constantly shrinking.²

These losses were drastic, by 642, thus within a period of less than ten years, the Empire had lost something over half its area and three-quarters of its resources. Its very survival was in doubt, and contemporaries were aware of this. How it survived is a complex story of many elements, but suffice it to say that in spite of the odds stacked against it, the Roman state in the east did survive, recovered, and went on to the offensive, to become by the early 11th century the paramount power in the east Mediterranean basin.³ The military aspects of this struggle were central to the story,

¹ For a good general survey: Kennedy 2016. See also Kaegi 1992.

² Detailed accounts in Lilie 1976; Donner 1981; Kaegi 1992; 2008; 2010. On East Roman/Byzantine strategic thinking more broadly, see also Haldon 2024; Cheynet 2014.

³ For more detailed accounts: Haldon 1997; 2016a.

but it must not be forgotten that they were only one element in a bigger picture. The changes which accompanied the developments of the 7th century affected all areas of social, cultural and economic life. There occurred a ruralisation of society, a result of the devastation, abandonment, shrinkage or displacement of many cities in Asia Minor as a consequence of invasions and raids. The defensive properties of ‘urban’ sites, their direct relevance to military, administrative or ecclesiastical needs, for example, played the key role in whether an urban centre or fortress survived or not.⁴ Constantinople became the pre-eminent city of the Empire.⁵

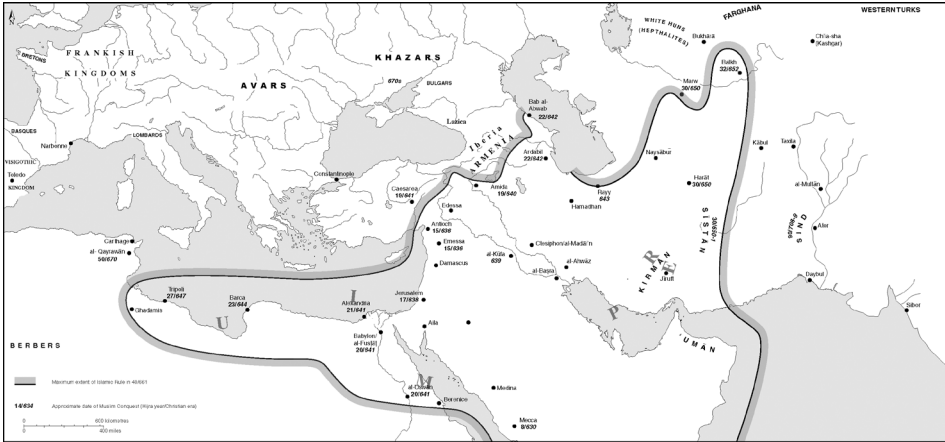


Figure 1: The expansion of the early Islamic Empire c. 634-661.

Credits/sources: J. Haldon.

As a result of the disastrous defeat at the battle of the Yarmuk River in 636, the armies which had operated in Syria, Palestine and Mesopotamia were withdrawn into Anatolia, and re-established within a greatly changed economic and strategic framework. The complete failure of attempts to meet and drive back the invaders in open battle thus induced a major shift in strategy whereby open confrontations with the Muslim armies were avoided. The regions across which they were based were determined by the ability of these districts to provide for the soldiers in terms of supplies and other requirements. By the last decades of the 7th century, the Anatolian provinces across which these armies were garrisoned were known collectively by the name of the army based there. The distribution of the various units of the field armies across the provinces in this way was connected with logistical demands, but the strategic implications of this meant that Roman counter-attacks were relatively slow to organise, and defence was often fragmented and localised.⁶

⁴ Brandes 1999; Brandes, Haldon 2000; Haldon 2006; Ivison 2007; Niewöhner 2007; 2008; Crow 2009.

⁵ Mango 1986.

⁶ Haldon 1997.

Remaking imperial strategy

The military organisation of the Later Roman Empire in the East was based around a formal distinction between mobile field forces (*comitatenses*) and less mobile (but not entirely static) defensive garrisons both along and well behind the frontier regions (*limitanei*). These arrangements were flexible and units could be transferred from frontier forces to field armies or vice versa. While orientated largely towards defence, the field armies could be mobilised for offensive operations into enemy territory. There was a clear notion of a linear frontier or border, both in respect of political demarcation and in terms of cultural differentiation.⁷ Linear defensive systems could be of value when properly maintained, as along the Rhine and Danube rivers, for example, and they certainly had political value. These arrangements could also be complemented by zones of economic colonisation, whereby non-Roman communities bordering Roman territory were drawn into a network of commercial as well as cultural and sometimes social relations, creating thus a buffer between imperial territory and society and those who were less willing to be absorbed into a Roman socio-economic orbit.⁸ Defensive strategy by the 6th century generally permitted hostile forces to penetrate the frontier but in theory at least held them up through the existence of a series of “hard points”, major fortified centres or military garrisons dominating key routes.⁹ If these were attacked, the enemy's resources and lines of communication became vulnerable as time and energy were expended in trying to capture them; if they were avoided, the soldiers based there could sally out to harass the enemy column or columns, preventing them from collecting forage and supplies, limiting their freedom of movement, and so forth. This allowed time for other mobile forces to concentrate, and march to meet the enemy in battle. Warfare then became a war of manoeuvre and attrition, as the enemy force attempted to avoid contact and escape with its booty, and as Roman commanders attempted either to surround the enemy and overwhelm them numerically before attacking, or alternatively, and in order to avoid a full-scale battle, to persuade them to withdraw due to lack of resources. East Roman military handbooks paid considerable attention to attrition, disease and similar strategic assets.¹⁰

These were the arrangements in place at the time of the early Islamic invasions, and they failed. Again, ascribing priority to any of the likely reasons is difficult—rifts within the senior command, lack of resources, inadequate training or tactical discipline, inexperience among recently recruited units, poor morale, all may have played a role. The result, however, was the comprehensive defeat of the Roman forces in Syria and withdrawal of the eastern field armies into safer havens in Anatolia. The resultant

⁷ Arce 2000; Graham 2006; Whittaker 2004; Hekster, Kaizer 2011, p. 13-29; Whately 2013.

⁸ For frontiers and borderlands after the 6th century, see essays in Arrignon, Duneau 1981; Lee 1993; Frankopan 1997; Stephenson 2000; Pohl *et alii* 2001; Cheynet 2001; Curta 2006.

⁹ See also Crow, in this volume.

¹⁰ See the chapters in Isaac 1992; Greatrex 1998; Sarantis, Christie 2013; Sarantis 2016.

gradual transformation, chiefly for logistical reasons, of these forces into regional militias focused around a core of seasoned professional soldiers, largely mounted units, completely changed the nature of Eastern Roman military organisation.

During the second half of the 7th century, the Empire, still dependent on established late Roman strategic practice, had little success in major battlefield confrontations, whether due to poor tactical cohesion, poor morale, poor generalship or other factors remains unclear for lack of detailed sources. The occasional victories that were registered were mostly in the Balkans against much less well-organised and probably smaller forces of Slavic and, after 680, Bulgarian armies, usually commanded by the emperor himself. Imperial strategy in Anatolia became largely one of avoiding battle and attempting to control the major Anatolian passes through the mountain barrier that ran from the sea north-eastwards towards the Armenian highlands. The Arab conquest of Cilicia and its abandonment by the Empire at the end of the 7th century forced changes in this approach. Since early efforts to pursue a strategy of attempting to throw invading armies back following a pitched battle failed, the imperial response turned to harassing invaders once they had entered imperial territory and completed their attack. This approach meant, however, that the economic hinterland of the frontier incurred substantial damage, subject as it was to regular devastation.

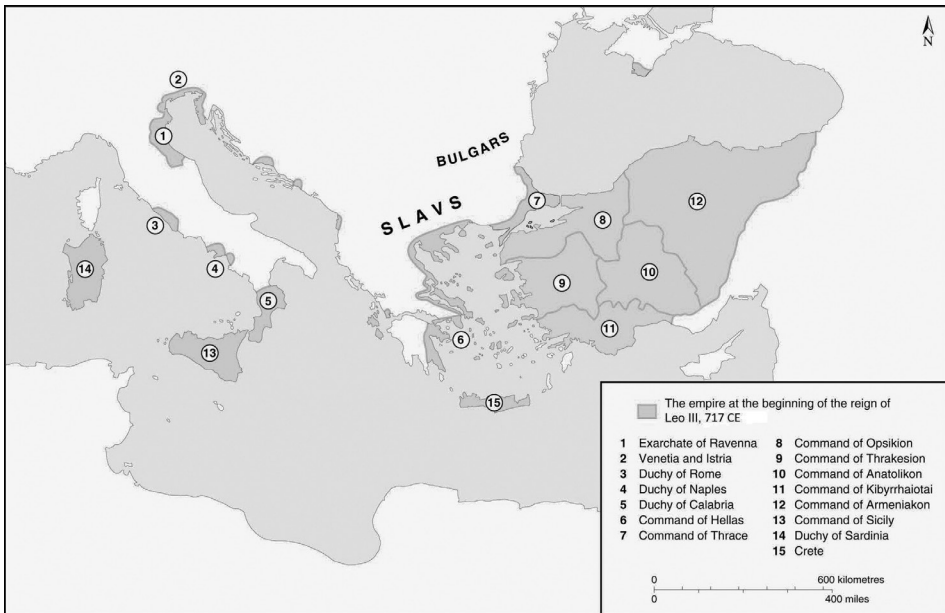


Figure 2: The rump of an Empire, c. 717.

Credits/sources: J. Haldon.

The localisation of military forces that took place through the distribution of the field armies across Asia Minor generated a distinction between the regular elements—full-time soldiers—and the militia-like conscripts in each division. The older divisional military

commands, known as *strategiai* or “generalcies”, were at first merely groupings of provinces across which the established field army corps were based (**Fig. 3**). By 730 or thereabouts these regions had acquired a clear geographical identity; and by the later 8th century some elements of fiscal as well as military administration were based on these territorial divisions, which became known as ‘themes’ (*themata*), a term that probably referred to the standing cavalry units around which the provincial forces were organised but which from the early 9th century also reflected local fiscal structures introduced to support soldiers through their own communities at provincial level.¹¹ The constant raiding and counter-raiding as well as the devastation of what had become a frontier zone led to the appearance, by the first half of the 8th century, of what was in effect a no-man’s land between the settled and economically safer regions on both sides. The new arrangements appear by the same token to have prevented the permanent establishment by the Arabs on imperial territory behind the Taurus / Anti-Taurus mountain zone, which by the early 8th century had come to represent the real frontier region between the two polities (**Fig. 2**). While these developments were taking place on land, a naval command, the Kibyrrhaiotai (named after the coastal town of Kibyrrha in Caria) had come into existence, probably by the 690s, in western and south-western coastal Anatolia, establishing thereby a much-needed maritime defence for the Western Anatolian coast and Aegean region.

Until the first decades of the 8th century there were occasionally major defensive and even more occasionally offensive campaigns led by the emperors themselves, but the success rate on the eastern frontier was not good. The evidence of the written sources (in Greek, Armenian, Arabic and Syriac) for the later 7th and much of the 8th centuries suggests that warfare revolved largely around local troops, left to their own devices in attempts to hold raiding forces and turn them back at the Taurus and Anti-Taurus passes. From the later 8th and early 9th century small independent commands appear along the eastern frontier, complementing the larger field armies. These units were called *kleisourarchies* (*kleisourarchiai*), or ‘frontier-pass commands’, and reflected the formal adoption of a highly-localised pattern of defence, entailing a strategy of harassment and ambushes, designed to hold up and limit the damage inflicted by all but the largest forces. While these commands only appear at this time, they probably reflected a tradition of local defence and counter-raid, since such commands had been established along the Cilician frontier for a while from the 640s. This strategy was successful partly due to the garrisoning of numerous small forts and fortresses along the major routes, on cross-roads and locations where supplies might be stored, and above and behind the frontier passes through which enemy forces had to pass to gain access to the Byzantine hinterland. Such posts were a constant threat to any invading force, although for the raiding party to lay siege to them was more trouble than it was worth. As long as such outposts were occupied by the local troops enemy raiders could be tracked and eventually brought to battle or ambushed, although again it seems that the raiding itself was rarely prevented nor the booty recovered. All these developments reflected the pace,

¹¹ Haldon 2016; Prigent 2018.

direction and intensity of the enemy strategy.¹² Concrete evidence for how this type of warfare was carried on is, however, sparse, until the middle of the 10th century, when a tactical treatise devoted to “skirmishing” or “guerrilla” was compiled by a senior military commander.¹³ This summarised in detail the frontier warfare of the author’s own time, but undoubtedly reflects long-standing tradition even if, as seems likely, somewhat rationalised in the treatise itself.

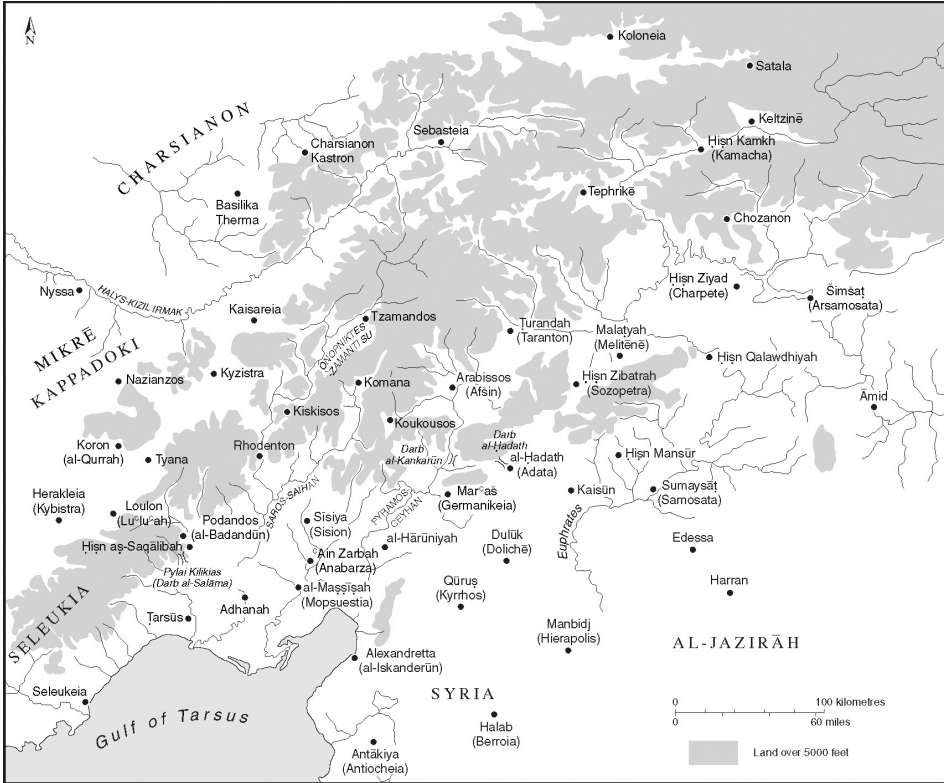


Figure 3: The Taurus / Anti-Taurus frontier c. 700-900.

Credits/sources: J. Haldon.

Even as late as the later 8th century it remains unclear as to what the Empire’s longer-term strategic policy was. With the establishment of the various frontier *klei-sourai*, however, things become a little clearer, and indicate that the Empire had a vision both of its defensive capacity and strategic needs as well as an understanding of how best to strike back at attempts to destabilize it. Partial economic recovery and political stability permitted militarily competent emperors to mount substantial

¹² Haldon, Kennedy 1980, p. 79-87, 95-106; Métivier 2008.

¹³ For the text, French translation and detailed commentary and analysis: Dagron, Mihăescu 1986. For the English translation: Dennis 1985, p. 137-239. See also Dagron 1995.

offensive campaigns both in the Balkans as well as across the eastern frontier, but in the latter case this merely confirmed the new frontier and re-established a degree of parity between the two sides. Constantine V (741-775) established a small elite force, known as the *tagmata* (“the regiments”), which soon became the elite field division of imperial campaign armies. While never very large, it had better pay and discipline than regular and part-time provincial units and served as a valuable nucleus of picked troops on campaign. This was, in fact, the first step in a rapidly-growing tendency to recruit mercenary forces, both foreign and indigenous, to form special units and to serve for the duration of a particular campaign or group of campaigns. As the state recovered and the political and economic situation stabilised the Empire was able to re-assert its military strength in the East during the 9th century, while the role and the proportion of such full-time units became ever more important.

Arab-Islamic strategy

The Caliphate found itself similarly challenged by the East Roman state, however, for while immeasurably wealthier and more populous, organizing its resources in such a way as to overwhelm the Empire proved to be an impossible task, even if on occasion it came close. But its strategic response reflected not just defensive as well as offensive priorities, but also ideological motives. The Roman Empire quickly became the hereditary enemy of the Islamic world, offering a rival world view and political system, and warfare against it took on a particular cultural symbolic value—fighting the Romans carried much greater ideological significance than fighting the various barbarians found along other frontiers.¹⁴

Once the frontier had begun to stabilize, around the 750s, and with Byzantine frontier outposts along the Taurus / Anti-Taurus chains posing a significant challenge to the peace and security of the Islamic lands behind the frontier zones, a sophisticated system of frontier posts and fortresses began to be established (see **Fig. 3**). The frontier lands (known as *al-thughūr*) were divided into two main zones, the Syrian frontier stretching from the Cilician plain in the west towards the mountains of northern Syria in the east, where it abutted the upland and mountainous regions known as al-Jazīrah which stretched eastwards as far as the Armenian highlands.¹⁵ In the latter were the fortress-cities of Mar’āš (Germanikeia), al-Hadath and Malatya (Melitēnē), each fronted by a series of smaller forts, referred to as *ḥiṣn* (as opposed to *madīnah*, city) covering major and minor routes from the Byzantine lands southwards and eastwards.

¹⁴ This was not a new phenomenon. A similar relationship—diplomatically, symbolically and culturally—had existed for centuries between the Roman world and Sasanian Iran, and the traditions it embodied readily transferred, in a new guise and in a somewhat different configuration, to relations between the Roman state and the Islamic Caliphate. See the extensive discussion in Canepa 2009, p. 188-226.

¹⁵ Bonner 1994.

In the Cilician region al-Maṣṣisah (Mopsouestia), Adhanah (Adana) and Tarsus fulfilled similar functions, again with a number of smaller advanced forts to protect the major routes from the north. The fortress-cities thus lay in the plains and protected their rural hinterlands as well as functioning as major foci for offensive raiding into Roman lands. Each city had a substantial garrison of regular troops, usually drawn from the local provinces in Syria or Jazīrah, or from more distant Khurāsān, and complemented by large numbers of volunteers from across the Islamic world during the annual campaigns. By the middle of the 9th century, Tarsus had become a major focus for raids into Roman territory and its army posed a substantial threat to the Byzantine provinces behind the Taurus mountains.¹⁶

There was a rhythm to the frontier warfare. Already from the 660s and 670s the raiding had become annual and there were often several raids in a single year, aimed both at economic disruption as well as the seizure of booty in people, livestock and other movable wealth. This could often have a dramatic impact. Palaeoenvironmental data from Cappadocia, for example, coincides with historical information to show that a period of continuous raiding and enemy occupation between 664 and 678 appears to have led to a near-complete collapse of agriculture in the area. This may not have been very common, but that it could occur is made clear by this example.¹⁷ By the later 8th century, and probably long before, there were two or three sets of raids each year, the spring, summer and winter raids.¹⁸ The spring and summer raids were much more usual, largely because of the adverse climatic conditions of the Anatolian winter, and generally entered Byzantine territory through the main passes—the Cilician Gates north of Tarsus, the Darb al-Hadath north of Mar'aṣ and the Darb Malatyah (see Fig. 3). Their frequency and size varied with the political situation, both in the Caliphate as a whole as well as at local level, especially as, from the middle or later 9th century, the central authority exercised from Baghdad was weakened and local emirates came to dominate the region.¹⁹

The frontier and frontier warfare

Given the situation that evolved across the later 7th and 8th centuries, therefore, the chief characteristic of Byzantine defensive strategy became the permeable frontier. Not only were raiders or invading armies not halted at this point, they were not even

¹⁶ Haldon, Kennedy 1980, p. 106-111; Bonner 1992; 1996; Bosworth 1992; Kennedy 1995. See also Haldon 2014, p. 379-380 (commentary to Leo the Wise, *Taktika*, XVIII, 131).

¹⁷ Ahrweiler 1962; Haldon 2007; Eastwood *et alii* 2009.

¹⁸ Described in detail by the 10th century geographer Kudāma ibn Ja'far, in: de Goeje 1889, p. 199, 259.

¹⁹ Haldon, Kennedy 1980, p. 113-115. About Byzantine-Arab warfare in the 9th-10th centuries, see Brooks 1900; Vasiliev 1935; Vasiliev, Canard 1950; Vasiliev 1968; and for a general survey of the military organisation of the early Caliphate, see Kennedy 2001.

brought to battle, except under the most favourable circumstances. Instead, and as we have noted above, conflict was avoided wherever possible (conserving limited manpower), and the populations of the countryside and their moveable possessions and livestock brought into places of security (conserving limited resources). Ensconced in their fortresses and strongholds or mountain refuges, the army and the civil population waited until the enemy withdrew. This usually occurred after a relatively short time, since larger forces were subject to the dangers of disease as well as problems of water supply and fodder, while substantial amounts of booty made withdrawal slower and more subject to ambush and counter-attack. Withdrawing forces were sometimes ambushed or confronted and defeated as they departed; and occasionally retributive offensive operations into enemy territory were undertaken. Naturally, this strategic approach was complemented by other, political means. Diplomacy was absolutely crucial: fomenting discontent among enemy troops or leaders, delaying negotiations until the enemy armies ran out of supplies or were assailed by disease, persuading the enemy that relief forces were about to fall upon them, or that their homeland had been attacked by imperial allies, these and a host of other methods were employed in a sophisticated armoury of non-military weapons at the disposal of an imperial government, and there can be little doubt that it was this combination which enabled the imperial government to survive so many apparently fatal onslaughts.²⁰

Roman success in defending the core territories of the Empire depended on a number of key factors or advantages, among the most important being the Empire's logistical infrastructure—communications and supplies of provisions and matériel. A major achievement of Roman armies up to the late 2nd century AD was the construction or further development of a network of major arterial roads suitable for the rapid movement of information, men, livestock and supplies from the inner provinces to the frontiers, and connecting these provinces to one another and to major political centres. Dramatic changes in these arrangements took place over the period from the later 4th-7th centuries, reasonably characterised as a gradual decline in the standard of many—if not most—major public roads. The reasons remain unclear and under-researched: in terms of maintenance and upkeep, it seems in part to reflect a shift in priorities and in particular an unwillingness on the part of provincial cities to allocate the necessary resources. Already the *Codex Theodosianus* laws of the later 4th and early 5th centuries regret the poor state of many roads, for example.²¹

One important factor in this was the transformation in the role of urban centres during the late Roman period, since it had been local municipalities which had borne the chief responsibility for maintaining the roads in their administrative territories.²²

²⁰ See Shepard 1985.

²¹ See *Theodosian Code*, XV, 3, 4 (AD 412), which refers to “the immense ruin of the highways” (*[...] immensas uastitates uiarum certatim [...]*, ed. Mommsen, Krüger 1904, p. 817; trans. Pharr 1952, p. 431) throughout the prefecture of the East. Procopius describes a section of the *Via Egnatia* as almost impassable in wet weather: Procopius of Caesarea, *The Buildings*, IV, 8, 5.

²² See Haldon 1997, p. 92-124.

Changes in the fortunes of the Roman road network may perhaps in part reflect the availability, or non-availability, of the requisite engineering skills in the army. Evidence about other aspects of Late Roman engineering and technical know-how would support the notion of a decline in high-level technical skills applied to military engineering: the move during the 5th-6th centuries AD from torsion-powered artillery, which requires fairly complex construction techniques as well as highly trained artificers, to tension-powered machines, is one example, although there are others.²³ Yet there is plenty of evidence from fortification and defensive architecture—quite apart from other secular and in particular ecclesiastical architecture—to show that a sufficient knowledge of engineering was available to maintain often very elaborate and sophisticated military building. Why less effort appears to have been invested in road maintenance remains an as yet unanswered question.

Only in the area of a few major cities—chiefly, in fact, around Constantinople—is there evidence for road maintenance or repair work undertaken by the state, much of it from the middle of the 6th century. Efforts to resurface short stretches of road along the *Via Egnatia* between Constantinople and Rhegion are recorded, for example, as well as along the main highway from Bithynia to Phrygia and on the road from Antioch in Syria northwards across the mountains into Cilicia. A number of bridges were also repaired—across the Sangarios and Drakôn rivers in Bithynia, or the Siberis in Galatia.²⁴ And there is a decent amount of epigraphic evidence from across the Empire for work of this sort being carried out fairly regularly.²⁵ But, after this time, there is no evidence for any central direction of road-building or maintenance in the provinces, except on a purely *ad hoc* basis, even in the laudatory accounts of the building programmes of emperors such as Basil I in the second half of the 9th century.

Roads were, however, certainly maintained and, in the case of some bridges, newly constructed.²⁶ Late Roman and Byzantine sources make it clear that road and bridge maintenance was achieved through the compulsory duties imposed upon local communities by local military or provincial authorities, and sanctioned by the central government. Obligations in the 4th-6th centuries, such as *viarum et pontium sollicitudo*, known certainly from the 9th century and probably before by a variety of terms such as

²³ This concerns double-spring torsion weapons in particular since the balance between the two springs is crucial. Horizontally mounted single-spring torsion weapons, such as the *onager*, seem to have continued in use throughout the medieval world, although evidence for them is sparse. See the valuable discussion in Chevedden 1995; and for the (apparent) continued use of torsion machines in the non-Byzantine medieval world, see Nicolle 1995, p. 50, 99; 1996, p. 47, 85. For a detailed discussion of these developments, see Petersen 2013, especially p. 406-429.

²⁴ Procopius of Caesarea, *The Buildings*, IV, 8, 4-9; V, 2, 12-14; 3, 4-6, 8-10, 12-15; 4, 1-4; and 5, 1-7. See Whitby 1985; Greatrex 1994.

²⁵ *E.g. I.Chr. Bulgarien*, 3 (an inscription from Serdica [Sofia] dated to AD 580 recording repairs to an aqueduct under an imperial officer named Julianus).

²⁶ For good short surveys of the key issues and literature, see Belke 2008; 2010.

odostrôsia or *gephyrôsis*, occur in various sources from the late Roman period, up to the 12th century and beyond.²⁷

But the results seem to have been patchy. Not all roads were of the same standard, nor were they constructed for the same purpose. Byzantine sources often differentiate between wide roads and narrow roads or paths, between paved and unpaved roads, and between roads that were suitable for wagons or wheeled vehicles and other roads. A 10th century treatise on frontier warfare distinguishes “public roads”, maintained at least irregularly by the local administration through compulsory services imposed on local communities, from paths and tracks of a humbler nature.²⁸

However degraded paved Roman roads became, a clearly-defined system of predominantly military routes, along which imperial and provincial marching camps were established, evolved from the 7th century onwards in response to the transformed strategic situation of the Empire. A similar pattern emerges also in the Balkans. While based in both cases on the pre-existing Roman network, the new emphasis reflects a specifically Byzantine strategic response to invasion in both regions. In many districts, the roads of the late Roman period seem to have continued in use, in spite of their gradual dilapidation, at least until they became so potholed and irregular that even pack animals and soldiers could not pass.²⁹ In addition, at least from the later 8th century (although possibly before), a system of marching camps or *aplekta* had evolved, which served as major supply centres as well as points at which substantial forces could be assembled, and which lay at key points along the military road system leading to the Syrian frontier or the Armenian frontier of the Empire in Anatolia.³⁰ In both the Balkans and Asia Minor, these routes can be traced, to some extent at least, both by their description in a variety of sources, as well as by occasional material traces. This system of roads was then supplemented by the imperial post, a complex set of institutions derived from the late Roman *cursus publicus* which, in the 8th century and afterwards, incorporated both a rapid courier service as well as arrangements for dealing with the billeting of imperial officials, soldiers, provision of draught animals and mounts.³¹ Together, imperial military roads and courier service constituted the fundamental element in the State’s intelligence and information activities, permitting the rapid movement of information from one part of the Empire to another.

²⁷ See, for example, the imperial prescriptions incorporated into the 5th century *Codex Theodosianus*, and repeated or replaced in the 6th century legislation of Justinian: *Theodosian Code*, IX, 16, 15 and 18; XV, 3, 6; *Justinian Code*, I, 2, 5; *Novels of Justinian*, CXXXI, 5; repeated again in the early 10th century codification: *Basilika*, V, 1, 4; 3, 6. For local military authorities responsible: Leo the Wise, *Taktika*, XVIII, XX, 71.

²⁸ See Dagron, Mihăescu 1986, p. 219.

²⁹ Since their maintenance was a localised and infrequent matter, many must have become little more than paths or tracks unsuitable for any wheeled vehicles at all by the 6th and 7th centuries. For a good overview of the Roman road system in Asia Minor, see the map edited by Calder, Bean 1957; and for the later Byzantine situation, see the overview, with further literature and archaeological materials, by Belke 2008.

³⁰ For discussion of Byzantine road networks in Anatolia, see Haldon 1999a, p. 150-151; Koder 2012.

³¹ For the operations of the postal system in the Middle Byzantine period, see Laurent 1981, p. 289-299, 487-497.

East Roman tactics and tactical organisation

In responding to the threat from the victorious Islamic armies after the initial conquests, Byzantine tactics and strategy during the second half of the 7th century had to adapt to a new situation. Light cavalry came to dominate the border warfare, with skirmishing and hit-and-run raids characterizing much of the fighting. Although substantial numbers of mounted soldiers were always present, the bulk of the Arab forces were mostly composed of infantry. But their extensive use of camels and horses to improve their mobility enabled them to travel far more quickly than most of their enemies, and the highly mobile nature of the warfare gave the Arab mounted infantry an advantage over regular Roman foot soldiers. While infantry continued to be needed by the East Romans, therefore, playing an important part in several campaigns, as well as in the guerrilla warfare along the eastern frontier, it seems that their value slowly declined, perhaps because they were drawn largely from the poorest and least well-equipped of the provincial soldiery. The seasonal campaigning and localised recruitment in the provincial armies, combined with their (probably minimal) professional training, the physical dispersal of the soldiers and the type of warfare waged, meant that while infantry soldiers could fulfil garrison duties and irregular, skirmishing warfare in broken country, or lie in wait for hostile forces, they would not be reliable under regular battlefield conditions. In general, there took place a levelling out of the different arms into simply light cavalry and infantry. Only the *tagmata* at Constantinople seem to have provided a heavy cavalry force. It seems to have been the responsibility of local officers in the provinces to establish field units and to arm them as each specific occasion required. This situation changed only from the later 9th and especially the 10th century, as the Empire went on to the offensive.

East Roman provincial armies were organised from at least the middle of the 7th century into *tourmai*, *drouggoi*, and *banda*: very roughly this might translate as divisions, brigades and regiments. The sizes of units on the battlefield varied according to tactical need, however, and there was no neat equivalence between the territorial and administrative districts and the size of the units drawn from them. Calculating the size of Byzantine armies from this sort of information is, in consequence, rather tricky. Although virtually nothing is known of how this functioned 'on the ground', by the 9th century the first and last of these had a clear territorial identity, and each *tourma* had a headquarters or base, a fortified town or fortress. The soldiers in each *bandon* were drawn from a particular locality. The *drouggos* or brigade, the middle level of this structure, always remained a tactical unit, without any territorial identity. Each commander of a *tourma*, the *tourmarchēs*, had his base in a fortress town, and was an important figure in the military administration, responsible for the fortresses and strongpoints in his district, for the safety of the local population and their goods and chattels, as well as for dealing with raids into his territory and for informing his superior of enemy movements.

The use of archery seems to have declined considerably among Eastern Roman soldiers as a weapon with real tactical importance. Until the 6th and early 7th centuries Roman commanders had used Hunnic or similar mercenaries and allies, and from this

basis had trained their own mounted archers accordingly. Thereafter, the possibilities for this sort of training declined. Archery did not disappear entirely, and provincial cavalry and infantry probably included some soldiers armed with bows. Nevertheless, the limited evidence makes almost no mention of archery, the standard armament for the middle Byzantine soldier consisting of sword, lance, shield and helmet, sometimes including also various forms of body armour. The early Islamic enemies of the Roman Empire relied upon a very similar panoply, and while there were significant differences in points of detail, style, and in some cases of fabrication, such differences were minimal, and were to a large extent a result of both familiarity and constant warfare.³² A change came only in the 830s, when the Caliphate began to employ Turkic mounted archers, against whom East Roman armies had great difficulty. The composite reflex bow used by these warriors was not native to the Empire's lands, and military and tactical organisation was not up to enforcing regular training and practice of the sort possible in the context of late Roman military structures. The Romans soon caught up however, and from the later 9th and early 10th century such soldiers were once again recruited from the steppes—Chazars, Magyars and others, for example. When the emperor Leo VI (886-912) wrote his military handbook called the *Taktika*, he too noted the decline in Roman archery, the many defeats which were a result, and commends that all Roman recruits practice with the bow.³³

Raiding and “shadowing” warfare

As we have seen, a major characteristic of the period up to the middle of the 10th century reflected a style of frontier fighting and skirmishing along the eastern borders, of guerrilla tactics and raiding, which had developed over several centuries from the period when the frontiers became more-or-less stable during the first decades of the 8th century and particularly after the failure of the Umayyad siege of Constantinople in 717-718. The early 10th century *Taktika* of the emperor Leo VI, for example, shows that warfare along the eastern front followed a well-established pattern, outlined in its classic form in the anonymous treatise on skirmishing and guerrilla warfare already mentioned. By the 950s and 960s, and as this mid-century writer notes, this was changing, as imperial successes in pushing forward the frontier rendered the traditional system of defensive warfare more or less redundant.³⁴

The eastern frontier was guarded by a chain of lookout posts, with small units of irregulars acting as scouts and informants along the frontier, particularly covering the

³² Zaki 1979; Nicolle 1991 (with Nicolle 1976).

³³ Leo the Wise, *Taktika*, 22-23. See the commentary in Haldon 2014, p. 337. See also Kaegi 1964; Haldon 1999; 2002; for Islamic arms and armour in the Umayyad period (660-751): Nicolle 1997.

³⁴ McGeer 1995. See the whole constitution XVIII of Leo VI's *Taktika* (and the commentary in Haldon 2014, p. 331-388).

various points of ingress into imperial territory. The frontier was linear, in a crude sense, but consisted in reality of a (sometimes very) broad band of territory, and the location of such lookout posts seems to have changed according to the situation, while raids and counter-raids intended to destroy enemy outposts or more important local fortresses and bases frequently altered the pattern of local strategy. The anonymous treatise sets out the key aspects of this type of warfare.³⁵ Local commanders should make sure that the networks of watch posts and lookouts are in order. Scouts should be recruited from among the local population, men with experience, a good knowledge of local routes and the different qualities they possess. These should operate on a fifteen-day rotation and be sent out in small groups to watch the roads and routes that might be used by the enemy. Local commanders should make extensive use of spies, including merchants and others on genuine business in the enemy's lands—a long tradition in Byzantine strategic thinking. The call-up of registered soldiers should be strictly observed, and the scouting parties should be checked by an officer from time to time. The latter should also frequently shift their location in order to avoid capture. There were pre-planned schemes for evacuating the non-military population of the regions through which an enemy raiding party would pass, once its route had been ascertained, in order to preserve the local population and at the same time to deprive the enemy of the chance to collect provisions and easy booty.

The most important aspect of this frontier defensive strategy might be described as “shadowing”. Following and harassing the enemy by exploiting one's own knowledge of the local terrain was one aspect; keeping a close watch on his column and especially his encampment, in order to attempt ambushes on forage parties and other isolated groups, was another. Crucial to all operations was the idea of bringing together several smaller forces, leading eventually either to a full-scale confrontation, but with the imperial forces at a numerical advantage, or to a pincer movement, designed to encourage the enemy force to give up and return home. In this case, it was usually planned for imperial troops to have occupied the passes or exit routes which the enemy commander would follow. The subsequent surprise attack or ambush, which could result in the recovery of all or most of the booty, and certainly with the destruction and rout of the enemy army, was the ultimate aim. The possibility that one's own forces might themselves become the victims of shadowing and ambush was ever-present, however, and the Byzantine commander was urged to use scouts and outriders in order to prevent this from happening. This sort of warfare could also be offensive. Local commanders were advised to maintain bands of raiders, whose purpose was to raid deep into enemy territory in order to foment insecurity and uncertainty. One of their most important tasks was to take prisoners, so that Byzantine commanders might learn of enemy troop movements and intentions.

One of the distinguishing features of this treatise is the focus on the judgement and independence of the local commanders. Not only should they themselves organize regular, small-scale raids over the border (unless the Empire had made a formal truce

³⁵ Anonymus, *Skirmishing* (above n. 13). See Howard-Johnston 1983; Dagron 1995; 1997.

with the Arab emirs or the Caliphate itself), they should be prepared to attack an invading force whenever an appropriate opportunity arose, and not necessarily wait for the arrival of reinforcements or the local senior commander. The author of the treatise distinguishes two types of enemy raid, differentiated by size or by timing. Small, rapid raiding parties of cavalry, which might invade Roman territory at any time, and whose entry should be communicated to the local commanders as quickly as possible by the border scouts and watch posts, should be shadowed, met, ambushed or hemmed in, and turned back, and if possible without any substantial gains in booty. Secondly, there were major raids, generally in August and September, consisting of substantial forces made up of volunteers for the *jihād* as well as regular troops from the Arab borderlands—Malatya, Aleppo, Tarsus, Antioch.³⁶

Such raids had both an economic and an ideological function, first in terms of the desire for booty, and to damage the Roman economy, and second in respect of the desire of many Muslims to participate in the *jihād*. The local commander was enjoined to use every means at his disposal to find out when such raids would begin, by which route, and how numerous the enemy host would be. The invading force should be shadowed, along with any accompanying raiding parties which were sent out once the main force had reached Roman territory. The invaders' logistical difficulties should be maximised by the removal of livestock and crops, or even their destruction in extreme cases. The enemy force should be subject to constant harassment as it moved, foraged for supplies, set up camp, or attempted to collect booty. The passes through which it would return should be occupied and ambushes laid; water supplies should be held by Byzantine forces. The enemy should be attacked as they returned, laden with booty. Naturally, the Romans were not always able to respond successfully to such attacks, and there are many examples where Roman preparations failed to produce the desired results, or where the Roman commanders were unable to outwit and out-general their adversary. The local commander also had to be on his guard against surprise raids, launched before the local population has been evacuated or any sort of ambush or shadowing-party sent out. In an effort to delay the enemy, various measures could be applied, such as a feint attack to distract the enemy from pillaging the villages while they are being hastily evacuated. Once the local troops were in the field, the strategy of harassment and ambush, by day and by night, came into play. While he was one of the Empire's most successful antagonists, the emir of Aleppo was ambushed on at least three occasions using this strategy, barely escaping with his life on one occasion.³⁷

³⁶ For all these points see Anonymus, *Skirmishing*, II-V, VIII-X, XVII, XXIII. Recent survey work using least-cost path and viewshed analysis to model distances and movement of troops has refined our understanding of the ways in which both Roman and Arab forces made use of and moved around the challenging landscape of the Taurus and Antitaurus mountains: see Turchetto 2018. On Byzantine frontier systems in early medieval Italy: McMahon 2022a, with extensive further discussion and literature; 2022b; and for earlier Roman frontier communications: Gotts 2017.

³⁷ McGeer 1995. See also many passages of the commentary in Dagron, Mihăescu 1986.

The physical infrastructure of this frontier warfare reflected this, on both sides. Byzantine and Arab sources make it clear that certain fortresses and installations were constant bones of contention—names such as Loulon, Koukousos, Podandos, Rodendos, to mention some of the key strongpoints within the East Roman defensive network recur endlessly through the histories and chronicles of the period. Hardly a decade passed across the period from the AD 660s to 760s when these strong-points are not mentioned as targets for one side or the other—as soon as Arab forces had managed to seize or force the surrender of one, the imperial forces struck back, sometimes surprising the enemy in mid-winter, at other times, retaking them as part of the regular spring and summer campaigning seasons. But these strongholds were supported by other sets of installations about which we have very little information—lookout posts at high points along the chain of mountains; and refuges to which local people with their movables could be evacuated. Some of this system can be traced, although hardly dated precisely. An anonymous 9th century treatise on strategy provides some important information,³⁸ noting that the function of frontier outposts (*phrouria*) is to observe the approach of the enemy, to receive deserters, and to prevent people from fleeing to the enemy. They should be located near the routes they are meant to observe, but not obvious enough to attract attention. They should exploit natural features for their defence, they should have a small garrison without their families, and the troops posted there should be relieved at regular intervals. All these characteristics are repeated in the anonymous 10th century treatise mentioned already, where outposts should be situated on “high and rugged mountains”, some three or four miles apart. It is clear that such outposts were small, defended post with minimal facilities, relatively inconspicuous, easily abandoned, and recovered after the enemy have moved past, essential for maintaining a watching brief on hostile incursions.³⁹

Modern surveys of the Cappadocian frontier suggest at least three bands of forts and fortresses covering, first, the passes into Roman territory, second, the roads north of the Taurus and Anti-Taurus, and finally, those protecting the more important fortified centres. Along the fringe of imperially-controlled territory, fortresses such as those mentioned above stood as major obstacles and garrisons, each with a chain of minor forts covering them. The latter, mostly situated on sites difficult of access and well-protected by natural features, served both to police and protect the local populace, defend particular local resources, as well as to guard strategic roads or routes. They also functioned as refuges for the surrounding populace and their livestock. As far as the (often very difficult to date with any certainty) archaeological and survey evidence suggests, they were usually very simple facilities, defended by a single wall with towers and enclosing areas ranging from 100 x 50 m to considerably less than this.⁴⁰ All have at least one defensive wall, often with traces of a *proteichisma* or outer defence,

³⁸ Zuckerman 1990; Cosentino 2000; Rance 2007.

³⁹ *Strategy*, IX (ed. and trans. Dennis 1985, p. 28-31); Anonymus, *Skirmishing*, I.

⁴⁰ E.g. Hild, Restle 1981, p. 237, 245-246.

with towers and defended entrance, a cistern (often more than one) and evidence of internal structures suggestive of permanent or at least regular occupation. They would also have served as foci for the collection and further transmission of information. In southern Cappadocia the natural barriers represented by the mountains and passes were strengthened by a chain of fortresses, behind which lay a further ring of forts and towers, as exemplified by a number of archaeological sites. Behind these in turn further installations covered the major routes into the heart of Anatolia.

These strongholds, even the most important of them, were not extensive. The important fortress of Loulon, for example (which also guarded mines and deposits of ores in the region) offers a good example, perched on a rocky outcrop 2,100 m above sea-level. Its walls surround an area of just 40 × 60 m approximately, within which shelter for the garrison as well as cisterns for their water supply were accommodated. Loulon was also the location of the first in the chain of fire-beacons which stretched across Asia Minor to Constantinople during the 9th century.⁴¹ The numerous fortified strongholds controlling routes across the region and the many other outposts revealed by recent surveys, were of a very similar nature.⁴² These seem often to have been the seats of local military commanders—*tourmarchai*, for example—and thus also, probably by the early 8th century, centres of administration and justice. Saniana, for example, situated on a hill overlooking the Halys some 76 km south-east of Ankyra, was of similar size, and became the headquarters of a *tourma* in the later 9th century.⁴³ The anonymous treatise on *Strategy* notes that:⁴⁴

The garrison in each fort should have a commanding officer entrusted with complete responsibility for the post. He should be conspicuous for his religious character as well as for all other qualifications one expects in an officer. The men in the garrison should not have their wives and children with them. Most of them should be left in a different province, so that love of them may not tempt the men to go over to the enemy or otherwise jeopardize the security of the fort. Soldiers should not stay too long in these posts, but should be relieved at regular intervals. One group may return home, while another comes in from their homes to the fort. Still, if a fort is extremely strong, so that there is no danger of its being besieged, and we can keep it provisioned without any problem, then there is no reason why the men cannot have their families reside with them. (trans. Dennis 1985, p. 29).

⁴¹ Hild, Restle 1981, p. 223-224; Haldon 1990, p. 254-255.

⁴² See for some examples Hild, Restle 1981, p. 219-220, 261-262, 266-267, 276.

⁴³ Belke, Restle 1984, p. 222 (with sources).

⁴⁴ Anonymus, *Strategy* IX, 21-33 (ed. Dennis 1985, p. 28): Τοὺς δὲ οἰκοῦντας κατ' αὐτὰ τὸν μὲν ἡγεμόνα, ᾧτινι πᾶσα ἡ τοῦ φρουρίου φροντίς ἐμπειρίστευται, γινώριμον μὲν ἐπ' εὐσεβείᾳ τυγχάνειν μετὰ καὶ τῶν ἄλλων ὅσα πρέπει ἄρχουσι, τοὺς δὲ ἐκεῖσε κατοικοῦντας μὴ ἔχειν μεθ' ἑαυτῶν τὰς τε γυναῖκας καὶ τοὺς παῖδας αὐτῶν, ἀλλ' ἔχειν πάντως τὸ πλεῖστον αὐτῶν μέρος ἐν ἐτέρᾳ ἐπαρχίᾳ, ἵνα τῷ πόθῳ τούτων μήτε πρὸς τοὺς ἐχθροὺς φεύγοιεν μήτ' ἄλλως προδιδόειν τὰ φρούρια. Μένειν δὲ οὐκ αἰεὶ τοὺς αὐτοὺς, ἀλλὰ κατὰ τινὰς χρόνους ἐναλλάττεσθαι, τῶν μὲν ἐπὶ τοὺς οἴκους ἀναστρεφόντων, τῶν δὲ ἀπὸ τῶν οἴκων ἐπὶ τὰ φρούρια παραγενομένων. Εἰ δὲ τῶν σφόδρα ἀσφαλεστάτων ὑπάρχει τὰ φρούρια ὥστε κατ' οὐδένα τρόπον πολιορκεῖσθαι, σιτοδοτεῖσθαι δὲ ἀνεμποδίστως δύνανται παρ' ἡμῶν, οὐδὲν κωλύει καὶ τὰς ἰδίας φαιμηλίας αὐτοὺς ἔχοντας ἐκεῖσε διὰ βίου τελεῖν.

The local military commanders seem generally to have been responsible for maintaining the defences of such forts or fortresses, the labour habitually being provided through impositions on the local population, although sometimes the central government stepped in where important defensive installations were concerned.⁴⁵ Life in such forts and outposts was always risk-laden, as the small fund of inscriptions from the frontier region for the 9th and 10th centuries shows. Inscriptions from the region of medieval Barata (ancient Gaianoupolis, modern Maden Şehir) in Lykaonia, south-east of Ikonion, may be characteristic. The defended upper town at the site of a city of the Roman period was re-occupied from the 7th to 10th century, dated by several small churches, and suggests the sort of settlement to which much of the rural population of such a region would have recourse in time of attack. Inscriptions, probably 8th or 9th century, hint at the centrality of warfare in the lives of those who lived there: “Here lies Mousianos, who endured many wounds”, for example, or “Here lies Philaretos Akylas, who died in the war on the 30th of May in the 4th indiction”.⁴⁶

Jihād and holy war

Probably the best-known feature of the Byzantine-Arab conflict is the Islamic concept of *jihād*, or religious struggle against unbelievers. Christian theologians had debated the rights and wrongs of waging war from the beginning, but once the Empire had become officially Christian by the end of the 4th century it became easier to justify fighting. There remained a substantial body of opinion that condemned all forms of warfare and violence, but the imperial church justified warfare as a defensive measure against those who threatened the Christian community—the Empire—and there developed in elite military circles a strong element of militarism during the 8th century and afterwards. But no theory of “holy war” in the later western, Crusading sense, or indeed in the sense that evolved with Islam, ever developed in the East Roman world. Indeed, such a theory was unnecessary: since all warfare was to defend the Christian Roman Empire, that was in itself adequate justification.⁴⁷

In Islam, *jihād* was itself an idea which crystallised quite slowly, emerging in its established form only in texts of the later 8th century CE. It was seen in particular as one aspect of the ideology of the frontier and as an element of good Islamic rulership, but took some time to mature and receive the sort of exegetical attention required

⁴⁵ For example, an 8th century inscription notes that Symeon, an imperial officer, was sent at some point between the 720s and 740 to take charge of the repairs to the fortress of Rhodandos on the south-eastern frontier. See Grégoire 1908, p. 436-437.

⁴⁶ See Ramsay, Bell 1919, p. 525-527, no. 13, p. 545-546, nos. 42-43. The dating of these inscriptions remains problematic, but sometime between the 8th and 10th century is generally accepted.

⁴⁷ See Laiou 1993; Haldon 1999b; Laiou 2006; Dagron 2009; Stouraitis 2011; Haldon 2014, p. 353-354 (commentary to Leo the Wise, *Taktika*, XVIII, 105). See also the essays in Miller, Nesbitt 1995.

to develop it into a fully fledged theory.⁴⁸ On the other hand, it played an important role in the continuous warfare along the Byzantine-Islamic frontier, and was one of the factors that determined the presence of the Abbasid caliphs themselves during the annual campaign, the only front on which the caliphs themselves were regularly involved.⁴⁹ Indeed, it has been argued that it was precisely in the frontier regions of the *thughūr* during the 8th century that the cultural and political discourse of border warfare helped to consolidate a theory of holy war expressed in religious terms. Divine reward, pious companionship and communal responsibility were its key elements, and its protagonists were scholars and theologians rather than soldiers and warriors.

As early as the middle of the 8th century Christians were aware of this idea and commented upon it;⁵⁰ and in the later 9th and 10th centuries Byzantine writers even attempted to elaborate a version of religiously-motivated warfare within the existing framework of Christian theology. Importantly, it was only at this point—later 9th century—that East Roman writers appear to have seen Islam as an existential threat, a challenge to the very existence of Christianity, rather than simply the erroneous faith (often understood as an aberrant form of Christian heresy) of a dangerous enemy.⁵¹

Warfare at sea

Until the middle of the 7th century the East Romans faced no serious challenges in the Mediterranean, either in the eastern or the western halves. East Roman naval squadrons, directed primarily against pirates and aimed at controlling maritime commerce, appear in the 6th century to have been limited in number, and based around the Mediterranean coastline at key ports. There is very little reliable information, and it is clear that larger forces could be drafted into service for major seaborne expeditions such as that directed against the Vandal kingdom in North Africa in the late 520s. From the early 650s, however, the Arabs began to build warships in various naval bases around the coasts of the Levant, an enterprise that met with considerable success. A major Roman fleet commanded by the emperor Constans II (641-668) was defeated (the emperor narrowly escaped) in 654;⁵² and the Arabs were able to mount a large seaborne attack on Constantinople shortly thereafter, again in 668-669, and once again in 717-718. All were defeated, the attacks of the 660s and 717-718 with the help of a new weapon,

⁴⁸ See especially Mottahadeh, Sayyid 2001. See also Bonner 1992; 1996.

⁴⁹ Haldon, Kennedy 1980, p. 106

⁵⁰ Krausmüller 2004; Lee 2013; Sypiański 2013.

⁵¹ Khoury 1982, p. 5-7; Haldon 2014, p. 33-37; 2018, with further literature and sources. Yet the Church remained reluctant, and the patriarch Polyuktos rejected a proposal of the emperor Nikephoros II Phokas (963-969) that soldiers who fell fighting for the Empire should be counted among the martyrs. See the detailed discussion in Kolia-Dermizaki 1991, p. 132-141.

⁵² Christides 1985; O'Sullivan 2004; Howard-Johnston 2010, p. 479-480.

“liquid fire”, a light crude oil mixed with pine resin and projected through a pump, effectively a sort of medieval flamethrower. It clearly had devastating effects, although that it changed the course of history, as often suggested, seems too strong a claim.⁵³

Thereafter there evolved a degree of equilibrium, although by the later 9th century the Byzantines seem to have achieved the upper hand. This was managed through the establishment of a permanent war fleet of heavily-armed vessels, *dromones*, based at Constantinople, complemented by a number of provincial fleets manned and maintained on the same fiscal basis as their terrestrial counterparts.⁵⁴ The maritime forces of the Kibyrrhaiotai, mentioned already, along with those of the Aegean Sea and of Samos, as well as land divisions with a maritime force attached to them, such as the fleets of Kephallenia, the Peloponnese, or Hellas, all contributed substantially to this, and certainly, by the time of the emperor Leo VI, the Empire was well on the way to naval superiority, in spite of occasional substantial setbacks.⁵⁵ Successful combined land and sea operations were also mounted, as in the 880s in Italy and the Peloponnese, for example, but there were some serious defeats—the expedition against Northern Syria in 911 came to grief off Crete when it was met by a substantial Arab fleet, as did the expedition against Crete itself in 949. The island eventually fell in 961 to a smaller but better-led expedition.⁵⁶ While there remained substantial maritime opposition at times, notably from the rising power of the Fatimid Caliphate, based from the 960s in Egypt, East Roman dominance at sea was maintained well into the middle years of the 11th century.⁵⁷

A final aspect that should be mentioned is intelligence-gathering about enemy movements as well as information essential to the movements of the imperial forces. 9th and 10th century documents provide a good deal of information on this, and much of it can reasonably be supposed to reflect long-standing practice continuing from late Roman times. For any planned campaign, detailed information about the state of the routes to be followed by the army was needed as well as about the availability of water and fodder for the animals, and about the crossing points of rivers or the various defiles through the mountains that the army would have to negotiate.⁵⁸ Commanders were advised to send small parties well ahead of the main force to secure these against enemy

⁵³ Haldon *et alii* 2006.

⁵⁴ On the various types of warships in use by both sides, see in general Haldon *et alii* 2006; Pryor, Jeffreys 2006, p. 123-304; Haldon 2014, p. 397-399, 409 (commentary to Leo the Wise, *Taktika*, XIX, 8; 42).

⁵⁵ Christides 2011; Haldon 2014, p. 109, with further literature.

⁵⁶ Ahrweiler 1966, p. 35-44, 93-97, 111-113; Eickhoff 1966, p. 65-67, 173-175, 235-237; Pryor, Jeffreys 2006, p. 385.

⁵⁷ See Haldon 2014, p. 389-417 (commentary to Leo the Wise, *Taktika*, XIX, devoted to naval warfare and related matters). See also Pryor, Jeffreys 2006, for a detailed account of naval warfare from the 7th century onwards as well as discussion of the various types of warships in use. Cf. also Eickhoff 1966; Christides 2002.

⁵⁸ Constantine Porphyrogenitus [and Romanos Lekapenos], *Treatises on Imperial Military Expeditions*, B, 1-17, 39-42; C, 116-120.

action.⁵⁹ Particular attention was paid to the work and skills of the scouts sent out to check that water supplies as well as of those who planned and laid out the marching camps, the sites of which had to be chosen with regard to water, cover, defensibility and forage.⁶⁰ The need for good, reliable scouts with local knowledge of roads, passes and river crossings is constantly emphasised in both the military treatises and the historians' accounts, and highlights the uncertainty and difficulty attendant upon any military undertaking in a context in which both major routes and local tracks were generally of such poor quality.⁶¹ Additionally, senior East Roman commanders had access to a series of military treatises reaching back to the late 6th century and brought up to date in the 10th century especially, in which the fighting styles, customs and tactics of various enemies in west, north, and east were described in detail alongside recommendations, clearly based on practical experience in many respects, on how to deal with them. Combined with the regular use of spies and informants of one sort or another, the Byzantines were often able very effectively to exploit their knowledge of enemy plans and movements to their advantage, even while at the same time they had to maintain regular counter-espionage operations as well.⁶²

Perhaps the best-known method of relaying information about an impending attack was the system of fire-signals or beacons, situated on prominences stretching from the fortress of Loulon in the Taurus and across Anatolia to the Bosphorus and the imperial palace itself. It is not known how long this system was in operation or when it started, nor how effective it actually was. One tradition suggests that it was shut down (for economic reasons) by Emperor Michael III.⁶³ Local fire-signalling posts were certainly used along key invasion routes in the eastern frontier regions into the 10th century, as the use of the terms *kaminobiglia*, "watch-fires", and *kaminobiglatores*, "watch-fire sentries" in the treatises of the period suggests. A similar arrangement appears to have been operational in the Peloponnese for a while, as a 9th or 10th century inscription on a signal-tower near Corinth attests.⁶⁴

⁵⁹ See, for example, Anonymus, *Campaign organisation*, XIX (ed. and trans. Dennis 1985, p. 292-295).

⁶⁰ Anonymus, *Campaign organisation* I, VI, VII, XXX (ed. and trans. Dennis 1985, p. 246-255, 268-275, 322-323).

⁶¹ 10th century treatises on imperial expeditions note the importance of sending both an advance division to prepare the way and of employing suitably qualified scouts. See Constantine Porphyrogenitus [and Romanos Lekapenos], *Treatises on Imperial Military Expeditions*, B, 116-121; C, 564-565, with commentary and further sources.

⁶² See the essays in Whately 2024; Wiita 1977; Dagron 1987; 1993. See also the commentary to constitution XVIII of Leo VI's *Taktika* in Haldon 2014, p. 331-388. For spies and espionage: Koutrakou 1995; 1999-2000.

⁶³ Much discussion has been devoted to the system of fire-signals. The most sensible accounts remain Pattenden 1983, with Zuckerman 1994, p. 361-366. For the signal stations and further literature, see Constantine Porphyrogenitus [and Romanos Lekapenos], *Treatises on Imperial Military Expeditions*, C, 614-646, and commentary (Haldon 1990, p. 254-255).

⁶⁴ See Anonymus, *Skirmishing*, II, 3-10; VI, 12-13; with Pattenden 1983, p. 266; n. 13. Dagron, Mihăescu 1986, p. 246-247, n. 32, prefer to derive the element *kamino* from late Latin *caminus*, whereas Zuckerman 1994,

Conclusion

The arrangements described in the foregoing evolved gradually from the second half of the 7th century as the East Roman state was forced to respond to the existential challenge posed by the Caliphate. The fact that it rose to the challenge is a clear illustration of the high degree of resilience it possessed at the level of the state and its administrative and organisational systems. Of course, resilience costs, and those who bore much of the cost of this survival were those least able to resist the impositions of the state and local elites—the rural population of the Empire who produced the wealth from which the government could generate its fiscal resources. Elsewhere I have argued that the East Roman—Byzantine—Empire survived because of a combination of geography, internal cohesion, ideological unity, effective logistics and management of resources, and a degree of systemic redundancy that permitted failure or breakdown at some levels to be compensated elsewhere within the system as a whole.⁶⁵ In practical military terms, this meant a remarkably effective and flexible response to the almost overwhelming challenge posed by the early Arab invasions and by the constant warfare that followed thereafter. Defeats there were many. Yet these reflected, on the whole, short-term difficulties and problems, while the longer-term recovery that took place from the middle of the 8th century reflected increasing geostrategic stability, a growing economy and, just as importantly, the increasing weakness of the Empire's most dangerous and persistent enemy during the 7th and most of the 8th century, the Caliphate.⁶⁶ All these factors together, along with the emergent outcomes of conjunctural influences, eventually permitted the Empire to go on to the offensive in the 10th and early 11th century, to once more dominate the Balkans and eastern Mediterranean region.

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Abbreviation

I.Chr. Bulgarien = Beševliev V. (ed.) (1964), *Spätgriechische und spätlateinische Inschriften aus Bulgarien*, Berlin (Berliner Byzantinistische Arbeiten, 30).

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p. 364, n. 18, follows Pattenden, correctly in my view. For the Peloponnesian inscription, probably originally located at Acrocorinth, see [Feissel,] Philippidis-Braat 1985, p. 299-300, no. 41.

⁶⁵ Haldon, Rosen 2018; Haldon *et alii* 2022; Haldon 2023.

⁶⁶ Whittow 1996.

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