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The Late Sasanian Army

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I. SASANIAN IRAN AND ITS NEIGHBOURS

Sasanian Iran was a continental power (Fig. 1). Eurasia stretched east, west, north and south-east far beyond the horizons of diplomatic vision. The new empire created by Ardashīr (224–239/40) in a few decades of dynamic growth at the beginning of the third century was a massive, resource-rich political entity. The highlands of Iran, a natural nursery of fighting men, were clamped together with the fertile lowlands of Mesopotamia and Khuzistan. The taxes of the one funded the martial efforts of the other, as long as the ruling dynasty maintained good order on earth and secured the favour of Ohrmazd and the Holy Immortals. But this re-creation, within the remembered past, of something akin to the Iran which had championed the cause of good on earth against the forces of evil, with extraordinary fluctuations of fortune, in a remote legendary past, was as vulnerable to attack as its mythic precursor. Fear as much as ambition or emulation of past achievements drove Ardashīr's successors into wars of expansion both west and east in the third, fourth and fifth centuries. Sasanian Iran, unlike its real, historical predecessor, the empire of the Achaemenids, was aware of its exposed, central position in a potentially hostile world.[1]

In the far south-east, where the Zagros mountains subside and spread out in the desiccated, wind-scarred landscape of Makran and Sakastan, in what are now the most refractory of all *terres d'insolence*, in north-west Pakistan and south-west Afghanistan, the tribesmen, then as now, were hard, if not impossible, to manage, save by drawing them into armed activity elsewhere on behalf of a higher, imperial power. It was a region of perennial instability, in contrast to the relatively urbanised worlds of Bactria and Sogdiana to the north. The latter rose at the expense of the former in Late Antiquity, its cities growing in size and the whole region beyond the Oxus developing into the economic motor of the continent. Here the threat to Iran was more insidious than in the south-east. The

[1] K. Schippmann, *Grunzüge der Geschichte des sasanidischen Reiches*, Darmstadt 1990; M. Boyce, *Zoroastrians: Their Religious Beliefs and Practices*, London 2001, 17–144; E. Yarshater, 'Iranian National History', *Cambridge History of Iran,* iii.1, Cambridge 1983, 359–477.

Fig. 1. The Sasanian Empire and its Neighbour

late Boris Marshak, who spent much of his life at work in Sogdiana, was inclined to look down on Sasanian Iran as a mere military enterprise, geared to holding and exploiting Mesopotamia, whereas the cities of Sogdiana (equally Iranian in culture) and its colonial territories to the east generated their own wealth, both by investing in large-scale irrigation schemes within their own territories and by engaging in highly profitable long-distance transcontinental trade. In aggregate, their agrarian resources more than matched those of highland Iran.[2] Compared to their governing elites, highly cultivated, at once aristocratic landowners and mercantile entrepreneurs, the provincial landowners of Sasanian Iran who made up the mass of middle-ranking *āzādān* were backwoodsmen, leading lives dominated by country pursuits, feasts, heroic stories retailed by minstrels and service in the armed forces.[3]

The steppes which enveloped the urbanised plains of Sogdiana and lapped against the formidable mountain ranges fronting the Tibetan plateau to the east generated far greater dangers. A watershed was crossed, both literally and figuratively, in the middle years of the fourth century, when the Huns/Xiongnu/Chionitae were driven west after occupying northern China for some 40 years. They were the first East Asian, Turkic nomads to cross the Hindu Kush-Altai-Tien Shan divide and to venture into the more hospitable west Eurasian steppes. They brought with them a governmental capability and statecraft considerably more advanced than that of the Indo-European nomadic peoples who had hitherto dominated the outer world around Iran. For they had to build up political institutions (the layered organisation of an imperial confederacy) which could generate (and manage) armed forces on the same scale as those fielded by successive great powers in China. Equally they had to match China diplomatically, devising (and implementing) policies appropriate for periods both of nomadic and of Chinese ascendancy (inner and outer frontier strategies). On the ideological plane too, they had emancipated themselves, developing an imperial ideology of their own, striving to create on earth a limitless realm reflecting that of the supreme god, Tängri, in heaven.[4]

It was no wonder then that Shāpūr II (309–79) broke off from his western, Roman war and concentrated on containing the Chionitae when they first entered the Sasanian field of diplomatic vision in the 350s, or that Bahrām V (421–439) made his name as a great champion of Iran campaigning in the north-east. The steppes had been transformed into an outer world as menacing as the legendary Turan which confronted Iran in the heroic

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[2] E. de la Vaissière, *Sogdian Traders: A History*, Leiden 2005, 97–117, 159–84.

[3] The world of provincial landowners is hidden from us, but something of their ethos – conservative, prizing order very highly, devoted to the crown – and tastes – for hunting, feasting and minstrel lays – may be retrieved from such Sasanian texts as have survived (above all *The Letter of Tansar*, tr. M. Boyce [Rome, 1968]) or have contributed material to later Arab works. Cf. A. Christensen, *L'Iran sous les Sassanides*, Copenhagen 1944, 57–59, 62–69.

[4] De la Vaissière, *Sogdian Traders*, 43–46, 97–103; T. J. Barfield, *The Perilous Frontier: Nomadic Empires and China*, Oxford 1989, 1–103; X. de Planhol, *Les fondements géographiques de l'histoire de l'Islam*, Paris 1968, 14–33; J. Howard-Johnston, 'Huns in the North', *Norwegian Archaeological Review* 40, 2007, 199–202.

tales of the Iranian national epic.[5] The danger was amplified by the alliance which first Huns, then Hephthalites, finally Turks struck with the cities of Sogdiana. It was mutually beneficial. Confident of security, Sogdian elites could invest in large capital projects. The irrigation schemes which were introduced and which greatly increased agricultural production were, in effect, developed under nomad sponsorship. The same was true in the commercial sphere, where the ramified connections of nomads and their military muscle both extended and secured trade-routes for Sogdian merchants. The nomad world reached an apogee of power and wealth at the end of antiquity, when Turks and Sogdians engaged in what soon became a joint imperial venture and were able to play off the great powers against each other at both ends of Eurasia.[6]

The Huns did not halt on the Inner Asian frontier of Iran, but, over the following two–three generations, moved westward, until, by the 420s, their political centre came to rest in the Carpathian basin.[7] At all stages of their apparently ordered migration, they were able to project their power to great distances. So they were able to reach round the Köpet Dagh, the mountain range which shields the Iranian plateau on the north-east, and around the Caspian Sea, so as to bring the north Caucasus steppes under their control. This meant that Iran could be attacked by a powerful nomadic adversary at its vulnerable spots in the north: (1) the steppes of Hyrcania (modern Gurgan) to the east of the southern Caspian coastlands, (2) the easy passage around the east end of the Caucasus, known as the Caspian Gates, and (3) the Dariel Pass over the high Caucasus. It was a threat which did not diminish with the demise of the Hun Empire in eastern Europe and Ukraine. For the Huns and their subordinated nomad peoples did not dissolve into thin air. All manner of Turkic/Hunnic peoples continued to dominate sub-regions of the former Hun Empire – Bulgars in the Carpathian region, Sabirs in the north Caucasus, Kidarites east of the Caspian. In due course they were incorporated into later, higher-level nomad states, led by Hephthalites, Avars and Turks. Thus to the age-old problems generated by the Caucasus, nursery of a multitude of highland peoples, virtually impossible to pacify, many of whom have survived into the twenty-first century, was added the ever-present danger of swift nomadic thrusts into the Sasanian north-west and the Caspian lowlands.[8]

The most formidable of all Iran's foreign adversaries in terms of resources and ideological drive were the Romans in the west. The Roman Empire had, of course, been the pre-eminent power in western Eurasia for at least two and a half centuries before the rise of the Sasanians. The Parthians who had taken a great swathe of sedentary Eurasia from the

[5] Chionitae: Ammianus Marcellinus, ed. C. U. Clark, tr. J. C. Rolfe, 3 vols., Cambridge, Mass. 1935–9, xiv.3.1, xvi.9.3–4. Bahrām V: C. E. Bosworth (tr.), *The History of al-Ṭabarī, V. The Sasanids, the Byzantines, the Lakhmids and Yemen*, Albany 1999, 94–99; J. Mohl (tr.), *Le livre des rois par Abou'lkasim Firdousi*, v, Paris 1977, 539–551.

[6] De la Vaissière, *Sogdian Traders*, 107–12, 199–215, 227–49; Barfield, *Perilous Frontier*, 131–38; M. Whitby, *The Emperor Maurice and His Historian: Theophylact Simocatta on Persian and Balkan Warfare,* Oxford 1988, 218; R. C. Blockley (ed. and tr.), *The History of Menander the Guardsman*, Liverpool 1985, fr.10, 13.5.

[7] P. Heather, *The Fall of the Roman Empire: A New History*, London 2005, 146–54, 202–205.

[8] P. B. Golden, *An Introduction to the History of the Turkic Peoples: Ethnogenesis and State Formation in Medieval and Early Modern Eurasia and the Middle East*, Turcologica 9, Wiesbaden 1992, 79–154.

Seleucids, laid no claim to parity of status. While they may have given occasional shocks – the worst being victory over Crassus's army at Carrhae – the Parthians were generally no match for the Romans in the field. Roman expeditionary forces were able to penetrate at will into the heartlands of Mesopotamia. Roman emperors exercised virtually unchallenged suzerainty over much of Transcaucasia. So it was hard for Romans to reconcile themselves to the existence of an equipollent eastern neighbour, once loose Parthian rule was replaced by a more managerial Sasanian regime. It took a century and a half of conflict before they recognised, in a treaty signed probably in 387, that the Persians were partners in the direction of human affairs, that there were, in effect, two centres to the *oikoumene*, the civilised world, one around the Mediterranean, the other in Mesopotamia and Iran.[9]

Achievement of parity with the Romans was an extraordinary Sasanian feat, given the superior resources upon which the Romans could draw, their centralised and tiered system of provincial administration, and, above all, a military tradition going back many centuries. The Mediterranean lands taken on their own almost certainly matched the whole Sasanian Empire in terms of agricultural output. With the diffusion of new technologies – particularly in mining, building and irrigation, but also in industrial processes – non-agricultural production had risen and urbanisation had advanced further than ever before. Manufacturing and commerce may well have contributed a larger proportion of Roman GDP than is commonly supposed, especially if allowance is made for a bias against trade in the reporting of Roman sources. If so, it is not simply the agricultural output of the northern hinterlands of the Mediterranean provinces, in the Balkans and the west, which increased Roman resources well above those of Iran, but also the aggregate industrial output of the Near Eastern provinces (from Egypt to northern Syria) and the rest of the empire.[10]

Government as well as commercial exchange was facilitated by the presence at the heart of the empire of a relatively benign sea. Its fiscal system was efficient at hoovering up resources from the localities and exercised reasonably effective oversight over spending. The efficacy of government is perhaps best illustrated, in the reign of Justinian (527–565), by the building of the cathedral of St. Sophia in Constantinople, a mere five and a half years elapsing between initial design and completion of the project.[11] Of the Roman military tradition, little need be said. It was Roman legions which had conquered the Mediterranean *oikoumene*. The smaller units, infantry and cavalry, which had succeeded the legions,

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[9] E. W. Gray, 'The Roman Eastern *Limes* from Constantine to Justinian – Perspectives and Problems', *Proceedings of the African Classical Associations* 12, 1973, 24–40; Whitby, *Emperor Maurice*, 202–205; R. C. Blockley, *East Roman Foreign Policy: Formation and Conduct from Diocletian to Anastasius*, Leeds 1992, 5–52; M. P. Canepa, *The Two Eyes of the Earth: Art and Ritual of Kingship Between Rome and Sasanian Iran*, Transformation of Classical Heritage 45, Berkeley 2009.

[10] J. Howard-Johnston, 'The Two Great Powers in Late Antiquity: A Comparison', in A. Cameron, ed., *The Byzantine and Early Islamic Near East*, III *States, Resources and Armies*, Princeton 1995, 157–226, repr. in J. Howard-Johnston, *East Rome, Sasanian Persia and the End of Antiquity*, Aldershot 2006, i; A. I. Wilson, 'Machines in Greek and Roman Technology', 'Large-Scale Manufacturing, Standardization and Trade', in J. P. Oleson, ed., *Oxford Handbook of Engineering and Technology in the Classical World*, Oxford 2008, 337–66, 393–417.

[11] R. J. Mainstone, *Hagia Sophia: Architecture, Structure and Liturgy of Justinian's Great Church*, London 1988.

supplemented by highlanders recruited from within the empire and foreign troops, chiefly German, recruited from without or from authorised settlements within, amounted to 500,000 men or so in the fourth century, falling to 300–350,000 in the sixth. The armies fielded were formidable fighting forces, trained to exploit to the full the paved roads and systems of deep forward defence which, in aggregate, formed prepared arenas of combat for engaging the enemy. The Sasanians had to be ready to confront forces 25–30,000 men strong in normal circumstances, which might on occasion rise considerably higher, as in 363 when Julian (361–363) launched his offensive on the Mesopotamian front with some 80,000 men and in 504 when five armies, perhaps as many as 100,000 men in total, conducted coordinated operations in and around the upper Tigris basin.[12]

Finally, in the south-west, Arabia abutted on to Mesopotamia. Historians should always beware of presumptions induced by hindsight. The unification of the tribes, nomadic and sedentary, of the peninsula and their subsequent outrush into the fertile lands arching over the desert in the seventh century, could not have been foreseen. For the ultimate cause was quite unpredictable, as all new ideas are. The whole dramatic sequence of events originated in the sudden intrusion of a new notion – in this case, of a single, all-knowing, all-powerful, interventionist deity who governed the affairs of man and nature and before whom, at the end of time, *which was imminent*, every individual human being would be brought, alone and quailing, for judgement. Nor should much be made of the large nomadic element among the Bedouin. For the nomads of the hot southern deserts were not organised into large, cohesive tribes on the pattern of those of the northern steppes, nor, outside Yemen, had they developed notions of rule beyond that of the *shaykh*, whose authority was personal and contestable. Nonetheless, Arabia stretched away to the south, a large region of competing kin-based groups, outside the control of the two great northern sedentary powers but susceptible to assertions of authority by the kingdom of Himyar in Yemen. It was yet another *terre d'insolence*, though of very different character to the Caucasus and the far south-east. There was a perennial danger of Arab predation, given the tempting proximity of the rich, highly urbanised lands of Mesopotamia. There had also been a glint of a yet greater threat, in the 260s and 270s, when a regional, north Arabian union led by Palmyra had been able to mobilise substantial military resources and inflict defeats on both Persians and Romans.[13]

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[12] H. Elton, 'Military Forces' and P. Rance, 'Battle', in P. Sabin *et al*. (eds.), *Cambridge History of Greek and Roman Warfare*, II *Rome from the Late Republic to the Late Empire* Cambridge 2007, 270–309, 342–78; R. Tomlin, 'A.H.M. Jones and the Army of the Fourth Century', in D. Gwynn, ed., *A.H.M. Jones and the Later Roman Empire*, Leiden 2008, 143–65; J. Haldon, *Warfare and Society in the Byzantine World, 565–1204*, London 1999, 99–101; Howard-Johnston, 'Two Great Powers', 165–69.

[13] De Planhol, *Fondements géographiques*, 11-33; R. Hoyland, *Arabia and the Arabs from the Bronze Age to the Coming of Islam*, London 2001; F. Millar, *The Roman Near East 31 BC–AD 337*, Cambridge, Mass. 1993, 167–73; M. Rodinson, *Mohammed*, Harmondsworth 1971; F. M. Donner, *The Early Islamic Conquests*, Princeton 1981.

II. PRINCIPAL COMPONENTS OF THE SASANIAN EMPIRE

The Sasanian Empire enjoyed the advantages and suffered from the disadvantages of a central position. Troops could be shifted relatively swiftly over secure land routes between frontiers. Diplomats too could take advantage of interior lines to stir up trouble or to cultivate allies at times and in regions of their own choosing. In this respect, it was the precursor of several great powers which made the most of their central positions – the Carolingian empire, Byzantium in the age of revival (ninth–eleventh centuries), the Moghuls in the Ganges plain, France in the seventeenth and eighteenth centuries, Germany after unification, and, in the twentieth century, the Soviet Union. But centrality entailed encirclement. There were opportunities for expansion and the projection of power on all sides, but equally danger might materialise from any quarter. So beneath the imperialism of central powers there might well lurk a deep anxiety. In the case of Iran, the fearfulness was openly expressed in tales of the legendary past which took their penultimate form in the Sasanian period. In what became the national epic, Iran was beset from without. Good was unceasingly beleaguered by evil. Iran only survived through the actions of a few great national heroes. Sasanian claims to a divinely sanctioned, dominating role in earthly affairs can be viewed, at least in part, as diplomatic bluster, which masked an enduring insecurity. Indeed insecurity, perhaps even outright paranoia, was (and is), along with wishful thinking, rising at times to grandiose ambition, one of the prime movers in international relations.[14]

The prime tasks of government were to ensure good order at home and to uphold Iran's position abroad as the leading power of the further Near East. Very large capital investments were made in military infrastructure, and the largest single item of recurring expenditure was undoubtedly army pay and equipment, as it was for the Romans. The security of the core territories of the empire had to be guaranteed, and, if possible, Sasanian influence was to be projected far afield. The defensive installations varied according to circumstance, terrain, climatic conditions and the character of the potential adversary on different frontiers. Concentration of force was the guiding principle in some sectors, dispersal in block houses or small forts in others, linear extension along a defensive wall in yet others. In all cases, though, there was a marked forward orientation to the defensive systems, giving them an offensive cast. Frontier bases were potential spring-boards for attack, and, by their presence and monumental scale, acted as permanent advertisements of the daunting power of a great empire.

What then were the constituent parts of the empire built up by Ardashīr in the early third century? What were the core territories which had to be secured and, ideally, enlarged, if a *shāhānshāh* was to retain the *khwarrah* (glory) vital to a king as a mark of continuing divine favour?[15] Two great mountain ranges, the Elburz in the north and the Zagros in the

[14] Yarshater, 'Iranian National History'.

[15] A. Soudavar, *The Aura of Kings: Legitimacy and Divine Sanction in Iranian Kingship*, Costa Mesa 2003; A. Panaino, 'Astral Characters of Kingship in the Sasanian and Byzantine Worlds', in *La Persia e Bisanzio*, Atti dei convegni lincei 201, Rome 2004, 555–59. Cf. V. S. Curtis, 'Royal and Religious Symbols on Early Sasanian Coins', in D. Kennet and P. Luft (eds.), *Current Research in Sasanian Archaeology, Art and History*, Oxford 2008, 137–47.

south frame the huge interior plateau of Iran proper. The Elburz runs from the Köpet Dagh, a natural bulwark facing the open steppes in the east, to Transcaucasia in the west, the Zagros from the wild country of the far south-east to the rugged mountains of Kurdistan by Lake Van. Four principal resource-bases may be identified within Iran:

1) Media in the west, which is endowed with plenty of agricultural land, dispersed over the rolling country around Ecbatana (modern Hamadan) and along the edges of the plateau, and which could offer virtually limitless grazing in the north-west, in open country presided over by the huge mausoleum of Öljeytü at Sultaniyya;
2) Persia proper in the nearer south-east, where the ridges of the Zagros open out into fertile valleys and plains, the region from which the Sasanians, like their distant and largely forgotten Achaemenid precursors, set out on their imperial venture;
3) Khurasan, a swathe of open land which is comparatively well-watered, running north-west from Tus between the two main ridges of the Köpet Dagh; and
4) Adurbadagan (classical Atropatene) in the north-west, a region of fertile plains, many with volcanic alluvium, centred on Lake Urmia.

These were the natural power-centres within Iran, with the greatest concentrations of population and wealth, from which the authorities sought to cast their control over neighbouring highlands and thus to tap them for additional fighting manpower.[16]

But it was the lands to the south-west of Iran which generated most of the wealth of the Sasanian Empire. With the development of agriculture and irrigation in the fourth millennium BC, Mesopotamia engendered early city-based states capable of controlling large areas and of asserting themselves militarily far afield. Investment over the centuries in increasingly elaborate and extensive irrigation systems transformed the alluvial plain of lower Mesopotamia and the adjoining region of Khuzistan into highly productive agricultural lands. There was no need for similar interventions by man in the fertile, undulating, rain- and river-fed lands on the left (north) bank of the upper Tigris. The size and density of settlements in all three regions grew, peaking in the late Sasanian and early Islamic periods. With canals and rivers providing easy routes for the transport of commodities in bulk, the metropolitan area around Ctesiphon and Veh Ardashīr could be provisioned from its hinterlands (the upper Tigris basin to the north-west and the Diyala plains to the north, the development of which climaxed in a gigantic sixth-century irrigation scheme centering on the Cut of Khusraw).[17] It is hard to gauge the extent of commercial and manufacturing activity in the fertile, urbanised lands of Mesopotamia and Khuzistan, because of the paucity of useful source material. But there is evidence that the Sasanian Empire was a major player in Indian Ocean trade in Late Antiquity and was ready to defend

[16] W. B. Fisher, 'Physical Geography', *Cambridge History of Iran*, i, Cambridge 1968, 3–110.

[17] R. McC. Adams, *Land Behind Baghdad: A History of Settlement on the Diyala Plains*, Chicago 1965; R. McC. Adams and H. J. Nissen, *The Uruk Countryside: The Natural Setting of Urban Societies*, Chicago 1972; McG. Gibson, *The City and Area of Kish*, Miami 1972; R. McC. Adams, *Heartland of Cities: Surveys of Ancient Settlement and Land Use on the Central Floodplain of the Euphrates*, Chicago 1981; R.J. Wenke, 'Imperial Investments and Agricultural Developments in Parthian and Sasanian Khuzestan: 150 BC to AD 640', *Mesopotamia*, 10–11, 1975–76, 31–221.

its commercial interests from rival Roman and Turkish challenges. We should perhaps be ready to envisage a mercantile class growing up in the cities of Mesopotamia and reaching out to tap the resources of the Indian subcontinent. A network of contacts would help to explain the early spread of the Nestorian brand of Christianity to south India.[18]

These core territories, in the Iranian uplands and Mesopotamian lowlands, constituted the Iran of Late Antiquity, which, in early Sasanian propaganda, was marked off from *an-Ērān* , a collection of peripheral regions beholden to Iran, regarded as integral components of a wider Iranian sphere of influence (their near abroad).[19] *An-Ērān*, which looked or was expected to look exclusively towards Iran, comprised most of Transcaucasia (the eastern lowlands of Albania [ex-Soviet Azerbaijan], Iberia [Georgia], Siunia [roughly equivalent to Nagorno Karabakh] and the four fifths of Armenia which belonged to Persarmenia), the Gulf coast of Arabia which was conquered in the third century, and large buffer territories in the east and south-east, stretching, at the empire's apogee, as far as the Oxus, eastern Bactria and the Indus plain.

One region, potentially an economic resource of great importance, has not been mentioned so far. We are remarkably ill-informed about the Caspian and its southern coastlands in classical times and especially in Late Antiquity. Not much weight can be attached to a passing reference to commercial activity on the Caspian in Ammianus Marcellinus' long geographical digression on the Sasanian Empire, since he simply pieced it together out of antiquarian materials culled from ancient texts.[20] For other Roman historians, the Caspian lay outside their field of vision, largely restricted as it was to arenas of warfare. The east Syrian writers, who included secular material in their histories of the Nestorian church (semi-established within the Sasanian Empire), did not lift their gaze over the mountains which bound Mesopotamia on the north and west. Even the Armenian histories which provide near-contemporary evidence about the geo-political convulsions of the seventh century and take a broad view of the world around Armenia have nothing to say about the lowlands between the Caspian and the foothills of the Elburz. They first come into view in the early middle ages, under Muslim rule, when their agriculture (rice being the principal crop) and industry were well developed and the elites of the great cities played an important part in the wider cultural life of the Abbasid caliphate.[21] The question which gnaws at the mind of the historian of Late Antiquity, especially after travelling along the southern coast of the Caspian, is whether or not the Sasanian regime (and its Parthian predecessor) invested as much effort in developing them as it did in Mesopotamia. There is no physical evidence of water management schemes, nor of urban

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[18] D. Whitehouse and A. Williamson, 'Sasanian Maritime Trade', *Iran* 11, 1973, 29–49; G. Gropp, 'Christian Maritime Trade of Sasanian Age in the Persian Gulf', in K. Schippmann *et al*. (eds,), *Golf-Archäologie: Mesopotamien, Iran, Bahrain, Vereinigte Arabische Emirate und Oman*, Internationale Archäologie 6, Buch am Erlbach 1991, 83–88; de la Vaissière, *Sogdian Traders*, 227–32.

[19] G. Gnoli, *The Idea of Iran: An Essay on its Origin*, Rome 1989.

[20] Ammianus, xxxiii.6.51.

[21] V. Minorsky (tr.), *'The Regions of the World': A Persian Geography, 372 AH–982 AD*, London 1970, 134–135; Ibn Ḥawqal, *Configuration de la terre (Kitāb ṣūrat al-arḍ)*, tr. J. H. Kramers and G. Wiet, Paris 1964, ii, 370–72, 379; al-Muqaddasi, *The Best Divisions for Knowledge of the Regions*, tr. B. A. Collins and M. H. al-Tai, Reading 1994, 313, 316–17.

structures, because of the destructive effect of the subtropical climate on all manmade structures. But why would the Sasanian (and Parthian) authorities who showed themselves adept at devising and implementing large infrastructure development schemes elsewhere have refrained from doing so in the Caspian lowlands? It is not as if promotion of agricultural production and urban life was not encouraged in the north. For evidence has now been found of extensive irrigation works before and during the Sasanian era in the southern Gurgan plain immediately to the east of the Caspian lowlands.[22]

So the Caspian lowlands on the northern flank of the Elburz should probably be bracketed with Khuzistan, lower Mesopotamia and the basin of the upper Tigris on the southern flank of the Zagros and Armenian Taurus as a fourth massive agricultural resource, thus narrowing the gap between Iranian and Roman economic output and between the amounts of fiscal revenue which each could allocate to their army. In terms of military manpower, the Sasanians were certainly not at a disadvantage, since both great mountain ranges were nurseries of fighting men, foremost among them being the Daylamites of the western Elburz and the Kurds at the northern extremity of the Zagros. There were also the tribal lands of the far south-east, from which other elite forces were raised.[23] The key role of the main agrarian regions within the plateau, Persia proper, Khurasan, Media and Azerbaijan, and their principal urban centres was to bind highlands and lowlands together, to maintain the commitment of the heterogeneous peoples of the empire to the Sasanian imperial enterprise, and to sustain the Zoroastrian rites which would keep the empire free from contamination and maintain the favour of the gods.

III. DEFENSES, NATURAL AND MANMADE

In the south and west, the Sasanians were well endowed with natural defenses (Fig. 2). The Euphrates shielded Mesopotamia from attack from the desert, while the two Zabs provided convenient defensive lines against a regular army advancing down through the fertile lands on the left bank of the Tigris. Rivers which had carved out deep channels were harder to

[22] J. Nokandeh, E. Sauer and H. O. Rekavandi, 'Linear Barriers of Northern Iran: The Great Wall of Gorgan and the Wall of Tammishe', *Iran* 44, 2006, 121–73, at 138–48; H. O. Rekavandi *et al.*, 'An Imperial Frontier of the Sasanian Empire: Further Fieldwork at the Great Wall of Gorgan', *Iran* 45, 2007, 95–136, at 95–98; H. O. Rekavandi *et al.*, 'Sasanian Walls, Hinterland Fortresses and Abandoned Ancient Irrigated Landscapes: The 2007 Season on the Great Wall of Gorgan and the Wall of Tammishe', *Iran* 46, 2008, 151–78, at 151–61.

[23] Daylamites: Procopius, *Wars*, ed. J. Haury, tr. H. B. Dewing, 5 vols., Cambridge, Mass. 1914–28, viii.14.5–10, 12, 41–42; Agathias, *Histories*, ed. R. Keydell, CFHB 2, Berlin 1967, tr. J. D. C. Frendo, Berlin 1975, iii.17.6–8, 18.1–11, 22.5–8, 26.1–8, 28.6–7; Bosworth (tr.), *History of al-Ṭabarī*, v, 160. Kurds: Łazar P'arpets'i, *Patmut'iwn Hayots' (History of Armenia)*, ed. G. Ter-Mkrtch'ean and Y S. Malkhasean, Tiflis 1904, repr. Delmar, NY. 1985, tr. R. W. Thomson, *The History of Łazar P'arpec'i,* Atlanta 1991, 121, 124–25, 129 (Katišk'); F. R. Trombley and J. W. Watt (tr.), *The Chronicle of Pseudo-Joshua the Stylite*, TTH 32, Liverpool 2000, cc.22, 24, 57 (Qadushaye); Procopius, *Wars*, i.14.38–39 (Cadiseni). Tribesmen from far south-east: Ammianus, xix.2.3 (Segestani, described as the most zealous fighters among the troops arrayed against Amida in 359).

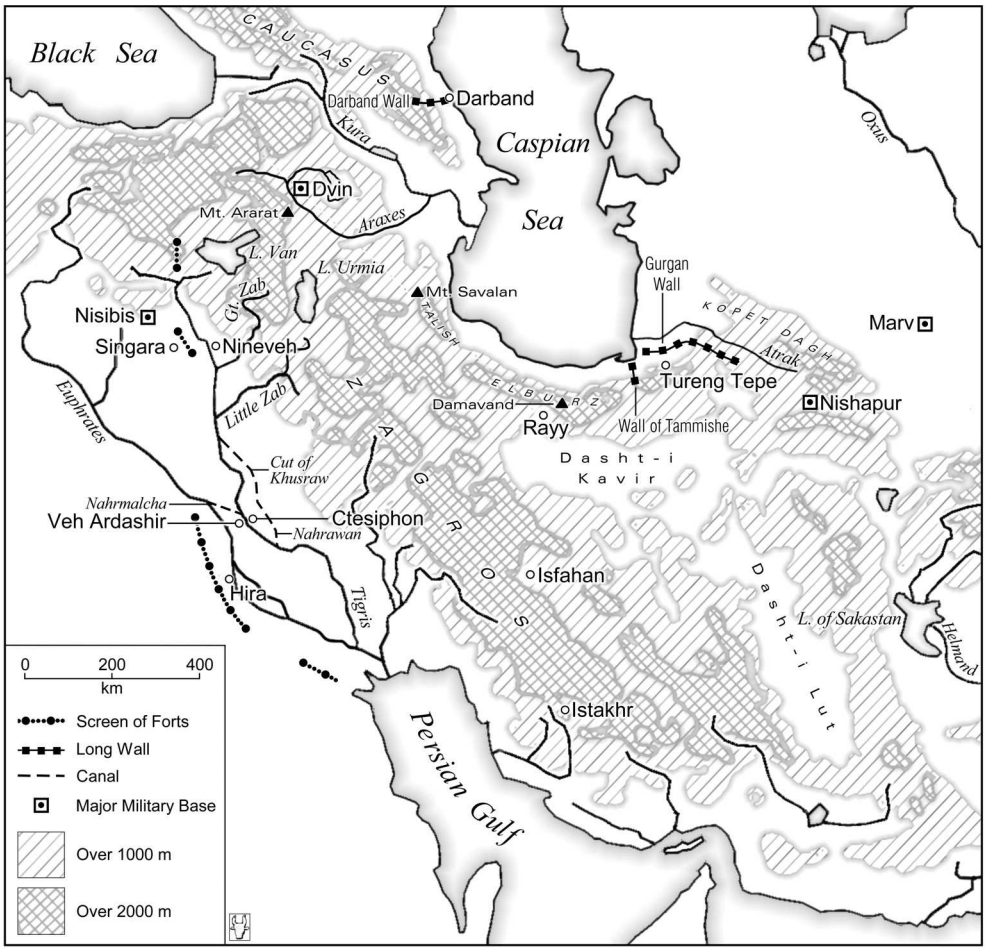

Fig. 2. Sasanian Defenses

cross than all but the highest and most broken of mountain ranges. Aware, like the Romans, of the potential danger posed by Arabs, the Sasanians took care to reinforce the works of nature. They created a defensive line on the margin of a belt of fertile land west of the Euphrates, stretching from Hīt in the north to Basra in the south. There were small, hard-point forts commanding key points in the communications network – the remains of three have been found (Ruda, north of the Karbala lake, Dab‘, near Ukhaydir, and Qusayr South, south-west of Nasiriyah), measuring between 35 × 35 m and 42 × 46 m and defended, in at least two cases, by eight semi-circular towers. They probably acted as outliers for larger fortresses (one, Qasr Yeng, measuring 150 × 150 m, has been identified west of the Karbala lake) and fortified towns analogous to those which grew up in Late Antiquity in the Roman *bādiya* (again one, Qusayr North, 7 km north-west of Ukhaydir has been identified). These

manmade fortifications were, according to later Islamic sources, fronted by a canal, built under Shāpūr II, running south from Hīt, supposedly as far as the sea.[24]

Well to the north, close to the Roman frontier, where the Euphrates encloses a large sweep of desert on its left bank, a network of fortified settlements (five have been provisionally identified) and guard posts secured the routes which Arab raiders might use to attack the fertile land between Nisibis and the Tigris, the one sector of Nisibis' hinterland to have been subjected to systematic survey.[25] Similar systems of local defense may be postulated for other relatively exposed areas on the right bank of the Tigris to the south as far as the Nahrmalch canal which ran along the northern edge of the central alluvial plain. Forward defense was provided by a fortress at Singara, on a low range of hills which rise from the desert due west of Nineveh and provide plentiful winter grazing. Singara commanded the approaches to these local defensive systems.[26] A yet more important deterrent took the form of the Sasanians' principal Arab client, the Nasrid dynasty of the Lakhm, who were given plenipotentiary, i.e. royal, power to manage the tribes of north-east Arabia from their capital at Hira. This they seem to have done successfully for over three centuries, remaining resolutely loyal to the Sasanian dynasty. By the sixth century, they had brought about a clear shift in the balance of power in northern Arabia in favour of the Sasanians. Their court at Hira was also recognised as the pre-eminent political and cultural centre of the whole of Arabia. It was at Hira probably that the heroic poetry of the pagan age which was collected and studied under the early Abbasids was composed and that the economical and elegant script used for classical Arabic was developed.[27]

Traces of a similar system of area defense which is probably attributable to the Sasanian period – a string of two-storey block-houses, varying in size but built to the same specification – were glimpsed by Aurel Stein in the area of Zarang, close to the modern Afghan-Iranian frontier, nearly a century ago. They were guarding what was probably a fertile swathe of irrigated land between the great lake of Sakastan and the Helmand river.[28]

As for the greater conventional military threat posed by Turkic nomads from Central Asia (against whom the block-houses would have been utterly ineffectual), the Sasanian high command relied on a very different defensive strategy, one of maximum concentration of force in large, heavily fortified strongholds. Marv, a massive hard-point base, strategically placed to command the approaches to Khurasan from beyond the Oxus, was the outer bulwark of Sasanian power. In times of confidence, as in the reign of Bahrām V, Marv was

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[24] B. Finster and J. Schmidt, *Sasanidische und frühislamische Ruinen im Iraq*, Baghdader Mitteilungen 8, Berlin 1976, 13, 27–39, 44–46, 47–48, 49–54.

[25] T. J. Wilkinson and D. J. Tucker, *Settlement Development in the North Jazira, Iraq: A Study of the Archaeological Landscape*, Warminster 1995, 70–1, 188–189 (figs 46–47).

[26] St. J. Simpson, 'From Tekrit to the Jaghjagh: Sasanian Sites, Settlement Patterns and Material Culture in Northern Mesopotamia', in K. Bartl and S. R. Hauser (eds.), *Continuity and Change in Northern Mesopotamia from the Hellenistic to the Early Islamic Period*, Berlin 1996, 87–126, at 90–92.

[27] G. Fisher, *Between Empires: Arabs, Romans and Sasanians in Late Antiquity*, Oxford 2011; Hoyland, *Arabia and the Arabs*, 236-243; M. C. A. Macdonald, 'Reflections on the Linguistic Map of Pre-Islamic Arabia', *Arabian Archaeology and Epigraphy* 11, 2000, 28–79, at 57–60, repr. in M. C. A. Macdonald, *Literacy and Identity in Pre-Islamic Arabia*, Aldershot 2009, iii.

[28] A. Stein, *Innermost Asia*, Oxford 1928, ii, 972–79.

the forward base where expeditionary forces gathered before campaigning in the steppes or pushing south-east towards the Indus. At other times, when the Sasanians were on the defensive, the presence of a large field army in what was an impregnable position, might well be enough to deter an invading force from pressing on, lest it be caught in a pincer attack or so harassed as to be unable to replenish its provisions by foraging.[29] Marv was backed by Nishapur, another powerful stronghold, lurking just behind the south-eastern tip of the range backing the Köpet Dagh (the Kuh-i Binalud).[30] From there it commanded the relatively narrow passage between the mountains and the interior desert to the south. Control of this natural pinch-point on the only feasible route for the invasion of Iran proper carried with it a plain threat of entrapment for any enemy foolhardy enough to venture further west.[31]

A similar strategy was adopted by the Persians on their western, Roman frontier. South of the Taurus, the key forward base was Nisibis, once it had been forcibly disgorged by the Romans after the disastrous failure of Julian's expedition in 363. The presence of large numbers of military personnel at times of international tension does not appear to have dampened intellectual or commercial life in the city, but it certainly deterred even the greatest of Roman generals in 541, when he was confident of the superiority of his own army, from advancing past it and leaving so great a potential threat to his rear.[32] In the north, a similar role seems to have been played by Dvin, capital of Persarmenia. It was well-placed, on the largest of the plains in the Araxes valley, to block the difficult route down the river as well as the pass which runs first east from the plain of Bagrewand and then north over the great western shoulder of Mount Ararat. Its garrison could either bar access to the plain or, preferably, trap an invasion force once it had come in.[33] It remains unclear, for lack of a Persian or Armenian source to match Procopius' *Buildings*, to what extent the Persians developed a zone of deep defense in their western frontier provinces. If it is safe to extrapolate from what is recorded by Theophylact Simocatta about Arzanene, the province immediately to the south of the Bitlis pass over the Armenian Taurus, where the fighting was concentrated in the 580s, the Persians, like the Romans, integrated fortified towns and specialised military forts into regional defensive systems. In the case of Arzanene, there was an additional element – underground refuges for the civilian population of rural areas.[34]

[29] G. Herrmann, V. M. Masson, K. Kurbansakhatov *et al.*, 'The International Merv Project: Preliminary Report on the First Season (1992)', *Iran* 31, 1993, 39-62, at 40–50; G. Herrmann, K. Kurbansakhatov *et al.*, 'The International Merv Project: Preliminary Report on the Second Season (1993)', *Iran* 32, 1994, 53–75, at 53–61.

[30] R. W. Bulliet, *The Patricians of Nishapur: A Study in Medieval Islamic Social History*, Cambridge, Mass. 1972, 3–10.

[31] The only alternative route would involve a long detour south to Zahedan and then west to Bam over difficult, largely arid country, before reaching the eastern edge of the northern outliers of the Zagros.

[32] Procopius, *Wars*, ii.18.1–19.25.

[33] Procopius, *Wars*, ii.25.

[34] L. M. Whitby, 'Arzanene in the Late Sixth century', in S. Mitchell (ed.), *Armies and Frontiers in Roman and Byzantine Anatolia,* Oxford 1983, 205–18. Underground refuges: Theophylact Simocatta, *History*, ii.7.1–5.

The forward defenses were backed, as has been seen, by a series of reserve lines of defense on the left-bank tributaries of the Tigris (there were few bridges to seize and hold). The narrow valley of the Euphrates, where it cuts its way through the desert well to the south, was effectively barred to an invader by a series of well-fortified island towns. The innermost line of defense was formed by the Nahrmalcha, 'royal canal', running from the Euphrates, on the north side of the low ridge on which Fallujah now stands, to join the Tigris above the capital. It was secured by troops stationed at Pirisabora, in the southern angle between the Euphrates and the canal, and by Veh-Ardashir, in a similar position at its eastern confluence with the Tigris.[35] A gigantic sixth-century project, which greatly extended the irrigation system in the Diyala plains, involved the construction of a canal, well over 200 kilometres long, on the left bank of the Tigris, from an off-take between Dura and Karkha (above modern Samarra), to a point well downstream of the capital. Besides acting as a major distributor of water and providing a waterway for the transport of bulk cargoes, this canal, known in its northern section as the 'Cut of Khusraw' and in the southern as the Nahrawan, provided Ctesiphon, hitherto exposed to attack, with virtually impregnable defenses.[36]

Finally, we turn to the north, to the defenses built, in the imagination of Christians, to hold off the threat of Gog and Magog. Long walls were constructed across the two inviting avenues of invasion which led south on either side of the Caspian. The Caspian Gates on the coastal strip at the eastern end of the Caucasus, where it narrows to 3.5 km, were blocked by two parallel walls running inland from a heavily fortified town and port at Darband. They were impressive, some 4 m thick, faced with limestone slabs and 18–20 m high, with 73 massive round and rectangular towers facing north, some 70 m apart, and 27 round towers at intervals of 170–200 m facing south. A single wall, guarded by at least 40 forts, continued for some 40 km into the mountains. This Darband wall was the main component of the Caspian Gates defenses, which included four other defensive lines, one to the north and three to the south.[37] Two features, the towers facing south on the double Darband wall and the three southern linear defenses, are rather puzzling if the function of the defenses was simply to keep out attackers, nomad or other, from the north. It looks as if the Sasanian authorities had laid out an artificial arena, its periphery defined by mountains to the west, sea to the east and manmade defenses to north and south, within which to lure, trap and engage intruders.

The creation of a strong line of defense to the east of the Caspian was a much more difficult task. For the distance between sea and mountains, in this case the north-western extremity of the Köpet Dagh (the Arab Dagh which ends in the Pishkamar Rocks), was over 180 km. The Gurgan River which flows west across the southern section of the plain had nothing like the defensive capability of great rivers like the Euphrates, Tigris or left-bank

[35] J. Matthews, *The Roman Empire of Ammianus*, London 1989, 145–55.

[36] Adams, *Land Behind Baghdad*, 76-80.

[37] K. V. Trever, *Ocherki po istorii i kul'ture kavkazkoj Albanii IV v. do N.E. - VII v. N.E.*, Moscow-Leningrad 1959, 267–87; S. Khan Magomedov, *Derbent*, Moscow 1979, 69–127, 207–27; E. Kettenhofen, 'Darband', *Encyclopedia Iranica*, VII, Costa Mesa 1996, 13–19, at 15–16; R. H. Hewsen, *Armenia: A Historical Atlas*, Chicago 2001, 89–91.

tributaries of the Tigris. Nor were there natural features to exploit in the plain itself except for the river. The plain forms a natural salient offering easy access to the Caspian lowlands and the two principal passes over the eastern Elburz. Long-established settlements on either bank of the Gurgan River and the irrigation system on which they relied were utterly exposed to attack. Only a few isolated protuberances rose from the surface of the plain, of which the most notable were two tepes (manmade, occupation mounds), Qizlar Qaleh, 16.5 m high, on the north bank of the river, and, some 15 km to the south, Tureng Tepe, rising to a height of 35 metres and crowned by a dilapidated fortress dating back to prehistoric times.[38]

It seems to have been experience of the fighting capability of the Turkic nomads from eastern Eurasia, from the 350s to the early fifth century, which decided the Sasanian government to embark on the massive programme of investment in military infrastructure needed to protect the southern Gurgan plain and thereby to plug what was a serious hole in the defenses of Iran as a whole. For the long wall which was built is securely dated to the fifth or early sixth century.[39] Its course can still be traced as it snakes across the plain as a broad, low swelling, suffused for much of its length with a dark red colouring from the billions of brick fragments embedded in the soil. Its construction was an extraordinary feat of engineering and logistics. The wall, which climbed up the Pishkamar Rocks and carried on for some 15 km into the Arab Dagh at the eastern end, was guarded by approximately 36 forts and fronted by a wide ditch in the plain. The water which filled the ditch was drawn by a series of off-takes from the Gurgan River a short distance to the south. Two small forts on the Pishkamar Rocks extended the defenders' field of vision at the eastern end. In the west Qizlar Qaleh was incorporated as a forward lookout post. The wall curved to the south as it approached the Caspian, where it may have ended, like the Darband wall, in a fortified harbour, now submerged beneath the Caspian, or, conceivably, may have continued to join up with the northern end of the Wall of Tammishe (for which see below).[40]

There were other elements in this grand regional fortification system beside the main wall with its ditch, forts and observations posts. The Wall of Tammishe, which ran for some 11 km inland from the south-east corner of the Caspian into the foothills of the Elburz, was probably built by the same units as the westernmost section of the main wall, to judge by the dimensions of the bricks used. Intriguingly, it faced west, since that was the side protected by a ditch. It was designed, it seems, to prevent hostile forces – Elburz highlanders? sea-raiders? – from entering the protected southern segment of the Gurgan plain.[41] Of greater significance, probably, are the vestiges of eight mud-brick compounds in the immediate hinterland of the wall. Four of these are of strikingly similar design – large, square fortresses, averaging 40 ha in area. They have been characterised plausibly as

[38] Nokandeh, Sauer and Rekavandi, 'Linear Barriers', 148–51; R. Boucharlat and O. Lecomte, *Fouilles de Tureng Tepe*, I *Les périodes sassanides et islamiques*, Paris 1987, 7.

[39] Nokandeh, Sauer and Rekavandi, 'Linear Barriers', 158–63 for OSL (optically stimulated luminescence) and radiocarbon dating.

[40] Nokandeh, Sauer, and Rekavandi, 'Linear Barriers', 121–51; Rekavandi *et al.*, 'Imperial Frontier', 95–107, 112–13; Rekavandi *et al.*, 'Sasanian Walls', 166–69.

[41] Nokandeh, Sauer and Rekavandi, 'Linear Barriers', 151–58; Rekavandi *et al.*, 'Imperial Frontier', 112–13.

ready-made encampments for temporary occupation by field armies, with large cavalry components. This is suggested by relatively shallow deposits of detritus and by the internal lay-out of the one fortress which has been examined in detail, Qaleh Kharabeh, with broad avenues between double rows of tent enclosures for the tethering of mounts. One or two of the other four compounds which have been detected may well have served the same purpose. So it seems that a large offensive capability was incorporated into the Gurgan defensive system.[42]

Finally, there is Tureng Tepe to consider. It commands the western half of the Gurgan Wall from the edge of the alluvial plain to the south of the river. It is a large site, some 35 ha in extent, elevated well above the plain. It has several distinct elements: the main tepe, 35 m high, was well defended and served as the citadel; a narrow ridge runs north-east from the tepe, forming a useful outer line of defense on the north-west side of the site. What may be construed as a large outer enclosure incorporated two smaller mounds which lie to the south and west of the tepe and a broad platform, rising some 5–6 m from the plain, which extends east and south from the large and small tepes; a depression which transects the platform is blocked by a dam at its north-west end, where it passes between the two small tepes, so as to create a small lake – if a reservoir of this sort existed in antiquity, it would have solved the problem of water supply for the site.[43] Given its strategic position, it is tempting to identify the complex as a regional military command centre, responsible for organising logistics and for co-ordinating operations along and behind the wall.[44] This must remain in the realm of speculation, since only the main tepe, which served as the citadel, has been subjected to systematic investigation. It is telling, though, that the third building phase, during which the fortifications of the citadel were refurbished and improved, was roughly contemporary with construction of the Gurgan Wall.[45] Tureng Tepe would undoubtedly have made an impressive headquarters base, worthy of a senior general, with the citadel rising above the rest of the base and presenting a daunting face to all those approaching from the north – five closely-spaced round towers rising from a glacis, with a row of tall arrow-slits above a decorative band.[46]

The main Gurgan Wall and its forts were completed in a single building phase. Work began at the western end and moved east. Bricks were manufactured in hundreds, if not thousands, of kilns placed at regular intervals along the line of the wall. The fronting ditch and its feeder canals served several useful purposes during the period of construction – providing excavated material for the platforms of the forts, clay and water for the manufacture of bricks, and access for barges bringing in other materials.[47] The processes of design, procurement of materials, assembly and deployment of labour, and so forth,

[42] Rekavandi *et al.*, 'Sasanian Walls', 161–66, supplemented by further information from Eberhard Sauer.

[43] Boucherlat and Lecomte, *Fouilles de Tureng Tepe*, 7.

[44] *Contra* Boucherlat and Lecomte, *Fouilles de Tureng Tepe*, 49, 195–96.

[45] Without secure, scientific evidence, the excavators can only place it in the later Sasanian era, preferring to credit it to Khusraw I rather than Pērōz, on the grounds that Khusraw is known as a great builder (Boucherlat and Lecomte, *Fouilles de Tureng Tepe*, 192–95).

[46] Boucherlat and Lecomte, *Fouilles de Tureng Tepe*, 25–49.

required managerial skills of a high order. It was a gigantic project, the largest single investment in military infrastructure made by Iran in classical antiquity or the middle ages, only surpassed in the civil sphere by the Cut of Khusraw/Nahrawan project. It demonstrated that the Sasanian state was capable of organising projects almost on the scale of Chinese imperial regimes in Late Antiquity.[48] Its construction should probably be credited to Pērōz (459–84). For it was he who embarked on a policy of head-on military confrontation with the most powerful neighbouring nomads of the time, the Hephthalites, in an apparent attempt to break the power of Turan for several generations. A vital preliminary act would have been to strengthen Iran's defenses and to establish a secure forward area for the mobilisation of expeditionary forces. Circumstances also were relatively propitious for undertaking so large a project, after the successes achieved in the steppes earlier in the century by Bahrām V. Later, after the disastrous end of Pērōz's final expedition, which is reported to have been launched from Hyrcania (Gurgan), such a project would have been out of the question.[49] The cost would have been prohibitive, at a time when large sums of tribute were being paid out to the Hephthalites, and it is inconceivable that the Hephthalites would have authorised it in what remained in effect a protectorate of theirs up to the early sixth century .[49a]

Two functions of the Gurgan Wall and associated installations have already been picked out. In the first place, it greatly improved security. The weakest sector in the perimeter defenses of Iran was transformed into one of the strongest. All but the largest forces could be opposed at the wall itself. The very appearance of the wall and its protective forts was likely to deter attack, by impressing the majesty and power of the Sasanian Empire on northern peoples. The wall clearly demarcated the territory of Iran, as bastion of civilisation and prime earthly agent of the good, from the outer world of Turan. Cross-border traffic could be policed thenceforth with ease, and custom duties raised from goods in transit. In the second place, the Gurgan Wall provided the Sasanian high command with a secure setting for the gathering, training and provisioning of expeditionary forces. This was probably its prime intended function at the time of construction. The Romans had developed a similar sort of secure forward assembly area, in the early third century, when they became aware of the offensive striking power of Iran under its new dynasty. But theirs was withdrawn well back from the frontier – in the Arabissus plain, nestling in the Anti-Taurus – and they relied primarily on God-given defenses, in the form of mountain ridges which splayed out north and south of the interior basin.[50] The Sasanians' fifth-century assembly area was much more aggressively positioned.

A third function may also be suggested. On those occasions when an enemy attacked

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[47] Nokandeh, Sauer and Rekavandi, 'Linear Barriers', 130–35, 147–48; Rekavandi *et al.*, 'Imperial Frontier', 108–12.

[48] A. Waldron, *The Great Wall of China: From History to Myth*, Cambridge 1990, 42–47.

[49] Łazar P'arpec'i, 155–56.

[49a] This rules out the second half of the period defined by carbon-14 dating (fifth–early sixth century).

[50] J. Howard-Johnston, 'Military Infrastructure in the Roman Provinces North and South of the Armenian Taurus in Late Antiquity', in A. Sarantis, L. Lavan and N. Christie, ed., *Warfare in Late Antiquity: New Perspectives*, Late Antique Archaeology 8, Leiden forthcoming.

in massive force, when it was judged imprudent to try to hold the line of the wall at all costs, the whole southern section of the Gurgan plain could be treated as a large prepared arena of combat. As in the case of the Caspian Gates, the arena of combat was defined by manmade structures and natural barriers – the Gurgan Wall itself with its forts, a well-defended redoubt south of the river (Tureng Tepe), the Caspian together with the wall of Tammishe (admittedly facing the other way but still a significant obstacle) to the west, the Arab Dagh to the east, and the Elburz to the south. Within these fixed boundaries, with which the defenders would be so much more familiar than the attackers, Sasanian commanders would be able to devise various scenarios for trapping, engaging and defeating enemy forces. The combination of a mobile field army and well-garrisoned fixed defenses would always pose great danger to an intruder, the danger of being manoeuvred into a position where he could be attacked from two or more sides at once, or of being exposed to harassing attacks as he withdrew and had successively to cross river, wall and ditch.

IV. MILITARY CONSTRUCTION PROJECTS: CHRONOLOGY

With the completion of the Gurgan Wall, the Sasanian Empire had been rendered as secure as was humanly possible. Different strategies were programmed in by the configuration of physical defenses, both manmade and natural. Where great powers were faced, nomadic in the east, sedentary in the west, resort was had to massive, hard-point bases, where maximum concentration of force could be achieved, as at Marv, Dvin and Nisibis. Where the distances were not too great and the cost consequently not prohibitive, extended linear defenses were developed:

(1) along the Euphrates, strengthened in the south by a long fronting canal,
(2) along the Caucasus with an artificial extension (the Darband wall) to the sea, and
(3) to the east of the Caspian, the Gurgan Wall defending the north-western flank of the Köpet Dagh, Iran's great natural redoubt facing the steppes.

Of course, military forces had to be spread thin to hold these lines, but fixed defenses more than made good the dispersal of force. In most circumstances, the garrison troops, supported by a mobile reserve, would be able to halt and repel invasion forces, thus guaranteeing the security of Sasanian territory in their hinterlands and justifying the capital invested in military infrastructure. On all frontiers, efforts were made to deepen the military zone behind the frontier, whether (1) by construction of a single large backing stronghold (for example Nishapur, far to the rear of Marv), or (2) by creation of a network of smaller forts to discourage enemy dispersal and thus to limit the damage which might be caused (as in the canal zone fronting the lower Euphrates, or in the hinterland of Nisibis, or in the lowest section of the Helmand valley), or (3) by development of reserve lines of defense, to contain forces which might have breached the forward defenses (as behind the Darband and Gurgan walls).

The development of the eastern frontier defenses of the Roman Empire can be broken down into distinct phases, above all because of the chronological precision imparted by a

rich epigraphic record and the comparative wealth of written source material. So it is possible to define (1) the initial development, under the Flavians (in the 70s and 80s AD), of forward defenses on the Euphrates, between Trebizond and Samosata, with support roads reaching back into the heart of Asia Minor, followed (2), in the early second century, after the annexation of the Nabataean kingdom, by the extension of the forward defensive line south to the Red Sea at Aila. Several further phases can also be picked out: (3) improvements to the strategic road network carried out over two generations around 200 CE, followed (4) by a general upgrading of defenses along the whole length of the frontier, begun by Diocletian (284–305) and extending into the second half of the fourth century; finally (5), after a long intermission during the many decades of peaceful co-existence (*c.* 387–502), a crash programme of fortification, involving new and improved projects, carried through to completion in a little over twenty years between 505 and 527 and described in detail by Procopius.[51]

We would dearly like to know how the Sasanians responded to Roman building activity from the late third century onward, especially to the massive investment in military infrastructure in Armenia and north Mesopotamia made by Anastasius (491–518) after the rude breaking of the peace by Kavād (488–96, 499–531) in autumn 502. It would be no less interesting, not least from the point of view of Sasanian state finances, to be able to date specific infrastructure projects, including those with military functions. However, given that there are very few dating indications, we have no choice but to resort to educated guesses for the most part. We may conjecture that great cities like Marv, Nishapur, Dvin and Nisibis, which were given key strategic roles, both defensive and offensive, had their existing defenses upgraded on annexation. In the case of Nisibis, the work can be placed in the period immediately following the ignominious retreat of the Roman army in 363, when there was virtually no chance of disruption to building work.[52] As for Marv, all we can say is that, if the Seleucid fortifications of the lower city (Gyaur-Kala, 340 ha) and the 20 m high walls of the adjoining polygonal Achaemenid fortress (Erk-Kala, 20 ha), both mud-brick, needed improving, the work was probably carried out before, perhaps well before, the phase of Sasanian aggression in Central Asia, which is associated with Bahrām V.[53] Nothing beyond basic maintenance and repair work was probably done at Dvin, after the abolition of the Arsacid client-kingdom, given that the peace treaties in force (from *c.* 387 CE) are likely to have included a clause banning fortification work on or close to the Roman frontier.[54]

The ground becomes somewhat firmer in the fifth century. The Romans acknowledged that they had an interest in the defense of the Caucasus and agreed to contribute to the cost of the Caspian Gates, possibly as early as 387.[55] Development of its multi-layered

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[51] Procopius, *Buildings*, ed. J. Haury, tr. H. B. Dewing, Cambridge, Mass. 1940, ii–iii. Cf. Howard-Johnston, 'Military Infrastructure'.

[52] M. H. Dodgeon and S. N. C. Lieu, *The Roman Eastern Frontier and the Persian Wars AD 226–363: A Documentary History*, London 1991, 231–74.

[53] Herrmann *et al.*, 'Merv Project, First Season', 40–41.

[54] Howard-Johnston, 'Military Infrastructure'. Cf. Blockley, *East Roman Foreign Policy*, 42–45.

[55] Blockley, *East Roman Foreign Policy*, 50–51.

system of defense may therefore be placed early in the fifth century, when the Persians, like the Romans, were all too aware of the continuing threat posed by the Huns and the Roman subsidy was to hand. Later, in the middle of the century, attention shifted to the eastern shore of the Caspian. The ambitious Gurgan plain fortification scheme may be dated, with reasonable confidence, taking account of general historical considerations as well as the results of scientific analysis, to the reign of Pērōz. Completion of that massive project was then followed by a hiatus after Pērōz's last, disastrous expedition, when Iran was reduced to tributary status *vis à vis* the Hephthalites and was subject to serious social and religious stress.

The time of troubles ended with Kavād's Roman war, extraordinarily successful in 502 but ending in a forced withdrawal from the main prize, Amida, in 505. An uneasy peace followed, during which an arms race, taking the form of rival fortification programmes, almost certainly gathered pace.[56] Kavād, it may be conjectured, sponsored upgrading work in the two main theatres of war, north and south of the Armenian Taurus, and, in addition, may have encouraged, even funded, the construction of new forts to add to the security of highland districts in Persarmenia.[57] The upgrading of the principal line of defense in the Caspian Gates, involving the reconstruction *in stone* of the Darband wall, was probably a contemporary project, prompted by an enhanced threat from the north Caucasus Huns, first evident in 503–4 (Kavād was forced to divert troops from the upper Tigris basin, allowing the Romans to seize the strategic initiative). Since a date, given in the form of a regnal year (ending with the digit 7, or just possibly 3) of an unnamed king (taken to be either Kavād or Khusraw I [531–79]), is included on one of the official inscriptions on the wall, completion of the project may be placed most plausibly in Kavād's twenty-seventh year (514–15) or Khusraw's third (533–4).[58]

A much larger infrastructure project, explicitly associated with Khusraw in medieval sources, was the Cut of Khusraw-Nahrawan scheme in the districts adjoining the Diyala's junction with the Tigris. It was probably initiated at the very start of Khusraw's reign, once he was flush with cash under the terms of the treaty for a Peace without End which Justinian had been forced to sign in 532. While it was primarily a civilian project, increasing massively the irrigated proportion of the hinterland of capital, it brought with it an important strategic gain. For the new trunk canal on the left bank of the Tigris formed an inner, virtually impregnable line of defense around the metropolitan area. This significant improvement in security was achieved without in any way infringing the 532 treaty with the Romans.[59]

Such is the provisional chronology of major Sasanian military construction projects which may be pieced together from the scanty available evidence. What cannot be in doubt

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[56] G. Greatrex, *Rome and Persia at War, 502–532*, Leeds 1998, 73–122; Howard-Johnston, 'Military Infrastructure'.

[57] It would help explain the early appearance of castles in private hands in Armenia, if the structures were built by the Sasanians and then taken over by local princes with the receding of Sasanian authority in the seventh century.

[58] Kettenhofen,'Darband', 16.

[59] Greatrex, *Rome and Persia at War*, 213–18; Adams, *Land Behind Baghdad*, 76–80.

is the strength of Iran's outer defenses in the middle of the sixth century, when bubonic plague struck the Sasanian state a devastating demographic and fiscal blow. The marked slow-down in building activity in the 540s attested by Procopius for the Roman Empire, was assuredly paralleled further east.[60] Minor work may have taken place subsequently, as the revenue base began to recover – for example, to provide accommodation for a large influx of Turkish troops, who, we know, were resettled in several different areas, away from their point of entry at the Caspian Gates.[61] Khusraw's great project in the metropolitan area must have absorbed almost all of whatever capital was available for investment.

The peripheral bases, lines of fortification and systems of area defense developed under earlier kings proved their worth towards the end of Khusraw's reign, around 570, when Turks and Romans formed an unholy alliance and Iran was threatened from all quarters. Of course, resources of many sorts were drawn on as Khusraw clawed his way out of trouble – Sasanian statecraft, a versatile and resilient military, carefully modulated propaganda and brilliant strategic planning. But military and diplomatic action required solid bases to be effective, if it was:

(1) to dissipate potential danger from the south (as was achieved by the 571 Yemen expedition),
(2) to contain the trouble fomented by the Romans in Transcaucasia and gradually to re-impose Persian authority (a process completed by Khusraw himself in 576),
(3) to prevent the Turks breaching the defenses of Iran in the east and north (they held in the critical opening year of full-scale warfare, 573, in contrast to 627 when the Darband wall was attacked in overwhelming force), and
(4) to launch a devastating counter-offensive in the west in 573 (which resulted in the capture of Dara).

All component parts of the peripheral defensive system contributed to the successful outcome from these years of crisis, both by securing Sasanian authority on the ground and acting as platforms of counterstrikes.[62] Within 30 years the same set of installations was to prove its worth in very different circumstances, when, in 603, Khusraw II launched

[60] P. Sarris, 'The Justinianic Plague: Origins and Effects', *Continuity and Change* 17, 2002, 169–82; L. M. Whitby, 'Justinian's Bridge over the Sangarius and the Date of Procopius' *De Aedificiis*', *Journal of Hellenic Studies* 105, 1985, 129–48 at 146.

[61] Z. Rubin, 'The Reforms of Khusraw Anūshirwān', in Cameron, *Byzantine and Early Islamic Near East*, iii, 227–297, at 279–284.

[62] Principal sources: Theophylact Simocatta, iii.9.1–15.7; *History of Menander*, fr.10, 13, 16, 18; Photius, *Bibliotheca*, *cod.* 64 (Theophanes of Byzantium), ed. and tr. R. Henry, 8 vols., Paris, 1959–1977, i, 76–79; Bosworth (tr.), *History of al-Ṭabarī*, v, 160, 237–52, 264 (occupation of Yemen), 298–301 (gravity of crisis [mistakenly transposed to the later 580s]). With the attention of Romans, Armenians and Syrians focused on events closer at hand, nothing is reported about events on the north-eastern frontier. This silence assuredly implies that disaster was avoided. Cf. Whitby, *Emperor Maurice*, 250-268 and Rubin, 'Reforms of Khusraw', 284–86.

a war of aggression against the Romans in the west and, with a single exception in the east in 615–16, maintained security on all other frontiers.[63]

Iran certainly had the physical endowment, in natural defences and military installations, to take on and beat its foreign enemies. Khusraw's achievement in 571–6 may even cap that of the Dutch Republic in its *annus nefastus*, 1672, when it came under attack simultaneously by land and sea from all its neighbours, and had to break the dikes to secure its core territory. What, though, of the fighting men who defended long walls, river and canal banks, who garrisoned forts, fortresses and fortified cities, and who were ready to venture forth from defended forward positions to take on the enemies of Iran? How many of them were there? Whence were they recruited and on what terms? How were they equipped? How well were they trained? What can be learned of their deployment in peace and war, and of the command structure? How was strategic cohesion achieved, when troops were distributed over so large a territory? These and many other questions cry out for answers.

V. TROOP NUMBERS, RECRUITMENT, CAPABILITIES

What then was the strength of the late Sasanian army? Figures are to be found in well-informed Roman sources for Sasanian forces engaged in major operations on the western front. They range from 20,000, the number of troops whom Kavād put into winter quarters at Singara after the fall of Amida in January 503, to the 40,000 who advanced to the plain south of Dara in 530 and, after being reinforced with another 10,000 from Nisibis, made ready to destroy Belisarius' army in front of Dara.[64] But such figures tell one little about the Sasanians' full military establishment. For the size of a field army was limited in the pre-modern age, both by logistical constraints (the larger the army, the wider the range of foraging and grazing needed to keep men and horses fed) and by its manageability on the march and on manoeuvre. A general could not exercise effective command over a force larger than 25–30,000 men, nor could it move fast enough, if too much time were lost at the beginning and end of each day on the march, in forming up and falling out to camp.[65] Rather more useful are those rare occasions when massive Roman armies were successfully opposed – say the 60,000-strong army commanded by the emperor Philip the Arab (244–9) which was defeated at Barbalissus in 250, or the main invasion force of 65,000 men[66] which

[63] R. W. Thomson and J. Howard-Johnston, *The Armenian History Attributed to Sebeos*, TTH 31, Liverpool 1999, xxii–xxv, 183–89, 193–228. Note that the dating by regnal years of Khusraw II should be corrected (brought forward one year), to take account of the re-dating of his accession to 590–591 by S. Tyler-Smith, 'Calendars and Coronations: The Literary and Numismatic Evidence for the Accession of Khusrau II', *Byzantine and Modern Greek Studies* 28, 2004, 33–65.

[64] *Chronicle of Pseudo-Joshua*, c.55; Procopius, *Wars*, i.13.23, 14.1.

[65] Cf. Haldon, *Warfare, State and Society,* 139-176; M. Whitby, 'Recruitment in Roman Armies from Justinian to Heraclius (*c.* 565–615)', in Cameron, *Byzantine and Early Islamic Near East*, iii, 61–124, at 100–102.

[66] P. Huyse, *Die dreisprachige Inschrift Šabuhrs I. an der Kaʿba-i Zardušt (ŠKZ)*, Corpus Inscriptionum Iranicarum III.1, London 1999, i, 28 and ii, 55–56; Eunapius' figure is transmitted by Zosimus, *Historia nova*, iii.13.1, ed. and tr. F. Paschoud, *Zosime, Histoire nouvelle*, II.1, Paris 1979, 27.

Julian led to its doom in 363 – or when the Sasanians deployed substantial forces in separate theatres – as in 528, when a pre-emptive strike by one army broke up a planned Roman offensive from Lazica and a second army, 30,000 strong, won a victory in north Mesopotamia, or 530 when, in addition to the 50,000 troops facing Belisarius, a 30,000-strong army advanced west against Satala in the north.[67]

But what percentage of the standing army could be mobilised for operations on two connected sectors of a single front? Clearly troops were needed outside the active theatre or theatres of war – above all for internal security. In an era before the development of specialist civilian police, the authorities relied ultimately on the military to enforce their will and to preserve the good order expected on earth. So troops were assuredly dispersed across the length and breadth of the empire, spread thin perhaps in the plains but more in evidence in and around the great mountain ranges. There were, of course, other demands on the military – guard duties in the palace, defense of the binary capital and its outer perimeter along the Cut of Khusraw-Nahrawan canal, and defense of all sectors of the frontier away from that which was the primary focus of action. If it seems reasonable to put the ratio of large field army to full military establishment at 1:4 (it seems to work for the rump east Roman state of the dark age), then we may envisage a total of some 320,000 troops of all sorts in the Sasanian army – a figure somewhat below that suggested for the fourth century Roman Empire (500,000) but roughly equal to that customarily given to the eastern empire in the sixth century.[68]

It is possible, however, to estimate the military strength of the Sasanian Empire independently of the written evidence. For a detailed survey has been carried out at one of the larger forts on the Gurgan Wall, fort 4 (5.5 ha), which was defended by 32 towers. Eight barrack blocks have been identified, with accommodation for 1000 men (at 4 soldiers per room) or 2000 (at 8 per room). Given that the total area enclosed by the 36 or so forts on the wall comes to some 90 ha, a rough total of 30,000 may be suggested for the permanent garrison.[69] From this point on, extrapolation becomes more hazardous: we may assign roughly equivalent forces (say, of 20,000 men) to the six other main frontiers of the empire: the east Caucasus where the Caspian Gates defenses needed to be manned in strength, with other units assigned to patrol the mountains to the west; Persarmenia where capable garrisons were required to secure the regional capital Dvin, other fortified towns and the forts which may be conjectured to have been built to give depth to the defenses; the northern approaches to the metropolitan region in Mesopotamia, which were already heavily fortified in the fourth century; the defensive installations fronting the lower Euphrates, and to be found on the Gulf coast of Arabia; the far south-east where there was much policing work to be done in addition to protection of settlements in the lower Helmand basin; and finally, the open frontier facing the steppes of Central Asia, where substantial forces had to be stationed at all times to uphold Sasanian prestige and daunt potential aggressors. We thus obtain a figure of some 150,000 soldiers engaged in guard

[67] Malalas, xviii.4 and 26; Procopius, *Wars*, i.13.23,14.1, 15.11.

[68] See n.12 above

[69] Rekavandi *et al.*, 'Imperial Frontier', 113–31. Eberhard Sauer now identifies eight shorter rather than four longer barrack blocks in fort 4 (pers. comm.).

duties on Sasanian frontiers, to which should be added perhaps another 30,000 involved in policing the interior provinces. This would put the Sasanian analogues to the late Roman *limitanei* at approximately 180,000.

Rather more important, in terms of striking power, were the mobile forces which could be deployed in offensive or defensive operations in the field, analogous to the late Roman *comitatenses*. Here again there is some solid material evidence from which to extrapolate – the internal lay-out of one quadrant of one of the four similar square mud-brick fortresses situated behind the Gurgan Wall, Qaleh Kharabeh (41 ha). Tent enclosures, each capable of accommodating 8–10 men, were arranged in 14 rows of 20 (or, possibly, 21), each pair of rows being fronted by 17 m wide avenues where mounts could be tethered. This puts the capacity of one quarter of the fortress at between 2240 and 2800 men. If, as seems likely, at least one other quadrant accommodated infantry, with more tent enclosures packed in, the total capacity of Qaleh Kharabeh would have been at least 10,000 men.[70] If similar totals may be attributed to the three strikingly similar fortresses which have been identified and to one or two of the other four compounds, we may envisage their total capacity as 50–60,000 men.[71] They were designed, it appears, as permanent camps or campaign bases for the secure accommodation of expeditionary forces of 50–60,000 men, on the edge of the open steppes into which they would be venturing before long. We can then make the more hazardous leap from the capacity of the Gurgan plain fortresses to the total offensive capability of the empire – putting it perhaps at three times the size of the lower figure for the Gurgan compounds' capacity which tallies with the largest recorded force operating in a single theatre of war (50,000), or twice the maximum number of troops ever recorded in action on a single front (80,000 in the west, in Persarmenia and northern Mesopotamia, in 530). This gives us a figure of 150,000–160,000 field troops, or a grand total of 300,000 or 310,000 men serving in the Sasanian forces – a number which does not include the guards-regiments stationed in Ctesiphon and its vicinity, responsible for the personal protection of the *shāhānshāh* and for security in the inner zone of the metropolitan region on both banks of the Tigris within the shielding canals to north and east.

Both these lines of argument, inevitably conjectural, point to a total of over 300,000 men serving in the Sasanian army in time of war. The peacetime establishment was probably rather lower, with a reduction in the strength of mobile field forces. As in the case of the late Roman army, the extra manpower required when there was the prospect of serious fighting on one or more fronts was probably generated in the Iranian core of the empire by concerted recruiting drives, initiated from the centre and conducted in the localities by generals with high reputations.[72] In the periphery, the task of mobilising a given number of troops was delegated, we know, to client-rulers. How, though, was the standing army replenished normally? What were the terms on which soldiers, whether cavalry or infantry, were recruited? Such scraps of evidence as there are suggest that soldiers serving in the field armies were paid in cash, before as well as after the reform programme initiated by

[70] Rekavandi *et al.*, 'Imperial Frontier', 130-131; Rekavandi *et al.*, 'Sasanian Walls', 161–66.

[71] Gabri Qaleh, Qaleh Daland and Qaleh Gug A. Information on the other four compounds from Eberhard Sauer.

[72] Cf. Whitby, 'Recruitment in Roman Armies', 63–68, 83–85, 116–19.

Khusraw I in the 530s. Hence the regular output of silver drachms, of a single authorised design, to the same high standard, from mints distributed across the empire throughout the Sasanian period.[73] Equipment seems to have been issued by the state: hence the regime of rigorous inspection which was the principal military reform introduced by Khusraw I and a legal requirement to return equipment at the death of a soldier.[74] We may also conjecture that military families benefited from certain fiscal concessions.

It is hard to say whether or not regular soldiers were allotted land in return for military service, whether or not there was a special category of military estates, the holders of which were hereditarily obliged to join the army, on the pattern of the system developed in the Byzantine rump of the east Roman Empire in the course of the dark age. The only evidence is indirect: reference is made in the *Book of a Thousand Judgements* to the sealing (formal registration) of a son by his father into the *asabar nipik*, 'List of Horsemen'. The circumstances envisaged are far from clear: the sealing may or may not have been a voluntary act of the father, in return for which he received a benefit from the state, say exemption or partial exemption from tax; if it was obligatory, it may have fallen on the family or may have been attached to the land, in which case the father merely retained the right to choose which of his sons would take the duty over from him.[75] The only firmly attested grants of land to individual subjects of the king in return for military service were made to senior commanders in recognition of past achievements.[76] Foreign forces, however, might be offered land (with the vital addition of water) for resettlement within the empire, as an inducement to come over and fight for Iran. This happened in the case of the Turks (53,000 all told) who sought asylum and were, after some hesitation, admitted through the Caspian Gates in 568–9. It was a time of gathering crisis when the Qaghan of the Turks was initiating talks to forge a Roman-Turkish alliance against the Sasanians. Any boost to Persian military strength, as was on offer from these Turks, in reality probably dissident subjects of the Turks who probably included Hephthalites and Sabir Huns, was eagerly grasped. For reasons of security, the incomers were reorganised into seven subdivisions and dispersed to the Marv region, Adurbadagan and, at least, one other area, where local military commanders could watch over them and make sure that they and their families were provisioned and accommodated. Those selected by the Sasanian authorities to take

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[73] M. Alram and R. Gyselen, *Sylloge Nummorum Sasanidarum: Paris-Berlin-Wien*, I *Ardashir I.-Shapur I.*, Vienna 2003; N. Schindel, *Sylloge Nummorum Sasanidarum: Paris-Berlin-Wien*, iii.1–2 *Shapur II.-Kawad I./2. Regierung*, Vienna 2004.

[74] Bosworth (tr.), *History of al-Ṭabarī*, v, 262–63. Cf. Christensen, *L'Iran sous les Sassanides*, 367–70; Rubin, 'Reforms of Khusraw Anūshirwān', 289–91. A. Perikhanian, *The Book of a Thousand Judgements*, Costa Mesa 1997, 189.

[75] M. Macuch, *Das sasanidische Rechtsbuch "Matakdan i Hazar Datistan" (Teil II)*, Abhandlungen für die Kunde des Morgenlandes 45.1, Wiesbaden 1981, 163, 165, 173–74. Cf. M. Zakeri, *Sasanid Soldiers in Early Muslim Society: The Origins of 'Ayyaran and Futuwwa*, Wiesbaden, 1995, 53–55.

[76] Thus Juansher, commander (*sparapet*) of the Albanian army, was rewarded for his gallantry at Qadisiyya with villages as well as military and court insignia - Movses Daskhurants'i (or Kałankatuats'i), ed. V. Arak'eljan, *Movses Kałankatuats'i: Patmut'iwn Ałuanits'*, Erevan 1983, 175.13–14, tr. C. J. F. Dowsett, *Moses Dasxuranc'i's History of the Caucasian Albanians*, London 1961, 112.

command were offered the additional inducement of individual landholdings, their companions (perhaps their leading retainers) that of 'stately attire'.[77]

There can be no doubt about the fighting capability of the Sasanian army in the early centuries (third–fifth), given the sequence of victories won over the Romans between 230 and 260, the successful defensive operations against the Huns in the east in the 350s, and the expeditions of Bahrām V into the steppes.[78] Roman generals never lost their respect for their Persian adversaries. Both Belisarius (in 530) and Heraclius (in 622) had to contend with a widespread sense of inferiority among their men.[79] From the first the Sasanians had developed the logistics to keep large forces in the field. Persian soldiers, like their Roman counterparts, were adept at all types of warfare: new roads could be pushed through difficult, wooded terrain, to improve mobility; rivers could be bridged on campaign, with pontoons brought up on wagons; a full array of siege machines could be deployed, both to attack enemy strongholds and to fend off enemy besiegers.[80] Man for man, the Persian soldier was a match for his Roman counterpart. Belisarius' denigration of the infantry should be taken for what it was, a morale-boosting speech on the eve of battle in 530, a rhetorical counterblast to the defeats inflicted on Roman forces in Lazica and north Mesopotamia in 528.[81] The advantage enjoyed by the Persians in heavy cavalry and heavy infantry in the fourth century, which was noted by Ammianus Marcellinus, had apparently been lost by the sixth century. The Roman army had developed its own heavy fighting arms, both for defense (the key role being played by close-knit formations of heavy infantry) and offense (a new penetrative power being achieved by heavy cavalry charging in close formation). It was rather Persian light infantry from Daylam, capable of operating in rugged terrain, their light cavalry adept at fighting and manoeuvering away from flat, open ground, and their swift rate of arrow fire, which impressed Roman commanders in the sixth century.[82]

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[77] Rubin, 'Reforms of Khusraw Anūshirwān', 279–284.

[78] Dodgeon and Lieu, *Roman Eastern Frontier*, 9–67; Ammianus, xiv.3.1, xvi.9.3–4; Bosworth (tr.), *History of al-Ṭabarī*, v, 94–99; Mohl, *Firdousi*, v, 539–51.

[79] Procopius, *Wars*, i.14.21; George of Pisidia, *Expeditio Persica*, iii.281–304, ed. A. Pertusi, *Giorgio di Pisidia, Poemi*, *I. Panegirici epici*, Studia Patristica et Byzantina 7, Ettal 1960, 128–9.

[80] Road-building: Procopius, *Wars*, ii.15.31–34, 17.1. Pontoons: Agathias, iii.20.1. Examples of siege warfare: Ammianus, xix.5.1– Amida in 359; Procopius, *Wars*, ii.26–7 – Edessa in 544; Procopius, *Wars*, viii.14.3–13 – Archaeopolis in 551.

[81] Procopius, *Wars*, i.14.25–7.

[82] Ammianus, xxiv.6.8, xxv.1.11–13 (heavy cavalry and infantry); Procopius, *Wars*, viii.14.6–9 (Daylamites); Mauricius, *Strategicon*, ed. G. T. Dennis, CFHB XVII, Vienna 1981, xi.1, lines 29–32, 54–70, tr. G. T. Dennis, *Maurice's Strategikon: Handbook of Byzantine Military Strategy*, Philadelphia 1984, 114–15 (light cavalry); Procopius, *Wars*, i.18.31–34 (rapid rate of fire). Rance, 'Battle', 352–355 for the late Roman army. D. Nicolle, *Sassanian Armies: The Iranian Empire Early 3rd to Mid-7th Centuries AD*, Stockport 1996 for line drawings of weaponry (bow, lance and lasso) used in combat and out hunting (as pictured in monumental reliefs and on silver vessels), and for rare illustrations of heavy cavalry lancers and infantry archers (from Penjikent). Additional evidence, documenting *inter alia* central Asian influence (splint armour and conical helmets), is gathered by St. J. Simpson in his review of Nicolle in *Antiquity* 71, 1997, 242–46.

By 620, two years before Heraclius began the difficult process of trying to re-invigorate his demoralised forces (through intensive training in combat together with speeches presenting the war as a holy war against an impious enemy), the Sasanian army had succeeded in conquering virtually the whole of the Near East and was poised to overrun Asia Minor and to take out Constantinople. Khusraw II (590–628) could take justifiable pride in the achievements of his great generals, Shahrvaraz, Shahen and K'rtakaren, whom he threatened to let loose against the Turks if they dared to give help to Heraclius.[83] They were the men who had, in effect, mastered the world. The mere mention of their names together with the reputation of Persian arms would, he hoped, give the Turks pause. In the event, the Turks, who plainly had good intelligence, were able to take advantage of Persian overstretch and to break through the Caspian Gates, soon after the first serious reverse suffered by the Persians when they and their Avar allies failed to take Constantinople in 626. This was the beginning of the end for Khusraw. But it was only the fortuitous conjunction of Turkish intervention in force in Transcaucasia at the critical time and the strategic ingenuity of Heraclius (a unique mix of boldness and guile) which brought about a palace coup against Khusraw.[84]

The army's morale was sapped over the following few years. For troubles multiplied. A period of political turbulence, with rival claimants striving and fighting for power, followed Khusraw's execution on 28 February 628. His scheme of world conquest was not merely frustrated. Within two years, all his territorial gains had to be disgorged under the terms of the peace eventually agreed with the Romans. But the army proved remarkably resilient and showed itself to be a capable fighting force in the later 630s, when it put up stiff resistance to the Arabs. A brilliant counteroffensive drove them out of the irrigated alluvium of lower Mesopotamia and imperilled the whole Islamic venture at the outset. Even after the climactic battle of Qadisiyya, on January the sixth 638, when a large Persian field army was decisively defeated in open, orthodox combat, resistance continued, engagements were fought and the pace of Arab advance was slowed. It took them sixteen years to impose their authority to some degree on the whole territory of the empire and to drive the last *shāhānshāh* off into the steppes and to his death.[85]

VI. ARMY ORGANIZATION

The late Sasanian army was a formidable fighting force, large, resilient, skilled in all branches of warfare, with a remarkable record on all fronts, until the rise of Islam. The efficient marshalling of its component units and their effective deployment in designated theatres of war bespeak an organisational capability of a high order (Fig. 3). This can be seen best at the very end of the Sasanian era. A collection of texts about the history of the Caucasian Albanians (Ałuank') in the seventh century, put together between 682 and 685,

[83] Movses Daskhurants'i, 134.6–13, tr. Dowsett, *Moses Dasxuranc'i's History,* 82.

[84] J. Howard-Johnston, 'Heraclius' Persian Campaigns and the Revival of the Eastern Roman Empire, 622–630', *War in History* 6, 1999, 1–44, repr. in Howard-Johnston, *East Rome*, VIII.

[85] Thomson and Howard-Johnston, *Armenian History*, 221–26, 243–46, 251–53, 264–66.

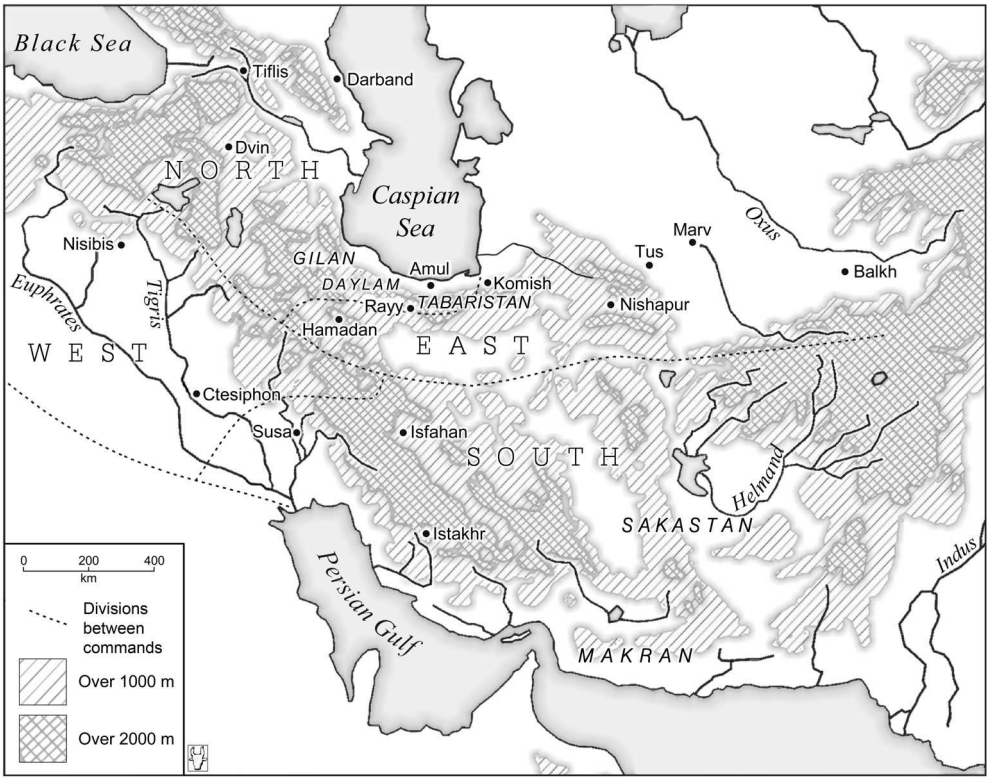

Fig. 3. The Four spāhbed *Commands*

which has been preserved in a later universal history, includes an account of the call to arms issued in Transcaucasia after the initial Arab successes in lower Mesopotamia in 636. Troops were mobilised by 'generals and princes, lords and indigenous nobles of the various regions subject to the kingdom of Persia'. The prince of the Albanians sent a contingent under the command of his son Juansher to the designated assembly place, where they joined the forces commanded by the prince of Siwnik' and the *sparapet* of Armenia. The Transcaucasian forces were then placed under the command of the Persian general Rustam for the counteroffensive against the Arabs in Mesopotamia.[86] Juansher was confirmed as commander (*sparapet*) of the Albanians on their arrival at Ctesiphon, fought at Qadisiyya, where he was wounded, was promoted (being granted some villages at the same time),

[86] Movses Daskhurants'i, 173.4–174.1, tr. Dowsett, *Moses Dasxuranc'i's History*, 109–10. Cf. J. Howard-Johnston, 'Armenian Historians of Heraclius: An Examination of the Aims, Sources and Working-Methods of Sebeos and Movses Daskhurantsi', in G. J. Reinink and B. H. Stolte, ed., *The Reign of Heraclius (610–641): Crisis and Confrontation*, Leuven 2002, 41–62, at 49–58, repr. in Howard-Johnston, *East Rome*, V.

and continued to serve the king loyally for another seven years.[87]

The Transcaucasian mobilisation was but a small part of a much larger operation, which put a great army into the field and which resulted in the ejection of the Arabs from lower Mesopotamia in 637. Similar processes should be envisaged as taking place whenever armies, great or small, were deployed in one or more theatres of war, in previous centuries. The Sasanian state, centralised, institutionally advanced, as was demonstrated by the scale of the infrastructure projects which it could organise as also by its stable and universal monetary system, had developed a command structure and an empire-wide military organisation of impressive efficiency. This was, of course, responsible for much more than mobilisation and direction of operations in wartime. Apart from recruiting, equipping, training and provisioning regular soldiers, it was responsible for distributing them across the empire's territory, allocating a majority to garrison duties on the frontier, others to the policing of potentially refractory areas, others still to strategically central positions, ready for deployment elsewhere.

There is, alas, all too little of the hard evidence – documentary, epigraphic, legal, literary – from which historians have been able to reconstruct the main features of the organisation of the contemporary Roman army and of its higher command. We have to scrabble around for odd, disconnected pieces of information. Three types of useful material can be picked up, from which to piece together some sort of a picture of Sasanian military organisation:

(1) a small number of official sealings testify to the existence of a set of four regional generals (*spāhbed*s) and a number (seven are currently known) of what were probably senior commanders of guards-regiments (*framādār*s);
(2) two well-informed Armenian historical texts, an account of the two fifth-century Armenian rebellions written by a contemporary, Łazar P'arpets'i, and the history attributed to Sebeos which dates from the middle of the seventh century, include detailed information about senior commanders operating in Armenia and the career of one Armenian general, Smbat Bagratuni, who rose to the very top of the army in the early seventh century – both these works seem to have had access to official Sasanian sources;
(3) perhaps the most valuable of all is a third Armenian text, the *Geography* of Ananias of Shirak, dating from the 660s – this includes a breakdown of the Sasanian Empire into four quarters, which correspond, almost certainly, to the four commands of the *spāhbed*s, and a breakdown of each of the four quarters into its constituent units.

In what follows I shall lay out the material culled from these sources about the structure of command, and shall then try to tease out some information about the functioning of the structures, in particular about the managerial capability of the high command as revealed in the crucial process of transforming the dispersed elements of the peacetime army into an effective instrument of war, available for use on any sector of the frontier. This vital task of combining units from different regional commands in an efficient and

[87] Movses Daskhurants'i, 174.1–177.2, tr. Dowsett, *Moses Dasxuranc'i's History,* 110–13.

timely manner into larger field armies was performed well on numerous occasions. Clues as to how it was achieved are to hand in the geographical distribution of guards-regiments and in the delineation of the boundaries of the regional commands.

Khusraw I Anūshīrvān (531–79) looms large in the versions of the official Sasanian history which have come down to us. This was not just because his reign stood at the limits of retentive memory at the time when that history became fixed, at the downfall of the empire in 651–2, but also because of the scale of the reform programme which he initiated, almost certainly right at the start of his reign, when he needed to secure his position by demonstrating his fitness to rule and by improving the functioning of the Sasanian state. It was Khusraw who promoted a literary and intellectual revival, and was probably responsible for commissioning the official dynastic history, the *Khwadāynāmag*, which, like its Christian analogues, reached back to the beginning of time. His prime concerns, though, seem to have been to increase the resources available to government, by shifting from a share-cropping system of taxation to one of fixed, annual liabilities, and to increase the striking power of the army – both rendered necessary by the proximity of a great and hostile empire in the west, itself being subject to a general institutional overhaul by Justinian.[88]

Apart from improvements to the inspection regime, to ensure that equipment was not mislaid nor allowed to deteriorate, the principal military reform involved the high command. Khusraw it is who is credited with dividing a unitary high command and instituting four regional commands, headed by *spāhbed*s.[89] Justinian's establishment of an independent Armenian field command under a *magister militum*, hived off from the unwieldy command of the *magister militum* of the East, cannot have escaped his attention.[90] A small number of holders of the *spāhbed* commands are known through their sealings, which have recently been subjected to systematic and thorough scrutiny by Rika Gyselen.[91] The iconography is uniform. The *spāhbed* is shown in full armour, riding an armoured horse and holding a lance, with a sheathed sword at his side. An emblem on the helmet (three crescents supine) indicates his rank, which is also stated in words. The inscription details the particular command held – *Khwarāsān* (East), *Nēmrōz* (South), *Khwararān* (West) or *Ādurbādagān* (North) – and the military post traditionally associated with each command – Parthian *aspbed* (Master of Horse – East), Persian *aspbed* (South),[92] *hazārbed* (Commander of a Thousand – West), and *aspbed* of the Empire (North). Eight *spāhbed*s are named on the eleven extant sealings, as are the kings under whom they served – Khusraw in five cases, Khusraw and Hormizd (Hormizd IV, 579–90) in two, Hormizd in one.

For the geographical definition of the commands, we turn to the short Persian section

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[88] Christensen, *L'Iran sous les Sassanides*, 415–29; P. Huyse cited by J. Wiesehöfer, 'Iraniens, Grecs et Romains', *Studia Iranica* 32, Paris 2005, 139, n.240; Rubin, 'Reforms of Khusraw Anūshirwān'.

[89] Bosworth (tr.), *History of al-Ṭabarī*, v, 149–50.

[90] Malalas, xviii.10.

[91] R. Gyselen, *The Four Generals of the Sasanian Empire: Some Sigillographic Evidence*, Rome 2001.

[92] Omitted in the case of one of the three attested postholders (Pirag) – Gyselen, *Four Generals*, 40–41.

in Ananias of Shirak's *Geography*.[93] The largest command, in terms of the number of subordinated military districts, was the eastern, with 26. Most, if not all of these military districts were probably coterminous with civilian provinces. It stretched from Hamadan in Media to the southern flank of the Elburz at Komish, with an extension to Gurgan to the north, then over Abarshahr (including the important cities of Nev-Shabuhr [Nishapur] and Tus), Marv and Marv-rud, as far as the Oxus and Herat.[94] The second largest was the southern, with 19 subdivisions, which reached out from Khuzistan through the historic heartland of Persia proper to the wild lands of the far south-east as far as Zabulistan and the lower Indus plain (Sind and Debuhl). Key positions in the Gulf (in Bahrain and Oman) also belonged to the southern command.[95] The smallest command was the western, with a mere eight subdivisions.[96] Four were resource-rich – Kashkar (in the irrigated alluvium, below the metropolitan region),[97] Garmegan or Beth Garmai (north of the irrigated alluvium – the plain around modern Kirkuk, together with the nearby upland basin of Syarazur),[98] Nod-Ardashiragan or Adiabene (the upper Tigris plain together with the lower valleys of the Great and Little Zab, centering on Nineveh),[99] and Mayjinesteh (a corruption of Marjin/Mygdonia, on the right, west bank of the upper Tigris, extending to the frontier beyond Nisibis in the north and Singara in the south).[100] The other four covered the northern Zagros together with Media south of Hamadan, including Bisutun, strategic routes into the mountains *via* Kangavar and Nihavand and the important passes which emerge at modern Qasr-i Shirin and Pol-i Dokhtar.[101]

Finally, there is the northern command, about which we are better informed, thanks

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[93] Ed. A. Soukry, *Géographie de Moïse de Corène*, Venice 1881, reproduced in facsimile as *Ashkharhatsoyts (AŠXARHAC'OYC'), the Seventh Century Geography Attributed to Ananias of Shirak*, ed. R. H. Hewsen, Delmar, NY 1994, 40. Translation and commentary in R. H. Hewsen, *The Geography of Ananias of Širak (AŠXARHAC'OYC'): The Long and Short Recensions*, Wiesbaden 1992, 72, 226–34.

[94] Localisation of districts: J. Marquart, *Eranšahr nach der Geographie des Ps. Moses Xorenac'i*, Abhandlungen der k. Gesellschaft der Wiss. zu Göttingen, Phil.–hist. Kl., ns.3.2, Berlin 1901, 47–93; R. Gyselen, *La géographie administrative de l'empire sassanide: Les témoignages sigillographiques*, Paris, 1989, 51–52, 84–85; R. Gyselen, *Nouveaux matériaux pour la géographie historique de l'empire sassanide: Sceaux administratifs de la collection Ahmad Saeedi*, Paris 2002, 148–51, 155, 162, 190–91, 193–94.

[95] Marquart, *Eranšahr*, 25–47; Gyselen, *Géographie administrative*, 70–73, 74–76, 85–88; Gyselen, *Nouveaux matériaux*, 165–68, 168–69, 169–70, 181, 183, 191–93, 194.

[96] Marquart, *Eranšahr*, 17–25. Ananias counts nine districts, having split Nod–Ardaširagan (Adiabene – see n.98 below) in two (Notartay and Širakan).

[97] M. G. Morony, 'Continuity and Change in the Administrative Geography of Late Sasanian and Early Islamic al-'Iraq', *Iran* 20, 1982, 1–49, at 30–4; Gyselen, *Géographie administrative*, 77–8.

[98] Morony, 'Continuity and Change', 14–18; Gyselen, *Géographie administrative*, 49; Gyselen, *Nouveaux matériaux*, 145–46.

[99] Morony, 'Continuity and Change', 5, 10–14; Gyselen, *Géographie administrative*, 56, 78–79; Gyselen, *Nouveaux matériaux*, 183–184.

[100] Hewsen, *Geography of Ananias*, 232; Gyselen, *Géographie administrative*, 79; Gyselen, *Nouveaux matériaux*, 134–136, 184.

[101] Morony, 'Continuity and Change', 5–6; Gyselen, *Géographie administrative*, 45–46, 53–54, 55, 82–84; Gyselen, *Nouveaux matériaux*, 157–58, 160, 161.

to the information which can be extracted from Armenian sources. Something can be learned about the upper echelons of the command structure below the *spāhbed*, as well as about the territorial extent of the *spāhbed*'s authority. The fourteen subdivisions were headed by Adurbadagan (what is now Iranian Azerbaijan, centering on Lake Urmia). The main constituent parts of Sasanian Transcaucasia formed five subdivisions - Armenia, Iberia, Albania, Balasagan (the Caspian Gates) and Siunia. Rayy (near modern Tehran) headed the larger eastern component of the command, which extended along the Elburz mountain range from Gilan to Dunbawand and included the Caspian lowlands (Amul and Tabaristan).[102]

The highest-ranking commanders serving under a *spāhbed* were *marzbān*s. Three are attested in the grand army operating on Roman territory between autumn 503 and autumn 504, one in command of the vanguard, another dispatched against Melitene, a third in command of the Amida garrison.[103] Over a century later it is as *marzbān* of Gurgan, within the eastern military quarter, that Smbat Bagratuni is credited with the final suppression in 601 of the rebellion of Khusraw II's maternal uncle Bistam, and with the revival of the war-damaged local economy.[104] He retired after eight years in post (600/1–607/8) but was recalled to active service, this time as commander-in-chief (so *spāhbed*), at a time of gathering crisis in the east (615–16), with authority to appoint his own *marzbān*s.[105] But we are best informed about the *marzbān* of Armenia. Several figure in Łazar of Pharb's detailed account of the Sasanian military responses to the Armenian rebellions of 450–1 and 482–4. This makes it plain that the post was in the gift of the crown and normally went to members of the Armenian nobility. *Marzbān*s could, of course, be dismissed, if they proved unsatisfactory, as was the case with the unpopular quisling Vasak in 451 (also sacked as Prince of Siunia), or if an absolutely reliable post-holder was needed, as happened early in 484 at end of the second rebellion when the *shāhānshāh* was planning his last, fatal expedition into the steppes (a Persian grandee, Shabuhr Mihran was appointed).[106]

*Marzbān*s were professional soldiers, since they could be entrusted with the direction of operations in the field, but they were also responsible for general administration in their area of competence. They were thus distinguished from regular provincial governors

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[102] Ananias' total (13) does not correspond to the number of districts listed (14). Localisations: Marquart, *Eranšahr*, 94–136; Gyselen, *Géographie administrative*, 44, 45, 49–50, 57, 58–59, 63, 79–81; Gyselen, *Nouveaux matériaux*, 127–30, 131–34, 139–40, 146, 156–58, 164–65, 169, 176–77, 184–88.

[103] *Chronicle of Pseudo-Joshua*, cc.64, 66, 77.

[104] His command may have extended to the neighbouring provinces of Komish, Abarshahr and Tus – see R. Gyselen, 'Sources arméniennes et sources primaires sassanides: harmonie et dissonance', in M.–A. Amir Moezzi, J.–D. Dubois, C. Jullien and F. Jullien, ed., *Pensée grecque et sagesse d'orient: Hommage à Michel Tardieu*, Turnhout 2009, 293–306 at 301.

[105] Ps.Sebeos, 96.18–30, 98.8–17, 99.14–100.4, 100.27–103.21, with Thomson and Howard–Johnston, *Armenian History*, II *Historical Commentary* (cited henceforth as *Hist.Com.*), 181–89. A radically different, earlier chronology is proposed by Gyselen, 'Sources arméniennes', 299–305.

[106] Łazar, 47 and 83 (Vasak, *marzbān* of Armenia in 450-451, previously *marzbān* of Iberia), 118 (Atrushnasp Yozmandean, *marzbān* of Armenia in 482), 121 (Sahak Bagratuni, designated *marzbān* by Armenian rebels in 482), 121 (unnamed *marzbān* of Koprik'), 146 (Shapuh Mihran, *marzbān* of Armenia in 484).

(*shahrābs, ōstānādars*) whose authority was confined to civil affairs, and from senior military commanders who had no civil powers.[107] The title of the latter, Commander of a Thousand (*hazārbed* in Persian, *hazarapet* in Armenian, *chiliarchos* in Greek), should probably be taken to mean general, and could be applied to commanders operating at different levels – for example, the commander-in-chief in Transcaucasia when rebellion broke out in Armenia in 450 (*hazārbed* of the Aryans) or a field commander operating in Armenia alongside the *marzbān* in 482.[108] The post of *marzbān* could be combined with a military command in exceptional circumstances, as it was in Armenia a few years after the end of the 482–4 rebellion, when Vahan Mamikonean had proved his loyalty to the crown.[109]

Additional information about the roles of *spāhbed* and *marzbān* in Persarmenia can be culled from summaries of what look like official lists of generals and governors serving in Persarmenia in the late sixth and early seventh century, which are included in the history attributed to Sebeos, as well as from longer notices about operations on the Armenian front between 603 and 611.[110] The assassination of the *marzbān* Suren in Dvin in 572 was the signal for a general uprising and, once the Sasanians reacted militarily, for Roman intervention in force.[111] From spring 573, when the Persians found themselves under attack in north Mesopotamia and, probably, in the east (from the Turks) as well as in Transcaucasia, Gorgon Mihran (ps.Sebeos' Gołon Mihran), *spāhbed* of Adurbadagan, was sent in with 20,000 regular soldiers and additional auxiliaries from the Caucasus to direct military operations. He remained in post for seven years, in sole command during the first phase of containment, then taking part in the reimposition of Sasanian authority under the supreme command of Khusraw I himself in 576 and Tam Khusraw in 577–8.[112] With the accession of Hormizd IV in 579, he was replaced by a certain Varaz Vzur, who met with mixed fortunes, and, within a year, so from 580, by the *spāhbed* of the East ('the great Parthian and Pahlavi *aspbed*', i.e. the Parthian Master of Horse, of the Pahlav family), who remained in post for seven years, so into 586.[113] It was a period of Turkish introversion (rival leaders competing for supreme power) when it was relatively safe to combine the two commands of Adurbadagan and the East and to concentrate their forces on the northern, Transcaucasian sector of the western frontier.[114] By 586, with the fighting localised and attritional, the command in Armenia could be handed over to *marzbān*s, who were succeeded, in the years of peace between the great powers (13, if they are counted from the moment the Romans

[107] Gyselen, *Nouveaux matériaux*, 106–110.

[108] Mihrnerseh, *hazarapet* of Aryans in 450 (Łazar, 39); Vehvehnam, *hazarapet* of Armenia in 482 (Łazar, 118, 120–21).

[109] Vahan was *sparapet* of Armenia, a command apparently analogous to that of *hazārbed/hazarapet* but held by an Armenian (Łazar, 174–76). His appointment as *marzbān* was made on the recommendation of Andekan, Šapuh Mihran's successor as *marzbān* of Armenia (Łazar, 177–78).

[110] Lists: ps.Sebeos, 70.10–71.22, 105.21–25, 113.29–34, with *Hist.Com.,* 166–67, 189–90, 204–205. Longer notices: ps.Sebeos, 107.31–110.11, 111.11–112.19.

[111] Ps.Sebeos, 70.15–16, with *Hist.Com.*, 166.

[112] Ps.Sebeos, 70.17–71.4, with *Hist.Com.*, 166 (where Tam Khosrov is wrongly taken to be Gołon Mihran's successor rather than superior); Gyselen, *Four Generals*, 44.

[113] Ps.Sebeos, 71.5–8, with *Hist.Com.*, 166–7.

[114] Barfield, *Perilous Frontier*, 133–38.

formally backed the claim of the fugitive Khusraw II) by a series of civilian governors.[115]

The *marzbān*'s term of office seems to have been shorter on average than that of the *spāhbed*. The two *marzbān*s (Hrahat and Hratrin Datan) who succeeded the Parthian Master of the Horse in 586, were in post for four and two years respectively.[116] During the long tenure of Shahen who succeeded four short-lived holders of the command of *spāhbed* of Adurbadagan in 609 at the latest and was probably still in post in 626 when he was killed in battle in Asia Minor, there were five *marzbān*s based in Dvin, the capital of Persarmenia, the last of whom, Eroč Vehan (Rahzadh) had to cope as best he could with Heraclius' second invasion of Persarmenia in 627.[117] An incident, reported in ps.Sebeos and dating to the period of Smbat Bagratuni's temporary retirement, between 608 and 615, allows us to catch a glimpse of three tiers of Sasanian command: a *spāhbed*, either Shahen or his immediate predecessor, Ashtat Yeztayar, was in post, as we know from ps.Sebeos' list; a plan, supported by Smbat, took shape to rebuild the church of St. Gregory the Illuminator in Dvin; objections (vain – they were overruled by Khusraw) were lodged by the *marzbān* and the garrison commander on the grounds that the church would be too close to the citadel.[118] A similar three-tiered system of command features fleetingly in the biography of Juansher summarised by Movses Daskhurants'i. Juansher was, we are told, rewarded for his valour at the battle of Qadisiyya by being appointed general (so either *hazārbed* or *marzbān*, evidently a promotion from his previous post as *sparapet* of Albania) and, as such, confronted two antagonistic local military commanders (almost certainly commanders of urban garrisons) in the provinces of Mad and Hamadan and managed to bring their conflict to an end, thereby gaining esteem in the eyes of his superior, Khorazat, Rustam's successor as *spāhbed* of Adurbadagan.[119]

It may then be suggested, tentatively, that each of the four regional commands presided over a set of military districts-cum-provinces, that important fortified cities had their own garrison commanders, that professional military commanders might be appointed, from time to time, as circumstances demanded, to take charge of provinces as *marzbān*s and, *in extremis*, to operate alongside the provincial authorities, whether civil or military, as *hazārbeds*. It has also been seen that the system of four regional commands was not inflexible. If external pressure eased on one of the quadrants of the empire, the opportunity could be exploited to magnify the force brought to bear on another front, as happened in Transcaucasia in 580–6, when the Pahlav *spāhbed* of the East took over the northern command. Equally, if unusually large concentrations of troops were required for major operations, the mobile forces of two regional commands might be assigned to a single theatre of war, to carry out coordinated operations, as happened in 617 when two deep-penetrating attacks were launched into Asia Minor and again in 619 when Egypt was invaded in massive force. These two campaigns involved both *spāhbed*s whose commands abutted on Roman territory, Shahen *spāhbed* of Adurbadagan and Shahrvaraz *spāhbed* of

[115] Ps.Sebeos, 71.9–22.

[116] Ps.Sebeos, 71.9–13.

[117] Ps.Sebeos, 107.31–110.11, 111.11–112.19.

[118] Ps.Sebeos, 100.5–18, with *Hist.Com.*, 182–3.

[119] Movses Daskhurants'i, 175.4–176.1, tr. Dowsett, *Moses Dasxuranc'i's History,* 111–12.

the West.[120]

Scattered references to military officers bearing other titles (*k'rprm'an*, *tansardaran*, *kanārang, sālār*) are to be found in other sources – e.g. Pahlavi papyri from the ten-year occupation of Egypt (619–29) and a Roman report of intelligence received about the planned *putsch* against Khusraw II in early 628.[121] So there is much more to be said about the officer corps and its senior ranks. But one category of senior officer – the *framādār*, 'commander' – can be singled out for inspection forthwith, because of the relative abundance of precise documentation available on extant official sealings. Seven such commands are attested, each associated with a specific area. The most important was the *wāspuhragān-framādār* of Khusraw-shad-Kawad and Khusraw-shad-Ohrmazd, provinces which lay on the east bank of the Tigris and probably straddled the Nahrawan-Cut of Khusraw canal. Given this location and the meaning of *wāspuhr* ('special' or 'court'), this *framādār* may plausibly be identified as the commander of guards-regiments, strategically placed in the metropolitan area. From this position his troops could take charge of the capital's inner line of defense along the waterway, if ever it were threatened by internal or external enemies.[122]

It must be stressed, however, that the identification of a *framādār* as a guards commander is conjectural. Only in the cases of the *wāspuhragān-framādār* and *gund-i-kadag-khwadāyagān-framādār* ('commander of the army of the house-lords' – discussed below), can we be reasonably certain that the post was a military command. But it is surely not too hazardous to extrapolate and to identify the other five attested *framādārs* as commanders of guards–regiments stationed elsewhere in the empire.[123] Their bases were, it appears, so chosen, as to enable them to act both as strategic reserves and as independent counterweights to the regional forces under the command of *spāhbed*s. Three of these hypothetical guards-regiment commands were located in northern Khuzistan – those of the *framādārs* of Veh-Andiok-Shabuhr, Eran-khwarrah-Shabuhr and Mihragan-kadag – where they were well placed to maintain law and order in the rich, irrigated lands on either side of the lower Tigris, as well as to intervene, if necessary, in Persia proper to the south or in Media to the north.[124] A fifth command was based in Isfahan, in a key strategic position between Persia and Media, and a sixth in Adurbadagan, where it could support the *spāhbed* of the

[120] Asia Minor 617: ps.Sebeos, 113.23–8, with *Hist.Com.*, 203–4. Egypt 619: *Chronicle to 1234*, tr. A. Palmer, *The Seventh Century in the West-Syrian Chronicles*, TTH 15, Liverpool 1993, 128, with n.289 (parallel passage in the *Chronicle* of Michael the Syrian) for Shahrvaraz; *History of the Patriarchs of the Coptic Church of Alexandria*, ed. and tr. B. Evetts, *Patrologia Orientalis* 1, Paris 1907, 487 for Shahen.

[121] O. Hansen, *Die mittelpersischen Papyri der Papyrussammlung der Staatlichen Museen zu Berlin*, Berlin 1938, nos. 1 (23–27) and 58 (82–83); A. G. Perikhanjan, 'Pechlevijskie papyrusi sobranija GMII imeni A. S. Pushkina', *Vestnik Drevnej Istorii*, 77, 1961, 78–93, at 91–92; D. Weber, *Ostraca, Papyri und Pergamente*, Corpus Inscriptionum Iranicarum 3.4–5, London 1992, nos 19 (130–33) and 23 (136); Theophanes, *Chronographia*, ed. C. de Boor, Leipzig 1883–85, i, 325.10–326.20, tr. C. Mango and R. Scott, *The Chronicle of Theophanes Confessor: Byzantine and Near Eastern History AD 284–813*, Oxford 1997, 453–54.

[122] Gyselen, *Géographie administrative*, 35; Gyselen, *Nouveaux matériaux*, 119–20, 153–54.

[123] Gyselen, *Géographie administrative*, 37–38; Gyselen, *Nouveaux matériaux*, 115–16.

[124] Gyselen, *Géographie administrative*, 55; Gyselen, *Nouveaux matériaux*, 151–52, 161.

North's troops on the Caucasus or Armenian fronts as well as ensuring the security of the great fire-temple of Adurgushnasp at modern Takht-i Sulayman.[125]

The seventh and last attested *framādār* led 'the army of the house-lords', readily identifiable with the Armenian *tanuterakan gund* ('army of the heads of household'), the command of which was given to Smbat Bagratuni (apparently for the second time) when he was appointed *spāhbed* of the East in 615–16. It was an elite Armenian force, officered by Armenian princes and nobles and amounting to some 2000 cavalry. It had served with him in Gurgan during his tenure as *marzbān* (600/1–607/8), and continued to be stationed there afterwards. It came to join him at Komish for operations further east in 615.[126] The Sasanians, like the Romans, seem to have taken care to deploy ethnically distinct forces well away from their home regions. The best example beside the Armenian guards-regiments is that of the Daylamite units allocated to the northern command, under which they can be seen fighting Roman forces on several occasions in Lazica.[127]

To the main regular formations of the army, first those guarding the frontiers and serving in mobile field forces under *spāhbed*s, *hazārbed*s, and *marzbān*s, and second guards-regiments commanded by *framādār*s, should be added troops recruited from natural nurseries of fighting men within the empire – Kurds raised from the northern extremity of the Zagros who appear occasionally in sixth century sources, highlanders from Gilan as well as Daylam in the western Elburz, Caucasian Albanians (regarded as elite troops on a par with Huns in the fourth century), and Segestani (men from Sakastan in the far south-east, again picked out by Ammianus in the fourth century).[128] Little should be read into the non-appearance of units from Gilan, Albania and Sakastan in extant accounts of sixth- and early seventh-century campaigns in the west. It is far more likely that the Sasanians deployed these units in theatres of war not covered by the extant Roman and Armenian sources than that they ceased to exploit these rich sources of fighting manpower at the end of antiquity. No less important were foreign auxiliaries from the north, either recruited from outside the frontiers of the empire – Sabir Huns from the north Caucasus – or resettled on Sasanian territory – the Turks who were admitted and then divided up in 568–9 – and the many Arab tribes in the south who were incorporated into a nexus of alliances managed by the Sasanians' Nasrid client-kingdom from its capital at Hira.[129]

That is what can be seen of the late Sasanian army's organisation through such sources

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[125] Gyselen, *Nouveaux matériaux*, 115–16, 127, 169–70.

[126] Gyselen, *Nouveaux matériaux*, 116; ps.Sebeos, 101.1–17. Cf. R. Gyselen, 'Le *kadag-xwaday* sassanide. Quelques réflexions à partir de nouvelles données sigillographiques', *Studia Iranica* 31, 2002, 61–69 and N. Garsoïan, 'Le "Guerrier des Seigneurs"', *Studia Iranica* 32, 2003, 177–84 who envisages a permanent base for this elite unit, in the heart of Persarmenia.

[127] Procopius, *Wars*, viii, 14.5, 12, 42; Agathias, *Histories*, iii, 17.6, 18.1–11, 22.5–8, 26.1–8, 28.6–7.

[128] References in n.23 above.

[129] Sabir Huns: Procopius, *Wars*, viii, 13.6–7, 14.3–5 and 11, 16.8, 17.10; Agathias, iv, 13.7; Blockley, *History of Menander*, fr.23.1. Turks: Ibn Miskawayh, *Tajārib al-umam*, tr. Rubin, 'Reforms of Khusraw', 280–82. Nasrid client-kingdom: M. J. Kister, 'Al-Ḥīra: Some Notes on its Relations with Arabia', *Arabica* 15, 1968, 143–69; F. M. Donner, *The Early Islamic Conquests*, Princeton 1981, 44–48; Hoyland, *Arabia and the Arabs*, 78–83, 236–43.

as survive. There were three distinct components:

(1) the regular army, divided into four regional commands,
(2) guards-regiments placed at strategic locations, and
(3) foreign auxiliaries.

Much, though, remains hidden from us. We know virtually nothing of the command structure within the regular army, below the highest level. Whereas individual units of the late Roman army can be identified with the help of inscriptions, papyri and the *Notitia Dignitatum*, we are entirely in the dark about individual units of the late Sasanian army, except for those identifiable by ethnic origin. The only regimental name to figure in a sixth century source, the *Immortals* who formed the main Persian reserve at the battle of Dara, may have been no more than an archaising usage of Procopius'.[130] Finally, a vital component of the Sasanians' armed forces, the troops responsible for the personal security of the *shāhānshāh* in court and on campaign, can only be glimpsed in passing.

VII. STRATEGIC AIMS

In conclusion, something should be said about the general strategic stance of the late Sasanian army, the rationale for its division into four commands, the functions of the individual regional commands, and the mechanisms for combining units from different commands into larger, unitary fighting forces for deployment in one or more theatres of war.

The general stance in Late Antiquity was one of aggressive defense. The army was poised to uphold the dignity of the king wherever it might be challenged, and, occasionally, especially when a foreign adventure might bind together fractious domestic interests, to make bold outward strikes. Both in terms of numbers, fighting quality and forward positioning, the army in the south-east and east was geared to projecting Sasanian power outwards and maintaining Iran's historic role as arbiter of Central Asian affairs. In the north and north-west, after the first phase of dynamic expansion, massive resources were allocated to the difficult tasks of defending the frontiers where they had stabilised in the second half of the fourth century, against the peoples of the north Caucasus and a much better-resourced rival empire. A military ethos, more pronounced than that of the Romans, ran through the population of highland Iran, from the grandest aristocrats and landed gentry down to the villagers who supplied most of the infantry. A *shāhānshāh*'s prestige or glory (*khwarrah*) rested ultimately on success in war or what could be construed as success in war.[131] Hence the surprisingly long duration of a unitary military command, which could, at any point, be assumed without bureaucratic difficulty by the reigning monarch. Hence the series of great kings whose deeds in war were commemorated in monumental inscriptions and reliefs and in the pages of the late Sasanian *Khwadāynāmag*.[132]

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[130] Procopius, *Wars*, i.14.31, 45, 49.

[131] References in n.15 above.

Hence even as cultivated a ruler as Khusraw I, was remembered as much for his victories as for his thorough-going domestic reforms.[133]

Brute reality, the demands of assuring the security of so large and diverse a continental empire, which might be assailed from several quarters at the same time (as it was, we know, in the 350s, 421–2, 573, 615–16 and 626–9), should have led to the establishment of regional commands, each taking charge of a quadrant of the empire, long before the reign of Khusraw I. The long time-lag of some 250 years between the Roman division of command, instituted by Diocletian and Khusraw's reform is to be attributed to the overriding ideological imperative of maintaining the *shāhānshāh*'s direct control of warfare and personal command on major campaigns.[134] We do not know exactly when Khusraw took the decision[135] – I am inclined to place it in the difficult plague years, around the time (545) when the western war was confined, by mutual agreement, to Lazica – but from that point on, the adaptability of the Sasanian army and its speed of reaction were undoubtedly improved. Regional defense or mobilisation for local punitive or offensive action became easier and quicker, once the command was delegated to a *spāhbed* of high status and unquestioned authority within his quadrant. Equally, large-scale mobilisation for a major expedition, drawing on the resources of more than one quadrant, would be more manageable when the central authority had to deal with a few rather than many senior commanders. Another benefit of decentralisation is likely to have been better policing of refractory highland regions.

Each of the new commands had a clearly demarcated territory,[136] which included supply zones (rich, irrigated arable lands), recruiting-grounds (mainly in the mountains) and sectors of the frontier distinguished from each other by the nature of potential outside adversaries. The western command's principal task was to protect the richest component of the empire, Mesopotamia, by guarding the sector of the frontier facing the heavily militarised Roman forward zone in north Mesopotamia and Osrhoene. It also appears, from his control over the northern segment of the Zagros range, together with the flanking plains of Mesopotamia and the rolling hill country of south-west Media, that the *spāhbed* of the West was also expected to tap the mountains for recruits and to secure the strategic passes linking Mesopotamia and Media. The extension of his authority over the rich, grain-producing lowlands down as far as the metropolitan region and beyond it to the district around Kashkar was surely intended to guarantee provisions for his troops, whether garrisoning frontier fortifications or serving in units of the regional field army.

The southern command, which had its own allocated supply zone in Khuzistan and could recruit from the central and southern Zagros, including the old heartlands of Persia, probably had two prime tasks – the projection of Sasanian power inland from the Gulf coast of Arabia and the maintenance of control over the wild country of the far south-east,

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[132] G. Herrmann, *The Iranian Revival*, London 1977, 87–94, 96, 100, 104–106.

[133] Bosworth (tr.), *History of al-Ṭabarī*, v, 150–62, 253–55, 264.

[134] M. Whitby, 'The Persian King at War', in E. Dąbrowa (ed.), *The Roman and Byzantine Army in the East*, Kraków 1994, 227–63.

[135] Bosworth (tr.), *History of al-Ṭabarī*, v, 149–50.

[136] *Contra* Gyselen, *Four Generals*, 15–16.

which could then act as a supplementary recruiting-ground. The eastern command, much the largest in terms of the number of its subdivisions, needed all the resources, human and material, provided by its territory (including provisions from the Gurgan plain and recruits from the Köpet Dagh), to man the hard-point defenses which affixed Sasanian authority on the ground and to field expeditionary forces large enough to operate against nomad adversaries. Finally, the northern command, responsible both for garrisoning the fortifications of the Caspian Gates and securing Persarmenia from the menacing Roman presence in west Armenia had as its allocation the Caspian lowlands and the Elburz range. It would not run short of supplies or fighting manpower.

Besides the all-important task of defense against external foes, the army had to uphold law and order throughout the empire and to guarantee the security of crown, palace and capital. Law and order probably fell within the remit of the *spāhbed* commands. Hence they reached deep into the interior of the empire. They were assuredly expected to keep the highlands quiescent and to assure free passage along the network of main routes. The only large area to be excluded from the four military quadrants was the metropolitan region. Behind its formidable water defenses – to the north the Nahrmalcha canal running from the Euphrates to the Tigris, the Euphrates itself to the west and the Nahrawan-Cut of Khusraw canal to the east – the irrigated alluvium which was the empire's single greatest arable asset, supporting a highly urbanised society, was relatively secure from attack. The palace guards-regiments, of which little is known but their existence, could police this interior zone, backed by the outer guards-regiments under the command of the *wāspuhragān-framādār* who were probably responsible for policing the Nahrawan-Cut of Khusraw canal. As for the desert approaches, where this heartland of the empire was in theory most exposed, the task of defense was delegated to the Nasrid client-kings of the Lakhm, ruling from Hira. Their army, consisting of directly recruited retainers, regular Sasanian troops and tribal levies, had little difficulty in discharging this duty, as well as helping to project Sasanian authority into the interior of Arabia and acting as a loyal force ready, if called upon, to intervene in Sasanian domestic politics.[137]

Ultimately, though, the army existed to defend Iran, in its late antique imperial manifestation, against whatever threats might materialise from the alien, outer world. If the danger were great or if a grand expedition were planned beyond the frontier, different component parts of the army would have to be brought together and combined to form an organic whole, capable of fighting the enemy on equal terms, divided perhaps for operational convenience into two or more corps but directed by a single supreme commander. There would be no difficulty in establishing the high command: either the *shāhānshāh* would take personal charge or he would appoint a general of his choice. But an assembly ground was needed, to which designated units from different commands could be directed and where they could be melded into a cohesive, responsive, adaptable fighting force – something analogous to the Gurgan plain south of the long wall but for the empire as a whole and safely withdrawn from its outer regions. It can be identified, on the basis

[137] See n.129 above. Bahrām V owed his throne to Lakhm backing (cf. Christensen, *L'Iran sous les Sassanides*, 274–76).

of oblique indications given in the *Geography* of Ananias of Shirak. The territorial commands of the four *spāhbed*s converged on the western angle of the Iranian plateau and Media, which is endowed, in its northern open swathe, with extensive and lush grazing-grounds. Each of the four commands had its own presence in this region, which may therefore be taken to be the military heartland of the state: the South had a subdivision centered on Isfahan; the West's consisted of the hill country, to the south of Hamadan (May or Mad); the north had the district of Rayy; the most surprising association, though, was that of the subdivision of Hamadan with the East.[138] This meant that North and East, as it were, leap-frogged over each other. Each had a bridgehead in the other's territory, and their two bridgeheads marched with the subdivisions of Mad and Isfahan to the south. Since all these military districts adjoined each other, together they could act as the venue for the mobilisation of a composite army, drawing on more than one regional command.

It is worth noting that the only discernible strategic reserve, the three guards units stationed in Khuzistan – in Veh-Andiyok-Shabuhr (the left bank of the Dez around Susa and Shustar), Eran-Khwarrah-Shabuhr (right bank of the Dez and Karkha rivers) and Mihragan-kadag (northern tip of Khuzistan), each under the command of a *framādār* – was within striking distance of this set of four adjacent military districts, on the far side of the central Zagros but close to the Pol-i Dokhtar Pass. From there they could be called upon to reinforce the regular field forces of the regional commands, particularly if the *shāhānshāh* was in command. Thus it can be argued that Media, together with the adjoining fertile margins of the plateau, constituted the military fulcrum of the Sasanian Empire, the designated zone for the assembly and mobilisation of grand armies. This helps to explain the choice of the large, mountain-girt basin of Bisutun, at the southern edge of Media, as the principal venue for the carving of monumental rock-reliefs commemorating the deeds in war and in the simulation of war (hunting) of Khusraw II, the greatest war-leader in the late Sasanian period.[139]

The military achievements of the late Sasanian army are partly to be explained by the ideological commitment of the troops and by the generalship of its commanders. But they would have been unattainable but for the development of a flexible, regionally structured and centrally controlled organisation, which facilitated both independent action by regional armies and their amalgamation into larger, grand armies for major offensives. As a result, the performance of the army at the end of antiquity was very impressive. We may single out the collective effort of 573, when the core territories of the empire were successfully defended against Armenian rebel forces backed by Roman troops in the west and against Turks in the east, while the elderly Khusraw I launched a brilliant counterattack from within the western quadrant.[140] Equally striking was the ability of the army to sustain the rolling offensive in the west, led by Shahen, *spāhbed* of Adurbadagan, and Shahrbaraz, *spāhbed* of the West, despite the serious defeat inflicted by the Turks on the regional army

[138] Cf. Marquart, *Eranšahr*, 70.

[139] Herrmann, *Iranian Revival*, 131–135; J. Howard-Johnston, 'Pride and Fall: Khusraw II and his Regime, 622–630', in G. Gnoli (ed.), *La Persia e Bisanzio*, Atti dei Convegni Lincei 201, Rome 2004, 93–113, repr. in Howard-Johnston, *East Rome*, IX, at 94–96.

[140] Whitby, *Emperor Maurice*, 254–58. See also n.62 above.

of the East commanded by Smbat Bagratuni in 615, their subsequent raiding expedition deep into the interior of Iran, and the effort put into Smbat's successful counteroffensive in 616.[141] Even more impressive was the strength of the offensive strokes which could be delivered and the army's resilience in times of crisis. Both relied on a well-established mobilisation system, which could reinforce one regional field army with detachments from the others and guards units.

Had Sasanian Iran been unable to achieve great concentration of force by combining units from different commands, we would be hard put to explain its survival through the sixth century, let alone the series of victories won by Khusraw I and Khusraw II or the army's ability to strike back with devastating effect after initial defeat and retreat, as in Armenia in 576 and Mesopotamia in 637.[142] As it was, in its late antique form, the Sasanian army more than matched the armies of earlier *shāhānshāh*s. For the Roman empire which was virtually conquered by 621 was not under serious pressure on other fronts and had only been weakened by internal division for two short periods. Equally the Turks who confronted Iran in the east and the north far exceeded their predecessors, Hephthalite, Kidarite and Hunnic, in territorial reach, wealth and military capability. No wonder Khusraw II could be portrayed in the *Shāhnāma* as master of the world.[143] No wonder the Arabs marveled at the wealth and grandeur of their Persian antagonists, and only succeeded in annihilating the empire when they suborned the *spāhbed* of Adurbadagan and thus left the last *shāhānshāh*, Yazdegird III, and the army of the East facing certain defeat.[144]

[141] Ps.Sebeos, 101.26–103.13, with *Hist.Com.*, 183–89.

[142] Whitby, *Emperor Maurice*, 262-265; Thomson and Howard-Johnston, *Armenian History*, 243–46.

[143] J. Mohl, *Le livre des rois par Abou'lkasim Firdousi*, vii, Paris 1878, 221–23, 267–69.

[144] Thomson and Howard-Johnston, *Armenian History*, 264–66.