2 The Arab conquests

Mohammed and the early campaigns and conquests

As the great empires of Persia and Rome (Byzantium) fought each other to a standstill in the Middle East, and "barbarian" successor states began to carve out their spheres of influence in Europe, a new force emerged unseen by any of these. Within a few years starting in the fourth decade of the seventh century, the now Muslim Arabs were to create a vast new power that swept the Byzantines from provinces they had held for seven hundred years, and utterly destroyed the Persian kingdom. Pressing on, the Muslim armies were to reach deep into central Asia in one direction, and to eliminate the Visigothic kingdom in Iberia in the other. This phase of conquests ran out of steam after a century of expansion, but the Islamic presence transformed the classical world. At the beginning, although religious inspiration undoubtedly played a significant if intangible part in the conquests, it is necessary to offer some more material judgements to explain how two of the world's most sophisticated, cultured, and developed states collapsed before the impact of the Arabs.

The frontier against which the Arabs first pressed was almost unguarded. The immense drain of the wars with the Persians had led the Byzantines to give very low priority to Palestine and Syria. The Persian conquest of the area and its subsequent recapture had left many places defenceless. Byzantine garrisons were few and far between. There were watchtowers, but their upkeep was the responsibility of the local landowners. What was there was usually small, and as likely had a role in allowing the government to police trade routes to the Mediterranean coast as anything military.[1]

Emperor Heraclius, so recently the saviour of Constantinople and victor over the Persians, was making his decisions on the basis of apparently sound arguments. The Arab tribes beyond the frontier were sometimes a nuisance, but were certainly not a threat. Indeed, defence for much of the time involved hiring them, or buying them off. Their level of technology and culture was low, as Procopius

[1] See Harper, *Upper Zohar*, 115. This was a 26-metre-square quadrangular stone fort with walls of 1–1.5 metres thickness and four small corner towers, apparently destroyed in an earthquake but occupied between the fifth and early seventh centuries; King, Lenzen and Rollefson, "Survey of Byzantine and Islamic sites in Jordan", 414.

had observed before. Expensive fortresses, needing garrisons of professional soldiers, were quite unnecessary. There were, anyway, plenty of walled cities in the area against which backward raiders would batter in vain, having no knowledge of siegecraft.[1] The limited resources of the empire to face had to face east, not south.

Arab sources for the seventh century (of the Christian era) are few, and none of them are contemporary. They rely upon the oral transmission of accounts back to actual witnesses. The earliest compositions based on these traditions make no attempt to decide which of several versions to believe, but recount them all. It has been argued that information passed on this way has been subjected to so many changes as to be highly unreliable. Where there is corroboration, this is vital. Where there is not, it must be remembered that the source may be, in effect, fictitious.

The early history of the rise of the new religion and the conquest by Mohammed of the Hejaz, insofar as it can be reconstructed from such sources, bears out the proposition that there was little enough culture or technology in this area. Mecca, Yathrib (soon to be renamed Medina), and Ta'if were the only towns, and they were small; and most of the population was nomadic. However, to the south was to be found the centuries-old civilisation of the Yemen, and Yemeni Arabs were to play a vital role in the spread of Islam. Yemen was characterised by a high level of prosperity, on the basis of which arose an urban culture, literacy, and the mastery of technology. Towns were provided with mortared stone curtain walls. The area had been conquered by the Abyssinians in 520 and then by the Persians in 570, with significant disruption and destruction, but the gap between its cultural level and that of its northern neighbours remained substantial.[2]

Mohammed's first military efforts point to the difference between the skills and resources available to his followers and those of the great empires shortly to be overturned by the Islamic armies. In AD 627, Mohammed successfully defended Medina against his enemies, the Quraysh. An earthen rampart and a trench were sufficient. Even this limited advantage was gained through the advice of an outsider, on this occasion a Persian.[3] Three years later (630), the Muslims attacked the town of Ta'if. Abu Bakr led the force. Showing their inexperience, the attackers first set up camp too close to the town, and were driven back after taking casualties from arrows. The next stage was an exchange of archery, in which the defenders came off best. We are told that, following his capture of Mecca, the prophet had sent two of his followers to the Yemen "to learn the use of the testudo, the catapult and other instruments", but they had not yet returned. So the Persian Salman, perhaps the same man who had given such effective advice at Medina, helped them to build a stone-throwing catapult, called in one source a *madjanik* (*manjanīq*). However, as they were amateurs, it had no significant effect. They

[1] Kaegi, *Byzantium and the early Islamic conquests*, 47, 51, 56, 60; Nicolle, *Yarmuk, 636 AD*, 32; Mayerson, "The first Muslim attacks on South Palestine", 180–85.

[2] Chelhod et al., *L'Arabie du Sud*, 1: 41–8, 195–215. On the excavations at the city of Ṣan'ā', see Sergeant and Lewcock, "The church (al-Qalīs) of Ṣan'ā'", 44.

[3] The story is told in J J Saunders, *A history of medieval Islam*, 29. See also Gabrieli, *Muhammad and the conquests of Islam*, 114.

then built a cowhide shelter to cover their approach to the gate, but the defenders succeeded in burning it with red-hot scraps of iron. After twenty days of siege, Mohammed gave the order to withdraw.[1]

If the reference to the stone-thrower is not anachronistic, what type was it? The name is unhelpful. *Manjanīq* is a word used for the mangonel, itself a type of *onager*. But it is also the generic term used overwhelmingly by later writers for a stone-thrower. We are told it was built by a Persian, confirming the absence of skills among the Muslims, and this makes it unlikely that it could have been a torsion weapon, and far more likely that it was a manually-operated single-armed lever weapon of the type recently introduced from the east. Its ineffectiveness, even against a place so weakly protected as Ta'if was, is telling. The reference to sending people to the Yemen is intriguing. If it happened, when did they return, and how was their information turned into practical results? It may be that the now rapid movement to the north, bringing conflict with both the Byzantines and Persians, provided the opportunity to demonstrate these skills. Or it may be they were actually learnt through the Islamic conquest itself. The settled Arab tribes that lived around the frontiers of Byzantium were urban. Some lived in towns that were defensible. These areas, as much as the Yemenis from the south, may have provided the technological know-how, and perhaps equipment itself from Byzantine arsenals. Here, as in other spheres, the Muslims proved themselves to be fast learners, and they most successfully absorbed and deployed the various talents of those who fell under their sway.[2]

The first Muslim raids in Palestine had weakened and probed the Byzantine defences in 633/4.[3] In 634/5, Arab armies won a series of victories over Byzantine forces. The conquest of Damascus and Emesa (Hims) followed. A number of accounts of these events survive, from which it is possible to attempt a reconstruction of the siege techniques displayed by the Muslim forces, and examine the reasons for their success.

Damascus was the major city of Syria, and it fell to the Muslims in September 635. The city lies in flat terrain and also does not have significant water defences. It was, however, large (1330 × 850 metres), and well protected with high walls and seven gates. A separate *castrum* for the garrison had been built in the third century. Once thought to lie under the later medieval citadel, this is now doubted.[4] If it was still there, it played no recorded part in the siege. The Byzantine garrison, perhaps of 12,000, should have been sufficient against an Arab force not large enough to enclose the place completely. Dionysius of Tel-Maḥrē's Syriac chronicle says that the gates were closed against the Arabs, who attacked the city vigorously,

[1] Ibn Isḥāq, *The life of Mohammad*, 587–91 at 587; *Mohammed der Prophet*, ed. Weil, 235–6; Akram, *The sword of Allah*, 111–15. Ibn Isḥāq was not a contemporary, but was born half a century after the death of Mohammed.

[2] Nicolle, *Yarmuk, 636 AD*, 39; Jandora, "Developments in Islamic warfare", 101–4.

[3] Mayerson, "The first Muslim attacks on South Palestine", 174–99.

[4] Sauvaget, *Les monuments historiques de Damas*, 39–44; Omran and Dabboura, *The citadel of Damascus*, 1995, 7–13, concluding that there was no citadel in Damascus before the eleventh century; King, "The defences of the citadel of Damascus", 60; Burns, *Monuments of Syria*, 87.

whereupon Damascus, seeing no hope of succour, surrendered on good terms.[1] Balādhurī (not a contemporary, but relying on a now lost earlier history) adds that the Arabs actually gained entry by use of ladders at night, whereupon the garrison fled; then the city agreed to surrender, after some four months of siege.[2] Ṭabarī, the ninth-century compiler, says that although Damascus had been unprepared for siege, Heraclius had ordered in reinforcements and provisions, and following the start of a blockade, there had been weeks of exchanges of archery and the defeat of various sorties by the garrison. This was followed by the night attack with rope ladders thrown up onto the battlements (we are not told how they were thrown up a high wall), and the negotiated surrender of the city to the besiegers on the opposite side of the city. The Arabs then proceeded to the important walled city of Emesa and blockaded it, repelling sorties by the garrison. In one account, the Muslims feigned a withdrawal, then turned on their pursuers and defeated them, an event that precipitated the surrender of the city.[3] In another version, there was an earthquake overnight that brought down part of the wall, whereupon the garrison capitulated. The Arabs then attacked the two remaining Byzantine-held cities of the province, Chalcis and Caesarea. The first surrendered after a siege of ten days; the second apparently fell to assault after the defenders had first given battle outside the walls.[4]

These accounts all demonstrate that the Arabs had not significantly advanced either their knowledge of siegecraft since their earlier encounters with defended towns, nor had they managed to take advantage of any equipment or experts captured from the enemy. It is remarkable how successful they were. Success was to be confirmed. Heraclius ordered a major counterattack, but in 636 the Byzantine army came to grief at the Battle of Yarmūk, and in its aftermath the victorious Arabs rapidly reoccupied Damascus and Emesa (hereafter Hims) and completed the conquest of Palestine and Syria, with the Byzantines retreating dispirited before them and strong cities like Edessa simply negotiating terms of capitulation. There are accounts of strong Byzantine resistance in the east of the region, for example in the late Roman fortress of Tikrīt, that successfully held up the Arabs until the garrison was betrayed by the local Arab population itself going over to the besiegers, whereupon the important city of Mosul also quickly capitulated.[5] There is no report of the Arabs' having been able to do anything other than to blockade the towns.

The Arabs then turned their attention both east and west. In one direction stood Byzantine Egypt and North Africa, populous, rich, and still in touch with Constantinople because of Byzantine sea power. To the east, and directly facing them across a very long frontier, lay the Persian empire of the Sassanid kings. One army marched west and in 640 accomplished, against all the odds, the conquest of

[1] Dionysius of Tel-Maḥrē, *The secular history*, 150–55.
[2] Balādhurī, *Origins of the Islamic state*, 186–7.
[3] Akram, *The sword of Allah*, 398.
[4] Ṭabarī, *Chronique*, IV: 159–61.
[5] Ibid., 170.

Egypt. We shall return to these events. Meanwhile, conflict with the Persians had been taking place simultaneously with the struggle for control of Syria.

The defeat of the Persians

The overthrow of the Persian kingdom involved a series of major campaigns crowned by victory in battles. It also involved the capture of major defended cities. However, the edifice of empire itself was already dangerously weakened before the Arabs gave it a final push. The effectiveness and power of the onslaught was as much a shock to the Persians as to the Byzantines. It seems that the long-standing policy was to expect nomadic raids but little more, and to deter these by establishing a ditch-and-rampart line along the western frontier. It is not clear whether this was still maintained at the time of the Muslim attack, but if it was, it would not have represented an obstacle to an army.[1] Having lost its last war with Byzantium, and suffered a series of internal upheavals, there was now a boy king, who was under the control of a regent who lost his life in the decisive defeat by the Arabs at the Battle of Qādisiyyah in 637. Further defeats left the field open to the invaders to tackle the cities. These stages of the war took place not in Persia proper but in its western provinces of Mesopotamia (modern Iraq), where loyalty to the King of Kings was less powerful a motive for risking one's life.[2] The picture of these operations is no different than elsewhere. In the early attacks, the towns of Iraq did not resist. When they did, their assailants were impotent. The Arabs were held up at the town of Dumat al-Jandal for months, until their commander, Khālid ibn al-Walīd, himself arrived with the main army and took the place by storm.[3]

The Arabs attacked the Persian capital at Ctesiphon on the river Tigris. It may be significant that the reinforcements sent by the Caliph to his army in Mesopotamia included a large force from the Yemen.[4] The challenge posed by the city should have been substantial had it been defended vigorously. The capital was in fact not one town but several, linked together and straddling both sides of the river. Ctesiphon itself covered 58 hectares and was surrounded by a semicircular towered wall. On the west bank stood Seleucia, even larger, with walls made of brick.[5]

The Arab army attacked, "bombarding its people with catapults, closing in on them with armoured siege devices". Ṭabarī, whose account this is, reports another source saying "the Muslims bombarded them with catapults and smaller mangonels"; the commander, Sa'ad, ordered more catapults built, so another twenty were set up. Under cover of the bombardment, the army marched forward, and set scaling ladders against the walls. They found that the Persians had fled. It is recorded that they had relied on Persian deserters to build the siege artillery.

[1] Nyberg, "Die Sasanidische Westgrenze"; Frye, "Sasanian system of walls".

[2] There is an excellent account of the Arab victory in Glubb, *The great Arab conquests*, 189–201.

[3] Ṭabarī, *Chronique*, IV: 101.

[4] Glubb, *The great Arab conquests*, 189.

[5] Christensen, *L'Iran sous les Sassanides*, 379–82.

Ctesiphon itself fell when the Arabs managed to cross the river further up: the garrison did not wait to challenge them. The defeat of Persia's armies and the loss of its capital did not end the war, but thereafter the conquest proceeded with an air of inevitability.

In 638 or 639 the Muslims besieged Shūshtar, fighting the garrison outside, and driving it back into the city. The besiegers gained entry because someone revealed to them a way in by "the outlet of the water".[1] At 'Ain al Wardah (Ra's al 'Ayn near Ceylanpınar, the Roman Resaena), Balādhurī reports a previous account as saying that the defenders closed the gates of the town and set up weapons called *'arrada*, and by their stones and arrows killed many of the besiegers. The town fell, however, by capitulation.[2]

Arab armies still relied to a large extent on direct attack with ladders, or the good fortune of finding a surprise way of entering an enemy fortification. There are references to mantlets or other devices to enable them to get closer to the wall. The references to siege artillery are tantalisingly inexact and non-contemporary. Leaving aside the earlier attempts to familiarise themselves with existing techniques from Yemen, the Arabs would soon have encountered the best technology available, and much would likely have fallen into their hands. It is therefore quite possible that within a few years, artillery could have been deployed even though the references to it are scarce. It is possible that Arabs were themselves learning to use it, perhaps under the guidance of more experienced operators from the newly conquered provinces. But even Ṭabarī's version of one successful siege suggests that wherever there may have been large-scale use of artillery or of any sophisticated siege techniques, it was only because of the assistance of experts from elsewhere. The skills of siegecraft remained beyond the reach of most Muslim commanders in the first years of the conquests in the east.

Egypt and North Africa

Following the victories in Mesopotamia, and with the consolidation of the newly conquered territories in Syria and Palestine, it was inevitable that Arab eyes would turn towards Egypt. Byzantine rule in Egypt may have appeared vulnerable, in this case because of the disaffection of the Coptic Christian population from the orthodox regime imposed by Constantinople. Although the country did not tamely submit to the invaders, a large part of the people did not flock to defend the existing regime. For all that, Egypt appeared a daunting challenge. There was a substantial force of professional soldiers, a number of powerful fortifications, a dense network of towns in the Nile delta that would deny the Arab armies the chance of fast-moving and mobile operations, and the control of the sea by the Byzantines that offered the prospect of reinforcement. Nonetheless, the Caliph agreed to the attempt, and in 640 the Arabs won a battle at Heliopolis that had the important effect of keeping the dispirited defenders behind their walls.

[1] Ṭabarī, *The History*, XIII, trans. G H A Juynboll, 134–6.
[2] Balādhurī, *Origins of the Islamic state*, 276.

The first of these walls to offer serious resistance was the fortress of Babylon on the Nile (close to the later Cairo). Enough remains of the ruins of Babylon to establish what a formidable obstacle this was. Built in the traditional late Roman form, in the shape of an irregular quadrangle, the walls of brick and stone were nearly two metres thick, with four projecting square towers to the south and east, the west wall standing on the Nile itself, and an enormous gateway, with its own port on an arm of the river, on the remaining side. Apparently there was a portcullis slot. Making the whole complex even stronger, there was an island in the Nile opposite the fortress. A wet moat surrounded the whole.[1] The Arab army under ʿAmr ibn al-ʿĀs had come into possession of Byzantine siege artillery through its capture at towns that had already fallen. This time, however, unlike in the east, they do not seem to have had access to people experienced in operating it, because against the fortress it was ineffective, while the defenders' weapons were not. Arab progress therefore was slow, while the Byzantines, who may not have been completely resolute, were none the less under strict orders not to surrender, although no significant effort was made to raise the siege. In due course, the level of the Nile dropped and the besiegers were able to cross the ditch. A storming attempt with scaling ladders gained them access to the wall top, only to find that the garrison had erected blockades to isolate the stretch. However, from this position, the garrison made an offer to surrender that was accepted (April 641). The siege had lasted seven months.[2]

After such an experience, the invaders must have been strongly motivated to continue their attack. Babylon was a minor target by comparison with the chief city of Egypt, Alexandria, to which ʿAmr now turned his attention. This was one of the most splendid cities of the world. The circuit of its walls was around sixteen kilometres, it had a large garrison (certainly larger than the Arab army), and was well provided with artillery atop the ramparts. Even if it was substantially reinforced, the attacking army (not more than 20,000 at the start) could not have entertained the idea of enclosing the city. It seems that ʿAmr tried first of all a direct assault, relying on the zeal of his troops and the lower morale of the garrison. This, however, was thrown back by stones and arrows from the wall top. The garrison clearly knew how to use its artillery in text book fashion. ʿAmr, on the other hand, had neither the siege train nor the numbers to take the city. Instead, he encamped at a safe distance from the wall and maintained some kind of blockade. His troops had the fighting spirit to defeat Byzantine attempts at sallies, crucially ensuring that they remained sitting tight inside. Meanwhile, the Arabs raided at will across the delta, taking towns where they were not defended, but not where they were. Eventually, internal dissension and treason led to an extraordinary surrender by

[1] Descriptions based on a survey of the remains: Butler, *The Arab conquest of Egypt*, 238–43, plan on p. 240.

[2] Ibn ʿAbd al-Ḥakam, *La conquête de l'Égypte*. This, though a source of the ninth century, is the earliest surviving account. There are various translations of different sections of his work (see Bibliography); Butler, *The Arab conquest of Egypt*, 249–71.

the Byzantine governor, which included the whole of Egypt, in November 641 after a blockade of many months, with the Byzantine forces withdrawing by ship.[1]

This was not quite the end of the story, because not all the many towns still in Byzantine hands were quite so inclined to give in, but details are not given of their surrender during 642. The following year, 'Amr pressed his advance westwards into the province of Pentapolis. There is no report of any serious opposition at the town of Barca (Al Marj), but Tripolis (Tripoli) was more strongly fortified. Once again, it is apparent that the Arabs had no siege train with them. Instead, they succeeded in capturing the place after several fruitless weeks, when some soldiers found a gap in the defences where the walls came down to the sea, sneaked in, raising their loud battle cry, whereupon the garrison fled to its ships. The next town, Ṣabrātah, was not expecting the enemy to appear so soon, and had its gates open to allow access for its cattle. Instead, the Arabs came sweeping down after a night march before they could be closed.[2] Thus easily was the Arab empire extended along the North African shoreline, even without the benefit of a siege train or engineers able to operate it.

Beyond Pentapolis lay the province of Africa (Ifrīqīya in Arabic) from which the modern continent derives its name. The Roman governor, Gregory, had declared his independence of Constantinople and ruled the whole stretch of the shore of modern Libya and Tunisia. His capital was at Carthage. The first Arab invasion of this area seems to have taken place in 647/8. The various sources (none contemporary) jumble together a number of expeditions in different years. This was the area where Procopius had praised the great works of fortification carried out by Justinian a century before. Initially, having defeated and killed Gregory in battle, the Arabs accepted an offer of tribute and withdrew. But they returned in a series of expeditions over subsequent years. These seem mostly to have been raids seeking to plunder the rich province. It was not therefore in the attackers' plans to become tied down in front of defended towns, although it does seem there were conquests of a number of walled towns.[3] A legendary account of the capture of Tébessa (Theveste — one of the places refortified by Justinian) tells the same overall story. The ramparts being constructed of great stones, it would have been a long task to besiege it. Instead, the Arabs obtained entry by plotting with someone inside who opened the gates.[4] Other towns like Aïn Djeloula were

[1] Ibn 'Abd al-Ḥakam, *La conquête de l'Égypte*, 221–8; John of Nikiû, *Chronicle*, 180–81; Butler, *The Arab conquest of Egypt*, 291–320.

[2] Ibn 'Abd al-Ḥakam, *Conquête de l'Afrique du Nord et de l'Espagne*, 37–9; Ibn al-Adhārī, *Histoire de l'Afrique et de l'Espagne*, 1–2; Butler, *The Arab conquest of Egypt*, 428–30.

[3] Caudel, *Les premières invasions arabes*, using unpublished manuscript accounts along with published ones, gives a detailed reconstruction of the series of attacks. A number of towns in modern Libya were taken in the expedition of 666 (ibid., 96–8) without any details being given as to how this was achieved. The policy of not becoming held up by defended towns is confirmed explicitly by 'Ubayd Allāh, "Un nouveau récit", 36.

[4] Cherbonneau, "Relation de la prise de Tébessa", 229, 236–8. Tébessa was a rectangle some 320 × 280 metres, with two gates and 14 square towers, the walls averaging two metres thickness. An inscription dates its construction to 535: Gsell, *Les monuments antiques*, II: 358.

carried by storm.[1] There was a change of approach in around 670, when the city of Kairouan (in modern Tunisia) was established as a military settlement close to the frontier of the reduced Byzantine domain. This represented a significant change from the previous strategy, and demonstrates also that the Arabs had the skills to plan and construct a major fortified site. It has been noted how Kairouan was well sited for its apparent purpose, with neighbouring pasturage for horses and camels, a location at a vital crossroad, and excellent all-round command of the territory.[2] Briefly driven out by the Moors and Byzantines, the Arabs quickly regained control and completed the work. The advance would be renewed in the last decades of the seventh century.

Southwards to Nubia

South of Egypt lay the Christian kingdoms of Nubia (approximately, modern Sudan), the histories of which are difficult to recover from the written record, and have been explored largely through archaeological excavation of a number of significant sites of towns along the river Nile between Aswan, north of the first cataract of the Nile, and the sixth cataract, north of modern Khartoum, a (straight line) distance of more than 1,000 km. From north to south, the kingdoms were Nobatia, Makuria, and Alwa (or Alodia), and the largest site, probably the capital of Makuria, was (Old) Dongola. There had been continuous interaction between Byzantine Egypt and the lands to their south — apparently including raiding expeditions — and this was maintained under the new regime. The only sources, none earlier than the ninth century, suggest an Arab raid from Aswan in 641/2, as soon as the new rulers had taken over, which was rebuffed by the Nubians, and then a more serious expedition ten years later (652). The source used in Maqrīzī's fourteenth-century compilation stated that ʿAbdullāh ibn Saʿad ibn Abī al-Sarḥ besieged Dongola and bombarded it with *manjaniq*, which were unknown to the Nubians. A church roof was smashed by its stones, whereupon the king arranged peace.[3] The Nubian kingdoms were sustained until eventual conquest by the Mamluk regime in the late thirteenth century, and some have concluded that the detail of the 652 attack has been mixed up with later events.

Archaeological discoveries at Old Dongola have confirmed the presence of a strongly fortified town by the seventh century. Sections of wall and towers have survived up to six metres high, and around four metres wide at the bottom, and were apparently once considerably higher. Well constructed of large mud bricks set in mortar, the walls were additionally faced with stone. Corner towers were of differently rounded shapes, but were all strongly projecting (more than eight

[1] Ibn ʿAbd al-Ḥakam, *Conquête de l'Afrique du Nord et de l'Espagne*, 45; Ibn al-Adhārī, *Histoire de l'Afrique et de l'Espagne*, 3–4; John of Nikiû, *Chronicle*, 195; Caudel, *Les premières invasions arabes*, 94.

[2] On the foundation of Kairouan: Ṭabarī, *The History*, XVIII, trans. M G Morony, 102; Caudel, *Les premières invasions arabes*, 103–6.

[3] Reprinted in *Oriental sources concerning Nubia*, 639; Vantini, *Christianity in the Sudan*, 65. For a comprehensive modern account, see Welsby, *The medieval kingdoms of Nubia*.

metres), and of around six metres in width. Along the north wall were two further projecting towers between the corners, spaced irregularly. Reused columns were present in the work. The excavator suggested that the towers were additions, and the dating evidence, although not conclusive, made it realistic to suggest that they were added following the events of 652. This in turn suggests that the Arab attack had been serious enough to persuade the Nubians of the need to undertake substantial additional building.[1] As to the catapults, the discovery of the remains of a church outside the walls destroyed at around this time, gave credence to part of the story at least. If the other evidence from the original conquest of Egypt does not suggest initial familiarity with artillery, it is quite possible for them to have acquired that within ten years and to have used a weapon at Dongola. Perhaps it was transported by boat along the river, or else conveyed in parts by camel.

To the north and east

Meanwhile, scarcely pausing to consolidate their immense conquests in Syria, Iraq, and Iran, the Arabs resumed offensive operations. Their targets now were the rest of the Byzantine empire, in Asia Minor and the Mediterranean, culminating in another siege of Constantinople itself. At the same time, Arab armies continued to march east and north-east from Iran, subduing the remaining provinces of the Persian empire and penetrating deep into central Asia.

A major element in Arab warfare comprised raiding, with armies seeking to amass plunder (or tribute) and thus impoverish their opponents and enrich themselves and the new empire (a share being reserved for the caliph) rather than conquer territory directly. This may have been the motive for an attack on Cyprus, involving the first use of sea power by the Arabs. Fleets came from both Palestine and Egypt, in such numbers that the Byzantines apparently fled rather than resist. Much of the island it seems was unfortified and fell without a blow to the invaders. Since Cyprus had been surrounded on all sides by provinces of the Roman empire since time immemorial, the lack of defences is not surprising. However there was resistance from the "city" of Lapathos (modern Lapta: from the ruins, it had been an ancient city, but evidence for its seventh-century occupation is scarce), on the north coast. So the Arabs began to bombard it "with catapults from all round",[2] leading it to surrender, prudently, seeing as there was no prospect of being relieved. These events took place in 648. It is probable that if this happened — and the attack and use of weapons are corroborated by the source later used by the Byzantine chronicler Theophanes[3] — the invaders had brought the siege engines with them. Having but recently secured the contents of the great Byzantine cities and arsenals of Syria and Egypt, they had by now, perhaps, become

[1] Godlewski, "Old Dongola: the early fortifications". The year-on-year accounts can be found in Godlewski's other publications in the Bibliography. For the similarity of the remains to late Roman defences, see Monneret de Villard, *La Nubia medioevale*, inventory of sites in vol. 1. At that time, the walls of Old Dongola had not been uncovered.

[2] Dionysius of Tel-Maḥrē, *The secular history*, 177.

[3] Theophanes confessor, *Chronicle*, 478.

familiar with their use. Alternatively, having enlisted local people as auxiliaries in their armies, they may have brought non-Arab engineers with them to ensure that, having transported large machines across the sea, they could be certain that they would be put to effective use. Since the ships themselves must have been constructed and crewed by people who already had the skill to do so, it would not be surprising if the artillerists also came from this source. Another history reveals Arab willingness to use ships and artillery, this time in combination. In 653, according to the Armenian Sebeos, Arab ships from Alexandria penetrated to the Byzantine city of Chalcedon. These ships had "mangonels installed on them, machines for throwing fire and machines for throwing stones". On this occasion, they were dispersed by a storm.[1]

The most sustained conflict between Roman and Arab took place on the frontiers of Asia Minor. Following the loss of Syria, the Byzantines had withdrawn to the Taurus mountains, abandoning the once rich province of Cilicia, preferring to leave this as a devastated zone to impede further Arab advances. This did not prevent regular Arab incursions into the heartlands of Anatolia. In 664, they managed to occupy Amorium, one of the keys of the defensive network being established, and proceeded from there, according to the Syriac Maronite Chronicle, to attack the town of Synnada (Ṣuhut), the seat of a bishopric. The chronicler provides a fascinating story. A master carpenter from Paphlagonia approached 'Abd al-Raḥman ibn Khalid, the Arab commander, and said "I will make you a catapult [the Greek word is *manganike*] capable of taking this fortress. Ibn Khalid gave orders for long logs . . . So he made a catapult such as they had never seen before." It was installed before the gates of the fortress, the defenders, trusting in their impregnability, let them get close. "Ibn Khalid's men then drew back their catapult; a rock rose up in the air and hit the gate . . . The second fell short . . . The third fell shorter. The men above jeered and cried out 'pull your weight, you are drawing badly'. They used their own catapult to propel a huge rock down onto Ibn Khalid's catapult from above, wrecking it."[2]

The description is clearly of a manually-operated lever catapult, and the absence of skill of the operators meant that they were unable to achieve a consistent aim, even from relatively close. It was built according to the design of a Paphlagonian, clearly indicating that citizens of the Byzantine empire were accustomed to such machines, just as the successful operation of the defenders' weapon, apparently scoring with its first shot, shows that the garrison were masters of the equipment too. What is odd is the suggestion that the Arabs had never seen such a machine before. This seems highly unlikely. But it could still be the case that there was no one with this Arab force who knew themselves how to build or work the stone thrower. Nonetheless, the evidence grows to suggest that during these decades of the second half of the seventh century, the Arabs began to master siegecraft for themselves.

[1] Sebeos, *Histoire d'Héraclius*, chap. xxxvi, p. 141.
[2] "Maronite chronicle", 34–5.

Byzantine defences

Driven back on all frontiers, the Byzantine empire was in trouble. Unlike the Persian realm, however, the last king of which perished in 651, it was to survive the crisis, to stabilise its frontiers, and ultimately resume offensive operations. The fact that Constantinople lay a long distance from the threatened frontier was vital. The immense defences had already saved the empire in 626. The city contained a large area where agriculture could be maintained, and this had the effect that, with sensible advance provisioning, an attacker was likely to run out of food before the city did. In the 670s, it was to see off a rather hesitant Arab attempt, more of a distant blockade, where the distance of the Arabs from their bases, and Byzantine fleets, were significant factors. Greek fire, the mysterious substance that could burn on water and was therefore such a lethal weapon in sea battles, appeared at this time. The Byzantines were, remarkably, to hold onto the secret of making this weapon for centuries.[1] However, the use of inflammatory missiles based on naphtha was widespread, and was to become a specialism of Muslim siegecraft, and we have already seen references to some kind of incendiary devices in use even this early. Such weapons could be propelled in a number of ways, such as hand-held slings, or from artillery, with greater range and presumably greater safety for those involved.

The empire also gave attention to defences of the frontiers. The army was reorganised in a system of "themes" (*themata*), with forces assigned to specific areas for local defence, and a concentration in the areas most exposed to attack. The changing strategic position after the successful defence of Constantinople in 718, with the restoration of a more even balance between the two sides, determined the steps now needed. Thus troops were assigned in small units to frontier defences, with districts having a main fortified base not always identical with existing cities. Work also had to be done on the fortifications. The defences ordered by Justinian were now old, and many fortifications had been destroyed in the long wars with the Persians. The need to combat Arab raiding parties, now the most common form of warfare, called for new approaches. One part of the new system was the construction of fortifications (the *kastron*) whose walls and garrisons were to provide some protection for local villages. Many defences were now constructed on the tops of hills, as a refuge from raiders. There had been a general trend of smaller settlements for many years, and the combination of town and citadel, sometime with the town itself actually inside the citadel, was the natural response to the collapse of the Anatolian frontier.[2] Although Byzantine sources imply that defensive works were carried out at the command of the emperor, it has been argued that many of these hilltop sites were fortified at local initiative, the positions

[1] There is a large literature on this subject. Haldon and Byrne, "A possible solution to the problem of Greek Fire", argued it was crude oil projected from a bronze pump and ignited as it emerged. The subject is reviewed in B S Hall's new introduction to Partington's classic *History of Greek Fire and gunpowder*, pp. xxii–xxv. See further Chapter 9 below.

[2] Gregory, "Kastro and Diateichisma", 235–7, 252.

themselves having no strategic purpose, and while their inaccessibility contradicts a military function, it increased their value as a simple refuge.[1] The frontier, in a great stretch of territory from Cilicia to Armenia, was reduced to a devastated, depopulated buffer zone, and the territory remained in that condition until the Byzantine resurgence of the tenth century.[2]

There was little leisure for building works. New works were undertaken with a core of strong lime mortar and rubble, using timber bonding courses as recommended by Vitruvius. Such methods were economical and quick, and where defences remain from this period, it is usually of these cores. Towers were increasingly of the open-backed style, simple designs.[3] Direct evidence of the building of the seventh century is limited, in particular the new defences. In those sites that have been studied, the datable remains are usually later.[4] They may replace defences of this time, but it cannot be proven. In many places, given the shortage of time and resources, late Roman walls would no doubt have had to continue to serve. In other places, new building, such as at the citadel at Nicomedia (İzmit), the work was "sloppy".[5]

In general, then, the Byzantines maintained the traditions of the Roman empire while adjusting them to cope with present calamities. There were great cities in Asia Minor, however they might have shrunk during the sixth and seventh centuries, and they required defending. Not all were mere refuges. Some do provide the dating evidence enabling them to be assigned to this time. Sardis, destroyed in 616, acquired a citadel on the hill above the ancient city site around 660, which demonstrated considerable sophistication. Strong walls three metres thick were "carefully and soundly built" into the steep hill. Approachable from only one side, where there was a massive bastion (although the date of this is unclear) and three triangular projections with openings for the use of the *ballista* battery, the construction here was of stone blocks and a vaulted brick superstructure.[6]

Amorium was a vital fortress in the defences, becoming the main military centre of the theme of Anatolikon. Excavations suggest that the seventh century defences were limited to the hill top, rearing above the lower town where the defences are no earlier than the ninth century.[7] So this was a traditional late Roman building, not strengthened against the new aggressors, perhaps indicating the belief that the original defences were adequate to ward off attackers more likely to be set on booty than a regular siege.

At Ephesus, the town retreated into a walled complex on the hill above the ancient city, and a separate walled town by the harbour. New fortifications were

[1] Barnes and Whittow, "Yılanlı kalesi", 200.

[2] Haldon and Kennedy, "The Arab–Byzantine frontier", 80 ff.

[3] Foss and Winfield, *Byzantine fortifications*, 15–27.

[4] Foss, *Survey of medieval castles of Anatolia*, 1: *Kütahya*, 123.

[5] As described in Foss, *Survey of medieval castles of Anatolia*, II: *Nicomedia*, 31–9, 42. The style of illustrations of town walls in this period remained that of late Roman traditions: Ehrensperger-Katz, "Les representations de villes fortifiées", 11.

[6] Foss, *Byzantine and Turkish Sardis*, 53–9; see also the good discussion of Byzantine responses by Whittow, *The making of Orthodox Byzantium*, 122–3, 268.

[7] Harrison et al., "Amorium excavations 1989[–1993]", esp. Lightfoot, 44 (1994), 111.

erected after ravaging by the Arabs in the 650s. The massive walls of the old theatre were made use of, being incorporated into the defences of the lower town. The area enclosed was severely reduced but still amounted to a square kilometre. The rubble core of the wall of the citadel was four metres thick, and the builders also used spoils from the temple of Artemis. There were rectangular gate towers. The building style was very similar to that of Sardis, and of Pergamon, nearby. Ephesus also became the capital of a theme, but it seems that the builders here had the resources, and perhaps saw the need, to strengthen significantly the defences of the ancient site.[1]

Ankara (Ancyra) had changed hands during the Persian wars, having been captured and burnt in 622. The Arabs repeated the treatment in 654. Presumably the Byzantine defences, still there, followed this event, perhaps being built in the reign of Emperor Constans II (656–61), although an early or mid-eighth century date as also been suggested. The outer wall has square towers every 40 metres, the inner enclosure has pentagonal towers every 20 metres, and there is an inner castle which is rectangular, 350 × 150 metres. The facade is built of great blocks from ancient monuments with brick courses above. The main gate is heavily fortified. Thus massively defended, Ankara resisted every attack until 838.[2]

The city of Amastris (Amasra) on the Black Sea coast may also have benefited from imperial attention. Distant though it was from Arab threats (although a raid is reported in 727), it may have been refortified as a major naval base during this time. Roman building materials were reused on a significant scale in the walls and towers of the inner fortress, which had dimensions of some 400 × 100 metres. The core was mortared rubble recovered from classical buildings and included, for example, seats from the theatre. The wall survives in places to a height of ten metres above the present ground level. Rectangular projecting towers are between six and nine metres wide and project between four and six metres. They are closely spaced (all between eleven and thirty metres). Immense blocks were found making up some of the roofs, suggesting that they were specifically designed as supports for artillery, perhaps still torsion. There are arrow slits. There was a slighter outer wall on the landward side, running parallel, and a ditch in front of that. The original gates were simple passages but involved an angled approach.[3]

So, while there was a significant upgrading of the fortifications of towns which had not previously found themselves in the front line, there was no change in the general approach to the work, walls and towers being comparable in size to their predecessors, and with accommodation for defensive artillery. With some exceptions, the area to be protected had shrunk, but was still of a size to enclose a civilian population, thus confirming that the defences served the purpose of both habitation and the base of a military garrison. Whilst questions of resources, and

[1] Foss, *Ephesus after antiquity*, 103–11.

[2] Foss, "Late antique and Byzantine Ankara", 30–31, 70, 72, 74–9; Jerphanion, *Mélanges d'archéologie Anatolienne*, 144–222, provides a detailed description of all the remains.

[3] Crow and Hill, "The Byzantine fortifications of Amastris"; Crow and Hill, "Amasra", esp. 7–12.

the need for haste, will have decided what was built, there does not seem in the late seventh century to be any feeling that the new enemies required a different approach to fortification from that laid down in late Roman military manuals.

The next phase of conquest

The Muslim advances resumed in the second half of the seventh century, following internal conflicts around the succession to the caliphate, which were resolved through civil war resulting in the establishment of the Umayyads in 661. Equilibrium had been established along the frontiers of Asia Minor, where warfare was dominated by raiding, but Arab armies continued to drive to the east and north east. There is an account however of one serious siege operation against the Byzantines in the compilation of Bar Hebraeus (Gregorius Abū'l-Faraj bin Hārūn al-Malaṭī). The caliph Mu'āwiya (died 680) invested Caesarea in Palestine by land and sea from December until May. "Although 72 engines were hurling stones at its walls, no breach was made." The town fell when the Arabs "dug a hole under the wall" and entered it at the same time as those outside scaled the walls by ladder. They were apparently unable to take advantage of this entry, being pinned down on the wall. The garrison fled by boat.[1] It is a jumbled account written many centuries later, but the suggestion both that the Arabs had siege artillery, and that it was not remarkably effective, is consistent with the other evidence. The suggestion that they had now mastered mining techniques is one of the earliest references to this, and perhaps tied in with evidence for this advance from the caliphate's eastern frontier as well.

In the 680s, using their base at Kairouan, Arab armies began to drive north and west to complete the defeat of the Byzantines in North Africa. The latter played a remarkably passive role. Repeatedly, the Byzantine forces were driven up to the walls of their fortresses, but the Arabs did not have the means, or perhaps the time, to try to capture them. Instead, they drove far to the west, reaching Tlemcen and Tangier in 681. 'Uqba ibn Nāfi''s daring march involved battles and the capture of towns held by the local tribes about which no details survive.[2] Overthrown by a Moorish and Byzantine army that intercepted and killed their commander in 682, the Arabs were back with a reinforced army drawn from Egypt and Syria in 688. Defeating the Moors, this army then captured Carthage itself (695). Stung into action, a new Byzantine army was despatched and Carthage was reoccupied in 697 by the patriarch John. But the following year, and for the last time, a new Arab army besieged Carthage, and forced the defenders to surrender. After fifty years, the strongly fortified province of Africa finally fell. For most of that time, the Byzantine forces had failed to dispute control of the territory with the invader, but had retreated behind their walls, confident from experience that they were

[1] Bar Hebraeus, *Chronography*, 97.
[2] 'Ubayd Allāh, "Un nouveau récit", 38.

safe there. In the end, the approach proved a failure, and the powerful capital city was compelled to negotiate with the Arabs.[1]

The original accounts give little practical detail of the capture of the cities. There is evidence for growing use of siege artillery and growing competence from another event of this time, on this occasion (in 683) in another rebellion, when Mecca itself was the prize. The army of Syria "established siege engines and hurled stones on the Ka'ba which broke the columns of the mosque". They also hurled vases of burning naphtha which destroyed the holy site. Perhaps by way of diminishing the horror of this event for his readers, the machines, the chronicler says, were commanded by an Abyssinian infidel.[2] Although Mecca was hardly a major fortress, this story rings true and suggests that Muslim forces were now able to attack cities with a greater variety of methods than in the early years of the conquest.

The completion of the conquest of the empire of the Sassanids had involved the occupation of Tabaristan, the province immediately south of the Caspian Sea, whose capital, Amol, had been of recent Persian foundation, protected by a wall of baked brick, so wide that three horsemen could ride along it side by side, and a moat a bowshot wide (although one suspects a little exaggeration from the non-contemporary historian). When Tabaristan fell to the Muslims, they established their capital in Gilan and "filled the land with lofty castles".[3] In the 670s, Arab forces having established themselves in the north-eastern provinces of the old Persian realm began to press into central Asia, bringing them into conflict both with the nomadic Turkish tribes of the area, and the settled urban centres of the trade route to China. Some of these sites (such as Merv, a major oasis now in Turkmenistan) were not cities in the established sense, but were scattered settlements built around the fortified dwelling of a local landlord.[4] The conquest of such places was quite a different task from taking a city. However, evidence of the seventh-century defences is rare.

The earliest Arab moves, as elsewhere, seem to have been large scale raids, although we are told they had ballistas in 672. The city of Bukhara, their main objective, was saved on this occasion, but surrendered in 675, only to revolt once the army had left. Thirty years later the Arabs returned in a serious attempt to conquer Transoxiana. The Emir of Khorasan, Qutaiba, crossed the Oxus in 706. The inhabitants of the town of Baikand fortified themselves against him. The defences were strong. The siege lasted 50 days; then the Arabs succeeded in digging under the wall and undermining it, storming the town through the breach thus created.[5] The population was spared. If this tenth-century account is accurate, this (along with the reference mentioned earlier in Bar Hebraeus) would be one

[1] For the sequence of events, here simplified, see the sources cited by Caudel, *Les premières invasions arabes*, 125–74.

[2] Ṭabarī, *The History*, xx, trans. G R Huwting, 117; Ṭabarī, *Chronique*, v/vi: 57.

[3] Ibn Isfandiyār, *History of Tabaristán*, 25–6, 97.

[4] Hiebert, "The oasis and city of Merv", 113–21, on Russian excavations at the site.

[5] Narshakhī, *The history of Bukhara*, 37–8, 44–5. See also Vámbéry, *History of Bokhara*, 29.

of the earliest references to the successful employment of the technique of mining by the Arabs. In later times, the skill of the Khorasanis in this form of attack was well known. It may be that this was a tradition dating back to the Persian empire and enlisted by the Arab conquerors.[1] On this occasion, Bukhara itself adopted the prudent course and surrendered. There are descriptions of the defences of this city, but they all relate to later rebuilding, so it is not possible to consider how strong Bukhara was at this time. Certainly, according to Narshakhī,[2] the citadel and walls seem to have been constructed or reconstructed under Arab rule.

Qutaiba continued his advance. Siege machines were now deployed regularly against the towns that resisted him in 709, and although no details are given of the sieges, the Arab commander was successful.[3] In 711, he penetrated as far as Samarkand with an army of 20,000 men. Blockading the city from all sides, he was alert both to the risk of sorties by the besieged, and the likelihood of attempts at relief from nearby towns. Following his defeat of a relieving army, he turned at once to the city, pressing the attack with great vigour and battered the walls with his machines, soon creating a breach. Upon this, the inhabitants negotiated surrender.[4] There being no supply of stone in the region, the walls were of baked brick, strong but also friable, otherwise it would not have been likely that the Arab stone-throwers would have created a breach; or perhaps bombardment was combined with other forms of attack, such as mining. Whatever the actual methods, it is clear that this commander and his army knew their siegecraft.

Sind

The conquering drive of the Muslims was also directed against the province of Sind, at the mouths of the river Indus, where it collided with the fractured small kingdoms that had succeeded to the great Indian empire of an earlier age. Late in the seventh century, Muḥammad ibn Qāsim marched on Debal (south-east of Karachi), transporting his materials, including siege equipment, by sea, to begin the conquest of the region.

What he confronted is not very clear, as there are scant remains from this period. Certainly, there was official guidance left to the modern generation of Indian rulers by their classical forebears, in the form of the *Arthaśāstra* written by Kauṭilya, which provided advice on all aspects of statecraft, including how and where to build fortifications. The highly literate and cultured Indian ruling caste would have been familiar with these Sanskrit texts, but whether the states of the seventh century had maintained ancient walls was another matter. There is also little evidence of the level of military technology available, although it is likely that the same quality of expertise was available as elsewhere in the world at the time, northern India in particular being a crossroads for trade between Central Asia,

[1] Spuler, *Iran in früh-islamischer Zeit*, 498.

[2] Narshakhī, *The history of Bukhara*, 24–5, 34–5.

[3] Ṭabarī, *Chronique*, v/vi: 153.

[4] Ibid., 157–9. On this campaign, see also Gibb, *The Arab conquests in Central Asia*, 38–44.

China, and the Arab world. But exactly what kind of artillery the Indian rulers possessed is not known, although the generic use of the word "sling" might suggest something like the Chinese weapon. The broader term *yantra* probably meant any kind of machine, and whether the classical weapons that certainly included stone throwers and arrow-shooters continued in use remains unclear. The evidence does seem to suggest that most of the main dynasties maintained their own arsenals to support standing armies that sometimes included foreign mercenaries, who may have enabled cultural diffusion. The classical lists of officers included commanders whose title is translated as "commander of catapults and engines".[1] Building techniques were relatively simple. Stone was quarried and shaped by masons according to a well-established traditional style, often highly decorative, but relying on gravity instead of mortar to remain standing, and the many constructional benefits of the arch were unknown to the Hindus. Since the Muslim conquerors frequently demolished the places they captured and then used them as quarries for building anew, the two building styles being completely incompatible on many grounds including those of religious sensibility, we do not know what Muḥammad ibn Qāsim had to attack.[2]

Ibn Qāsim dug a trench around Debal and set up an enormous stone thrower called "the bride", which allegedly needed 500 men to operate it. This great weapon, however, was used merely to knock down the flagpole on the city's main temple, whereupon the Muslims took the place by escalade.[3] The tale's attempt to demonstrate the superiority of Islam must make its historicity doubtful! Attacks on Sind continued, with the regular deployment of *manājanīq* to bombard the Indian defences, often making use of higher ground to fire over the walls. Even so, those places that were either better defended, or stronger walled, were generally taken by close blockade rather than assault. When the town of Kiraj (Chitor, Rājasthān) rebelled against the new rulers, the governor left in control, Junaid, recaptured it by using rams to breach the walls. In 712, naphtha arrows were used to ward off Indian elephants, and miners were used in a combined attack with artillery to breach the walls of Rāwar. The city of Brāhmanābād, however, resisted attack for six months, but the more important city of Alor (Mansūra) had already surrendered after a month's blockade. At Askalanda (Uch), there was fierce resistance, and a rare reference in these Muslim accounts to the Indians deploying their own artillery on the walls (incidentally suggesting that it must have been of relatively small size). There are two differing accounts of the capture of Multān. One says that it fell when the besiegers found a way to cut the city's aqueduct. The

[1] *Dauhsādhyasādhanika*, according to Bhakari, *Indian warfare*, 49, citing U Ghoshal, *Studies in Indian history and culture* (Bombay and Calcutta, 1957), 452.

[2] P Brown, *Indian architecture: Buddhist and Hindu periods*, 65–6; Cousens, *The antiquities of Sind*, 71; Kauṭilya, *Essentials of Indian statecraft*, 78–80. For the probability that the *gophana* or sling in Indian sources included some form of stone-throwing artillery, see Gode, "The history of the sling", 85–8. For the other material in this paragraph, see Bhakari, *Indian warfare*, 34–49, 99–113, where other kinds of equipment are named and described. Much of his evidence dates from much later, however, and we cannot automatically read back their existence in the eighth century.

[3] Balādhurī, *Futūhu-l buldān*, 129.

other says there was a two month long attack with artillery used on both sides, until deserters showed the Muslims where they could mine, which they did and brought about the rapid collapse of the rampart and fall of the city.[1]

New attacks on Byzantium

The turn of the eighth century saw renewed attacks from the caliphate on the east Roman empire. These culminated in another failed attack on the capital city itself, for which there are a number of sources. In 704, the Cilician frontier town of Mopsuestia (Misis/Yakapınar) was captured. The Arabs did not merely destroy the place or loot it. In 706, they rebuilt the walls and installed a garrison. This is more early evidence of the willingness of the conquerors to build to defend what they had taken.[2] We will look more closely at the development of Arab fortress-building in due course. Meanwhile, in 706/7 the attacks continued, and again fortresses were taken.[3] In 707, the target was the important town of Tyana (Kemerhisar), which fell to the Arab commander Maslama ibn ʿAbd al-Malik, who followed up his victory by taking others. At Tyana, a Byzantine source tells, the Arabs "threw down part of the walls by means of their siege engines, but were unable to achieve further successes". However, relief attempts failed, and the inhabitants surrendered as their provisions ran out.[4] Tyana was to become an important military base for the Arabs, at which they themselves were to undertake significant building work in the following century.[5]

The growing threat to Constantinople itself was recognised. If the previous Muslim attack in the 670s had been a relatively ineffective blockade, this time the emperor took no risks with the security of the capital. "Expecting the Saracen attack", Anastasius II (r. 713–15) "restored carefully the walls of the city and refurbished the military engines", according to the patriarch Nicephorus. He also laid in great stores of provisions.[6] Quoting a now lost source, Theophanes recounted that the emperor "set up on the towers catapults for darts and stones and other engines".[7] The Byzantine arsenals were well equipped with such weaponry, it seems.

The preparations were not before time. The storm broke in August 717. The caliph ʿAbd al-Malik sent his son and commander Maslama across Asia Minor to attack Constantinople. He had been provided with a large army that included a large number of artisans, thousands of camels and asses loaded with provisions, arms, engines of war, and naphtha. Anticipating a long campaign, he had apparently been told to ravage the land and to sow it, and to build accommodation for

[1] Ibid., 122–5; *Chach-nāma*, 156–60, 170–72, 193–205.

[2] Bar Hebraeus, *Chronography*, 105.

[3] The source is al-Wāqidī, as quoted by Ṭabarī and translated by Brooks, "The Arabs in Asia Minor", 191–2.

[4] Brooks, "The Arabs in Asia Minor", 192; Nicephorus of Constantinople, *Short history*, chap. 44, pp. 105–7. Nicephorus was born in 758.

[5] Ṭabarī, *The History*, XXXII, trans. C E Bosworth, 198–9, details extensive work done in 833 to create a defensive site one mile square.

[6] Nicephorus, *Short history*, chap. 49, p. 117 (the year 714).

[7] Theophanes, *The Chronicle*, 534.

the troops over the winter. He cut off the city on the landward side with a "wide trench with a breast-high parapet of dry stone" (Theophanes). From this position of security he launched attacks upon the city using his siege weapons, of which he had many kinds (Nicephorus). Once again the Byzantine capital was preserved, though. The Arabs never secured command of the sea, so were unable to threaten the city, and its enormous population, with hunger. On the other hand, the besiegers themselves were unable to maintain adequate supplies for their host, and hunger led to disease. Conditions were worsened by bad weather. They sustained their efforts for 13 months before being ordered to retreat in disarray and with great loss of life, caused rather by disease, starvation, and storms at sea than direct enemy action.[1]

For all the number of accounts of this famous siege, there is remarkably little detail about the actual course of events, in contrast to the Avaro-Slav attack of 626. There are undoubtedly clues in the religious tract attributed to the patriarch Germanus II, who attributed the whole success of the defence to the city's protectress, the Virgin Mary, perhaps deliberately avoiding mention of the emperor, who was then on the other side in the developing theological schism over icons. The patriarch refered to the inertia of the "machines deployed for the assault" and to the failure of the Arabs to "launch a single engine of war against the city".[2] The ineffectiveness of the weapons of the Avars has already been noted. Ninety years on, there had not been much in the way of technological advance, and even if the stone throwers of 718 were more powerful and better manned, they would still have been inadequate against the walls of Constantinople. However, the Arabs were by now familiar with these defences and, as we have seen, had come well equipped. Most likely, they had not been able to get close enough to the walls to attempt to breach them, and were thus compelled to the ultimately unsustainable method of blockade. The Arabs did not try again to capture the capital.

Defeat at Constantinople was not perhaps surprising. The most powerful siege methods known would have been thwarted by the defences of the city, and forcing it to surrender through hunger depended on being able to prevent its receiving supplies, while simultaneously being able to feed, in the field, an army large enough to threaten its massive walls. Less substantial fortifications were however now vulnerable to Arab attacks, as was shown at Nicaea (İznik) a few years later (725/6), although this city's defences were themselves not inconsiderable. Two sources provide accounts of this attack that, while not entirely consistent with one another, enable something of a reconstruction. Nicaea, an important town that may have felt that its distance from the frontier made it fairly safe, was ringed with late Roman walls (Plate 2). The existing defences date from the rebuilding carried out by the Seljuks following the siege of 1097. The older defences were a single

[1] Theophanes, *The Chronicle*, 545–6; Brooks, "The campaign of 716–18", 19–26; Nicephorus, *Short history*, chap. 54, p. 123; Dionysius of Tel-Maḥrē, *The secular history*, 212; Bar Hebraeus, *Chronography*, 167; Ṭabarī, *The History*, XXIV: 39–42.

[2] Germanus of Constantinople, "Homélie sur la déliverance de Constantinople", §§ 11, 18, pp. 201, 203. There is also the suggestion (p. 203) that Greek Fire played a key part in the defence at sea.

wall with a circuit of about five kilometres, 3.6–3.8 metres thick, and nine metres high to the wall walk. There were numerous gates and towers of late Roman style.[1] The Arabs attacked for forty days. During the siege, one of the defenders (an iconoclast — this being the moral and purpose of telling the tale, presumably) was struck by a "stone discharged from a siege engine, and it broke his head and face" (Theophanes). Capture was apparently effected when the Arabs "dug down the wall" and gained entry, prompting the garrison to flee by ship across the lake against which the town stood. These two glimpses suggest that the attackers had artillery (although the missile described suggests this was of a lighter character), and that they knew how to undermine walls, assisted here by the absence of an outer wall and perhaps of a ditch.[2]

The range of expertise increasingly displayed by Arab armies, and also the limitations of eighth century siege techniques, is confirmed by another account. In 750, the Umayyad caliphate was extinguished following a revolution launched from the eastern provinces that brought the Abbasid dynasty to power. In the civil war between the two, the important town of Wāsiṭ on the river Tigris in Mesopotamia (Iraq) was attacked by Abbasid forces in August 749. The place had been an important military establishment for the Arabs and was well protected by water, both the river and a canal. The defenders at least were well supplied with stone throwers, which were used to good effect against the attackers. There were fierce battles beneath the walls, and by boat, and there are accounts of nocturnal fighting illuminated by torches hung from the walls. The defences of Wāsiṭ were clearly too strong for the weapons and techniques available to the Abbasid army, and it can be imagined that the water defences prevented any attempts at undermining. The siege lasted for eleven months and was brought to an end more through unrest and dissension in the garrison than by the effectiveness of the attack.[3]

Into Europe

By the time of the change of dynasty in the eastern heartland of the Arab empire, the area subject to Islam had also undergone a dramatic extension in the west, with the crossing by Ṭāriq ibn Ziyād of the straits later named Gibraltar after him and the spectacular collapse of Visigothic rule in the former Roman province of Hispania.

While the Arabs had been extending their control along the North African coast, dealing along the way with the Berber tribes who controlled the area, the Visigoths' main concerns had been to the north, both with areas of the peninsula that they did not control, and with the Frankish kingdoms of Gaul. Their domain, it will be recalled, crossed the Pyrenees and extended to the river Rhône. In very short order, the Franks were suddenly to find their Visigothic rivals replaced by Muslims.

The Visigothic kingdom was in considerable disarray, with succession disputes

[1] Schneider and Karnapp, *Die Stadtmauer von İznik*, 1–8, 10–11.
[2] Theophanes, *The Chronicle*, 560; Bar Hebraeus, *Chronography*, 110.
[3] Detailed account in Elad, "The siege of Al-Wasit", 59–70.

and civil conflict. The cultural level had developed but little from that previously considered.[1] The once larger Roman cities had shrunken considerably in population, although some new building, copying existing examples, had taken place.[2] The speed of the Muslim conquest (perhaps three or four years) suggests that the warriors available to the Visigoths were relatively few in number. The accounts give stories of battles fought and towns captured, but few details of any sustained attempt to defend the late Roman walls that might, if properly secured and provisioned, have held up the invaders. Some towns were found abandoned. At Córdoba, an Arab force gained entry because the wall was broken and they were able to climb over. The garrison was said to be only 400 strong. Carmona was too strong to assault (its ancient ramparts were "well-built") and was taken by stratagem. Seville surrendered after several months. At Mérida, where late Roman defences "of very strong masonry" stood in the way, the Arabs attacked by building a *dabbaba*, a kind of mobile tower. It sounds like some kind of mobile battering ram, as its purpose was "to open a breach",[3] and because it was held up by poor ground and eventually destroyed by a Visigothic sortie. It looks like the early defeat of the Visigothic army and death of King Roderic, along with the fragmentation of the ruling élite perhaps initially unaware that the Arab attack was more than a raid, had been catastrophic in preventing a sustained resistance that might have taken advantage of the presence of so many fortified sites.[4] It has been argued that the obligation on towns to supply help for royal expeditions that characterised the medieval Spanish kingdoms was rooted in Visigothic times,[5] but the effect of this on the Arab conquest is not evident.

The actual chronology of the conquest is impossible to reconstruct, but it is apparent that the Arab army (which had initially at least been largely composed of Berber tribesmen), operating under the command of Ṭāriq ibn Ziyād and the governor of Ifriqiya, Mūsā ibn Nuṣair, and then after their recall Mūsā's son ʿAbd al-ʿAzīz, spread out rapidly to secure the major cities, many of which did not resist but made their own treaties with the conquerors.[6] Perhaps the dispersal of some of these urban forces in the first phase of conquest critically weakened the defences of the first cities in the way of the advance. Certainly it was not long before the independent Christian territory was limited to the mountainous north-west (As-

[1] See Chapter 1.

[2] Reilly, *The medieval Spains*, 21–6; Jiménez Garnica, "Settlement of the Visigoths", 98, 119.

[3] Ibn al-Athīr, *Annales du Maghreb & de l'Espagne*, 46–7. Ibn al-Athīr was a thirteenth-century chronicler.

[4] Ibn ʿAbd al-Ḥakam, *Dhikr fatḥ al-Andalus*, tells of the battles but mentions no sieges. The details here are from a much later source, *Ajbar machmuâ*, 23–9. Ibn al-Quṭīyah, *The history of the conquest of al-Andalus*, 5, 19, adds a few incidental details. The quoted descriptions are from the tenth-century chronicler Rāzī: "La 'Description de l'Espagne'", 84 (Mérida), 94 (Carmona).

[5] Powers, *A society organized for war*, 127. It has also been argued that the main infantry force of the Visigoths were slaves; see E A Thompson, *The Goths in Spain*, 265–7.

[6] There are numerous modern accounts. For one based on Arabic sources and from an Arab viewpoint, see Ṭāha, *The Muslim conquest and settlement of North Africa and Spain*, 93–8.

turias), while the victorious Muslim armies consolidated their rule in their new province of al-Andalus and then pressed on towards and beyond the Pyrenees. Here they encountered the substantial late-Roman cities and their defences, the walls in all probability little changed since the third century, although perhaps rather better maintained or repaired, having been fought over so frequently by Frank, Burgundian, and Visigoth.[1]

In 721, ten years after the Muslim forces set foot in Spain, their armies were fighting for control of Narbonne and Toulouse. Narbonne was taken and the population carted off as slaves, suggesting that the town had not surrendered but had been stormed. The Arab commander Al-Samḥ ibn Malik al-Khawlānī then attacked Toulouse and deployed a range of siege machinery including *fundae*, which in the context are far more likely to have been lever-based stone throwers than handheld slings, although this cannot be proven;[2] and it took a rapidly assembled army of Franks and Aquitanians to drive them off. It is on balance more likely that the Arab attacks on southern Gaul and Septimania were raids seeking booty rather than permanent conquests, just as they were on the caliphate's other frontiers during this time, in which case so formidable an obstacle as Toulouse would have been a target more for the wealth it contained than for any other reason. Nonetheless, siege machinery would not normally accompany a raiding force unless it was light enough to be easily transported. Clearly, even if the Arabs had not had to deploy many of their acquired skills in siegecraft during their first years in Spain, they had not failed to bring these arts with them.

They may also have encountered such skills amongst their opponents. It is likely that the Visigoths had knowledge of artillery, as there are accounts of stone throwers and what sound like *ballistae* in Bishop Julian's account of the rebellion against King Wamba involving siege operations at Nîmes and Narbonne in 673.[3] It is impossible to know whether the late-Roman *onager* was still in use, although for all the reasons previously suggested this seems unlikely, in which case the new artillery must have arrived at this end of the Mediterranean at some point. There is a hint in these accounts of the greater than usual power of the weaponry, which implies we are not talking about the relatively small missiles of the late-Roman torsion weapons, and also an indication of a high trajectory, with stones crashing over the walls and into the city. However, these hints do not sit easily with the general picture we have of Visigothic skills, and it may be that access to siege weapons depended on finding experts from other sources to build and operate it.

[1] Thompson, *The Goths in Spain*, 266–7, and the sources cited there.

[2] "iam dictus dux exercitus tolosam usque pervenit eamque obsidione cingens fundis et diversis generum machinis expugnare concevit"; *Continuatio byzantia arabica*, 358. The identical text appears in the *Continuatio hispana* (ibid.); the two texts are edited in the *Corpus scriptorum muzarabicorum*, 1, as *Chronica byzantina-arabica* (p. 14) and *Chronica muzarabica* (p. 38). See also *Chronicon Moissiacense*, 290.

[3] Julian, *Historia rebellionis Pauli*, 776–9: "sed tantos imbres lapidum intra urbem concutiunt, et clamore vocum et stridare petrarum civitas ipsa submergi aestimaretur" (Narbonne); "confluentes undique nostri cum fragore vocum muros urbis petrarum jactibus petunt, missilibus quibusque constitutes per murorum spiculis sagittisque propellant" (Nîmes).

The victory of Charles Martel over the Muslims at Poitiers in 732 was subsequently glorified in western writing as the salvation of Christendom, although in fact the "Saracens" he defeated were another raiding force rather than an army bent on permanent conquest. Certainly the Frankish victory did not end Arab-led incursions into the region. Another account tells of a raid on Provence in 737, leading to an attack on Avignon, a "very strong" fortress that was now taken "by fraud". The Frankish response was prompt, and a powerful force set about recapturing the place, but had to do so by rather more strenuous means than the Arabs had, establishing a full encirclement and deploying machines before succeeding.[1]

A point of temporary equilibrium had now been reached, although it may not have appeared so at the time. During the first century or so of Islam, a nondescript army of desert tribesmen had humbled one great empire, shearing it of Syria, Palestine, Egypt, and North Africa, and even challenged the capital itself. Another once great kingdom had disappeared altogether. Essential to this progress had been the ability to absorb and use effectively the skills, arts and peoples of the newly conquered territories, even if the direct evidence has been limited to casual references.

The fortifications of the Arabs in the first one hundred and fifty years

Nowhere is the reliance of Islam on those it conquered clearer than in the arts and architecture that came rapidly to flourish under its rule. Nor is it a surprise that building styles should be heavily influenced by the culture of the particular province in question, be it Persian, Byzantine, Syrian, Egyptian, or Yemeni. The rapid establishment of stable government by the caliphs, with tax collection and the encouragement of arts and sciences, was naturally reflected in some splendid architecture, of which the Dome of the Rock in Jerusalem (around 690) and the Umayyad mosque in Damascus (around 706) are magnificent examples.[2] There is no question that, in contrast to the non-Byzantine Christian world, there were the resources and the skilled masons available for widespread construction in stone, and the new buildings created in the caliphate were of higher quality than anything contemporary in western Europe. It is rather less clear, however, how far this extended to defensive structures. With the empire constantly expanding, the need for defences may have seemed secondary, although there are sufficient references to such work to suggest that it was part of the scheme of things. In addition, in all those places that were to remain important, substantial rebuilding over the centuries has obscured any work from this first period. On the Byzantine frontier, the nature of the conflict was such that the Muslim frontier was usually based in cities and fortresses recently held by the enemy, in which case there may

[1] From *Ajbar machmuâ*, 170; see Chapter 3.

[2] See Ettinghausen and Grabar, *The art and architecture of Islam*, 17–23, for a summary.

not have been much call for anything other than repair and upkeep work. However, it seems likely that the Umayyads were responsible for some new defences at Amman in Jordan, where the ruined Roman defences of the town and citadel were substantially restored. The curtain walls were from 2.5 to 4 metres thick, with shallow buttresses added to strengthen the new facing, and at least four of the projecting rectangular towers of the upper citadel were of this period, one being closely dated to 724–44.[1] In al-Andalus the presence of "numerous cities and excellent fortresses" was apparently cited by Mūsā as a reason for the caliph not to withdraw from the newly conquered provinces.[2] The cities remained the centres of Muslim rule, government, and military operations.

The many rural complexes, some of them based in former Byzantine fortresses, others newly built, sometimes had defences (for example a complete walled enclosure) and sometimes also a small fortified structure resembling a later medieval castle. But they were primarily agricultural centres, boasting of houses and baths as well, and the residence of a powerful landowner. Some were in effect, desert palaces. They sometimes resembled caravanserais providing shelter on desert roads. Their defensive purpose was minimal.[3] However, in the frontier regions where the Byzantine side was providing itself with a network of local defences, on the Muslim side similar steps were being taken as the military balance became more even. Small *ḥuṣūn* were built, increasingly so under the Abbasids, and these had a clear military character, as they were populated by settlers from other regions, enticed by salaries or sometimes grants of land, but largely held by single men.[4] In al-Andalus, as the displaced new Umayyad caliphate asserted itself, there was also a widespread use of rural *ḥuṣūn*, the function of which seems to have been as centres for tax collection as well as popular refuges, others being used as centres of local revolts against the centralised state and being destroyed as a consequence if not required by the government thereafter.[5]

In the urban centres, little survives from this early period. We have noted the wall at Amman, and the arsenal and defended harbour at Tunis was started in around 732,[6] but most defensive building work known from either archaeology or descriptions dates from later. Islamic rule continued to make use of the cities, but they took different forms and designs, though the defences continued to be a crucial state responsibility.[7] But the Abbasid fortifications of Baghdad, after they moved their capital there, were to astonish everyone who saw them, ensuring a number of descriptions. This was in all respects an exceptional construction, begun from scratch in 758 (or 762) at the order of Caliph al-Manṣūr and ready for occupation seven years later. The earliest detailed description, however, comes

[1] Northedge, "The fortifications of Qal'at 'Amman", 437–57.

[2] Ibn al-Quṭīyah, *The history of the conquest of al-Andalus*, 29.

[3] Lézine, "Sur deux châteaux musulmans d'Ifriqiya"; Sauvaget, "Châteaux umayyades de Syrie", 9–45.

[4] Haldon and Kennedy, "The Arab–Byzantine frontier", 109–12.

[5] Acién Almansa, "Sobre la función de los *ḥuṣūn*", 263–6.

[6] Bakrī, *Description de l'Afrique septentrionale*, 90. This eleventh-century source also describes the walls at Tripoli, Gabès, Aïn Djeloula, Sousse and Ceuta.

[7] As with the cities of Syria: Kennedy, "From *polis* to *madina*", 4–26.

from 150 years later. According to Ya'qūbī, al-Manṣūr assembled "engineers, men with a reputation in the art of construction and surveyors skilful in measuring lengths and surfaces". Located where the rivers Tigris and Euphrates almost met, the new city was perfectly round, with four gates each two kilometres apart (but Ya'qūbī's description gives a total diameter for the whole complex of 2,900 metres; the inner citadel had a diameter of 2,286 metres), protected by double doors of iron. The walls, made of local brick, were no less than 30 metres high to the top of the merlons, 45 metres thick at the bottom, narrowing to twelve metres at the top. The bricks were themselves immense, being half-metre cubes, and no less than 162,000 were needed for each course. Bonding was achieved with reeds. As if this was not enough, there was an outer wall some 50 metres in front, with solid round towers, and in front of that a wet moat fed from a canal. According to another description, the dimensions were somewhat less (the main wall "only" 18 metres high). The workforce required must have been immense, although the 100,000 suggested as permanently employed, apart from its suspicious roundness, makes one wonder where they all came from, and how they were fed and housed during the work. The outer defence was removed at the end of the ninth century, by which time the whole vast complex was surrounded by markets and dwellings appropriate to such a metropolis, both government centre and trading emporium.[1] This immense monument seems actually to have been rapidly swallowed up as the city grew, and to have fallen into disuse after its walls were stormed in civil strife in 811. Certainly, nothing survives to confirm or change the picture. However, it can be shown that other architectural features like bent entrances (found at some of the desert castles) and machicolations were known to builders at this time.[2]

With substantial resources in terms of wealth and skilled workers available, the Arabs were both building on existing sites, and erecting new fortifications. In al-Andalus, perhaps spurred on by the presence of a large conquered population, the construction of a citadel (*alcazar*) to secure control in the cities from an early date is hinted at. When Mūsā and Ṭāriq were recalled, the commander "strengthened the fortresses of al-Andalus". In 763, the new Umayyad ruler and founder of a long-lasting dynasty, 'Abd al-Raḥman I, taking refuge from the Abbasids who had now gained the caliphate, was besieged in the citadel of Carmona, which must have been built between 711 and that year. The famous citadel of Toledo was first erected inside the town, in order to control it, in 797.[3] Similar reasons seem to have lain behind the building of the new citadel of Mérida, reconstructed after its initial capture in 713, and strengthened in the next century in the form of a fairly primitive structure designed to ensure control of the water supply, and probably with a strong symbolic function as well.[4] It would be strange if the building

[1] Wiet, *Baghdad*, 8–16; the Arabic sources are analysed in Le Strange, *Baghdad during the Abbasid caliphate*, 15–26, 42–5. There are considerable discrepancies in the overall dimensions that cannot now be resolved.

[2] Creswell, "Fortification in Islam before A.D. 1250", 89–90, 100.

[3] Ibn al-Quṭīyah, *The history of the conquest of al-Andalus*, 21 (Musa), 75 (Carmona), 105 (Toledo).

[4] Valdés Fernández, "El urbanismo islámico de la Extremadura leónesa", 160–63. In

materials used were not from local sources and the builders recruited from local artisans for the construction of the defences of the new regime, even if for quite some years the main enemies were to be found in rebellion and feuding between the different Arab and Berber factions seeking control of the rich new territory. Certainly, a detailed study of techniques of building of foundations (for example, the use of reinforced layers of stones to underpin the walls and towers, and of projecting layers of stone at the foot of walls to provide greater stability, in particular on mountain sites), shows continuity with not just the previous regime, but also with their Roman predecessors.[1]

Important military centres were built such as Kūfa and Wāsiṭ in Mesopotamia, Fuṣṭāt (Cairo) in Egypt, and Kairouan in Africa. Tunis was founded in order to provide a secure naval base for newly-conquered Ifriqiya in about 700, and a thousand Coptic families were settled there from Egypt.[2] Kūfa also supports the contention that Arab conquerors had to employ local skills. They had to "assemble everyone who knew architecture" to establish the enceinte. Similar terms are used to describe the beginning of work at Kairouan.[3] The late-eighth-century wall of Arab Tudela in al-Andalus was two metres thick, making it similar to the late Roman walls of the country.[4] Adequate survivals of fortifications from the time of the first settlements in al-Andalus are rare, as we have seen. Such poor scraps of information as do survive, or have been studied archaeologically, do not allow a comprehensive understanding of the fortifications constructed by the victorious Arabs of the period of the conquests, unlike the far greater store of information (and surviving remains) that date from later times.

Conclusion

In less than a century, the old post-Roman world had been transformed out of recognition. From Asia Minor to the Pyrenees, the new Arab empire held sway, and reached simultaneously to the borders of India and China. Drawing initially on the culture and skills of the new lands now under its control, this empire rapidly became a new centre of civilisation. Among the skills taken on board from their new subjects were the arts of siege warfare, in which the Muslim Arabs had been originally ignorant. Building skills, including defensive works, would follow. Having had to confront and overcome both Iran and Byzantium, the new

south-eastern Spain, the rebellions of the eighth century led to the destruction of many existing urban centres and a hiatus before their replacement in different form during the following centuries: see Gutiérrez Lloret, "Ciudades y conquista", 137–51. For a general picture comparing Spain with Syria, see Kennedy, "From antiquity to Islam", 53–62. (All three articles are published in the same volume.)

[1] Martínez Lillo, "Estudio sobre ciertas elementos y estructuras de la arquitectura militar andalusí", 11–32.

[2] Ṭāha, *The Muslim conquest and settlement of North Africa and Spain*, 71–2.

[3] Ṭabarī, *La chronique*, v/vi: 172 (the year is 640/41); Ṭabarī, *The History*, xviii, trans. M G Morony, 102 (the year 670/71); Ibn al-Athīr, *Annales du Maghreb & de l'Espagne*, 19.

[4] Maldonaldo, "La muralla primitiva árabe de Tudela", 30.

power had now posed a threat to both Italy and Gaul. Here, another new empire was about to take shape, the creation of which would set the map of Europe for the medieval period, in which the centres of power would shift from the Mediterranean to the north. The realm of Charlemagne, based on the newly reunified kingdom of the Franks, would face not only south but east and north as well.