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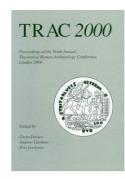
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# 6

# Siege Works, Psychology and Symbolism

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## 6.1 Introduction

Although the construction of siege works by the Roman army may have been undertaken in pursuit of a whole range of different strategic and tactical objectives, it would be a mistake to seek an entirely functional rationale behind their completion. Beyond overtly practical concerns over such matters as siting or raw material availability, it may also be possible to identify other, less tangible influences which, despite their general subordination to the exigencies of the military situation, may still have affected (albeit subconsciously at times) the decision-making of the besieging commander. It is the rôle of these less tangible factors in assisting with the reduction of defended centres that will be considered in this paper.

The design and completion of an effective siege system depended upon a competent mobilisation of those resources (both of manpower and matériel) that were available to the attacker. Although the task of constructing the actual works may not necessarily have been as time consuming as the scale of the field remains might first suggest (Roth 1995), the success of the operation must always have been dependent upon such variables as the experience and competence of the troops/engineers involved, the nature of the terrain, and, of course, the selection of an appropriate siege strategy (with the different 'suites' of siege elements that this decision implied). Nonetheless, it is clear that many offensive sieges undertaken by the Romans demanded the allocation of considerable resources to bring to fruition and it may be possible to recognise the operation of psychological and symbolic dimensions that acted to reinforce the direct physical threat posed by the resulting works.

## 6.2 Expressions of power

Notwithstanding the essentially temporary nature of siege works, the surviving components of a small number of siege systems would seem to belie their characterisation as ephemeral phenomena. This is particularly true in the case of the assault ramps at Machaerus (AD 72) and Masada (AD 73) or the siege mound at Cremna (AD 277–278), where the structures survive as impressive testaments to the labour and craft of their builders. Of course, it is no coincidence that these examples are located in areas that mostly have been abandoned by human settlement, and it is likely that equally dramatic survival might have been expected elsewhere had Bourges (Avaricum), Marseilles and Jerusalemnot have proved such successful urban centres, to mention only the more obvious examples.

Although it is these ramps and mounds that may still command our attention in the present day, a contemporary witness would also have been confronted by the visual impact of the other constituent elements of the siege system, and would have

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been aware of the labour requirements involved in completing the final scheme. By forcing the observer to recognize the physical effort made by him in the pursuit of his objective, the besieger may be seen as making a direct assertion of his power over the besieged.

If we were to follow Trigger's claim that 'the most basic way in which power can be symbolically reinforced is through the conspicuous consumption of energy' (Trigger 1990, p. 128), then the advantage to an assailant of large-scale siege structures can be seen to transcend the purely functional concern to reach or overtop the enemy defences. As the extravagant expenditure of energy 'expresses in a public and enduring manner the ability ... to control the (requisite) materials, specialized skills and labour required to create such ... structures' (Trigger 1990, p. 127), the besieger is making an explicit declaration of his authority. Simply by being conscious of the energy expended by the attacker, the besieged are obliged to adopt active strategies of their own if they are not to be seen as acquiescing to this claim to power. Therefore, a responsive expenditure of energy by the defenders, for example, through the construction of counter-mounds (as at Cremna) or the raising of the ramparts and the addition of turrets (as at Avaricum), may be interpreted as effective statements of resistance, both practically and symbolically. As there may be a question as to whether such measures would be sufficiently proportional to challenge the conspicuous efforts of the assailant, an alternative way in which to reject the besieger's claim would be to take direct action against its manifestation, that is, to destroy the siege structure(s) in question. Sallying or countermining (quite apart from the energy expenditure that the latter might entail) would be an incontrovertible demonstration of the defenders' repudiation of the attacker's assertion of power over them.

It should also be noted that statements of power of this nature may equally serve to reify control from an internal perspective as well. The physical reality and purposive determination of the Roman state would have been as apparent to those engaged in construction as much as to those who were the subject of such operations, and this internal reinforcement would have been particularly valuable when the besieging force included a significant proportion of allied troops or auxiliaries. By witnessing the mobilization of resources at Rome's disposal and, most notably, the harnessing and extravagant consumption of the available energy reserve, the *socii* would be compelled to accede to Roman claims of sovereignty. The complicity of participation in campaigns such as the reduction of Numantia (134–133 BC), where the energy expenditure would appear in marked disproportion to the level of the threat posed by the targeted city, not only bound the allied contingents within this relationship of subordination, but also served as a stark warning as to the likely consequences of any future re-assertion of autonomy.

Even though Trigger's 'thermodynamic explanation' of symbolic behaviour is mediated through the vehicle of monumental architecture, the 'scale and elaboration [of which] exceed the requirements of any practical functions that a building is intended to perform' (Trigger 1990, p. 119), it could be argued that the essentially temporary nature of siege works allows for a similar argument to be advanced on their behalf. Although siege structures were conceived with utilitarian objectives in mind, the degree of energy applied in the construction of what were only intended as ephemeral field works, may be sufficient to amount to the sort of conspicuous consumption that Trigger would regard as a signifier of asserted power (the grossly over-engineered circumvallation thrown around Masada being a case in point). Accordingly, the fact that these works may not have been designed to stand as 'enduring statements of power' in the same way as monumental buildings (where commemorative motives

may have exerted an equal attraction to the builder), does not devalue their impact as avatars for the articulation of the besieger's affirmation of power. That some of these 'statements' still survive to allow a modern observer to comprehend the original discourse that they embodied, must surely reflect the vagaries of fortune as much as any deliberate evocation of posterity on behalf of their creators.

Apart from the symbolic dimension, it is also possible to discern something of the visual impression that these structures must once have conveyed, even from the eroded remnants that exist in the present day. Although when built, these siege works would have been provided with superstructures and revetments, with hoardings, mantlets and the panoply of engines that gave immediate expression to the intentions of the assailant, the basic character of the same as threatening alien intrusions can still be appreciated today. Thus the architectural 'potency' (measured in terms of the emotional impact that the structure may inflict upon an observer) of the assault ramp at Masada, is scarcely mitigated by the disappearance through erosion and earthquake (see Roth 1995, p. 106, contra Gill 1993, p. 570) of Josephus' stone platform that originally would have crowned the same. Certainly, watching the raising of such impressive structures must have had a serious psychological impact on the defenders, particularly those who had not witnessed any comparable siege activity in the past. This effect probably explained how the morale of the defenders of Satricum (386 BC) had been shaken by the advance of Camillus' ramp and why the townspeople of Negrobriga (152 BC) surrendered after 'mounds' had been cast against their walls. Indeed, Caesar explicitly makes the point (BG II.12) that the defenders of Noviodunum (57 BC) were so awed by his preparations for an assault that they quickly sued for terms before the works had been completed.

However, the expression of inherent power does not always rely on sheer mass or large scale to transmit its message, rather, the use of coarse forms, crude materials, rough textures and dark colours may be equally successful at communicating the architecture of intimidation (Küller 1980, p. 94). That the Romans were well aware of the potential of detailing to make explicit use of the 'emotional dimension of control' (Küller 1980, p. 95), can be recognised, for example, in the decision to clothe the Porta Nigra at Trier with 'unfinished' black stone blocks which imbue the gateway with an impression of solid durability and unostentatious strength (Wightman 1970, pp. 94-6). Although siege works may not have been planned with the same, careful attention, the message conveyed by the raw scarring of the landscape with freshly dug trenches, the use of serrated palisades and obstacle fields and, above all, the ominous crudity of the approaching siege mound or ramp, would nonetheless have been explicitly menacing from the perspective of the besieged. On a slightly more abstract plane, the operation of what architects have described as 'second level signifiers' (those factors that form an important part of the architectural 'experience' but are more significantly expressed through other media such as noise, smell, tactility etc., Jencks 1980, pp. 73-4), may also play a subsidiary rôle in this evocation of 'potency'. Thus, the clamour of the work parties engaged in the various construction processes, the taste of the smoke from the enemy camp fires and furnaces, even the stench of the latrine pits and the unburied dead, might all evoke a response which, in a cumulative sense, would compound the feeling of helplessness and the impression of Roman invincibility.

By articulating symbolic connotations in this way, siege works may be seen to have exerted a significant psychological impact that buttressed their formal, militarily-designated *raison d'être*. Such pressures would have been all the more pronounced as a result of the activity taking place in such close proximity to the besieged and it is the effect of this spatial dimension that will now be examined further.

## 6.3 Alienation and appropriation

Siege systems did not exist in a vacuum, devoid of any reference to terrain and environment, as topography and the achievement of specific tactical objectives served to modify decisions as to the choice of the appropriate suite of siege structures and their deployment on the ground. Indeed, the relationship between siege works and the landscape in which they were situated, can scarcely be thought of as less than symbiotic, albeit that one should not pursue any deterministic assumption that the latter always dictated the manner of construction of the former. That the natural world was not always respected by the ambitious besieger can be seen in the case of the unfortunate P. Claudius Pulcher, whose efforts to build a mole in the restless sea off Lilybaeum (249 BC) were so derided by Diodorus Siculus (XXIV.3), or, with greater success, in Caesar's campaigns (BG III.12) against the promontory forts of the Veneti (56 BC). However, where such operations were undertaken in specific contravention of topographical reality, invariably they were militated by cogent military reasoning. Abstract notions such as the triumph of humanity over nature and the expression of power that this may have represented over the besieged, can not have been primary considerations in the decision to commence large-scale enterprises of this nature (even if they may have served useful propagandist purposes in subsequent literary accounts). But despite sounding this cautionary note, there are several issues arising from the imposition of siege works in the local environment that should be discussed, ranging from the psychological implications of these alien intrusions for the defenders, to the more symbolic connotations that stem from the appropriation of familiar geographical and socio-cultural landscapes by the assailants.

## Spatial encroachment

In order to pursue these arguments further, it is necessary to understand that the sense of being part of (and being 'situated' within) the local landscape is central to the cognitive process that anchors our recognition and appreciation of our immediate environment. Therefore, when these surroundings undergo some form of transformation, disorientation may be expected to follow thereafter and in severe cases this may result in social disruption. However, it should also be stressed that it is not simply the destruction of its specific component elements that converts a familiar landscape into an alien one, rather, it is the complex interplay between the processes of destruction and re-modelling that combine to erode an individual's sense of identification with their milieu. Because the impact of change is cumulative, it is necessary to contradict the 'implicit assumption that because space only exists where it is constituted by objects, it is wholly reducible to them' (Sayer 1985, p. 57). This reductionist approach is particularly unhelpful in the context of landscape studies as here it is the holistic impression that is important, even though specific physical elements may confer distinctiveness upon any given space and act as referential territorial signs (see Brower et al. 1983, p. 420). The landscape may be viewed as 'the extension and collection of human activity in a material setting. It is organized, choreographed . . . [and] can produce profound emotional effects on the beholder' (Kobayashi 1989, p. 164). If it is to be understood, the landscape should be analysed in much the same way as language so that its history, its structures and its syntax should be taken into account, and because people 'share the landscape they create through their labour' (Kobayashi 1989, p. 178), its relational dimension must always be emphasized. According to August Heckscher, what the individual requires of the landscape 'is not a plot of ground

but a place — a context in which he can expand and become himself. A place ... [which] must be shaped, usually over long periods of time, by the common efforts of men and women. It must be given scale and meaning by their love. And then it must be preserved' (quoted in Brett 1970, p. 140).

As people participate in the formation of their local environment (whether actively as labourers, or tacitly as consensual observers), it is likely that simple recognition will be translated into affection as the continuous process of habituation acts to imbue a sense of place and belonging (Küller 1980, p. 97). If the familiar, accretionally fashioned landscape is subsequently threatened, and old surroundings disappear too quickly and too extensively, then a strong reaction must be predicted from the observer (Küller 1980, p. 98). It is not implausible to suggest that this type of emotional response will be exacerbated if the process of alteration is brought about by alien manipulation.

Given the foregoing, it might be expected that resentment and anger would be incited by the destructive (or at the very least, disruptive) intervention of a besieging force in the immediate vicinity (and, particularly, within sight) of the besieged centre, but other, more debilitating psychological influences are just as likely to be stimulated. A feeling of disquiet, even fear, might be engendered by the violation of the communal sense of spatial autonomy. Just as individuals apparently require some minimal amount of unencumbered personal space (cf. Baum et al. 1974, p. 91), then the same aversion to spatial invasion should be extrapolated for the community as a whole, albeit that the actual radius at which an act might be constituted as unwelcome spatial intrusion at this aggregated level is always likely to be much wider than that projected for any given individual. Although to some extent dependent upon the degree to which the local environment has been 'colonised' by this communal sense of exclusivity, it is inevitable that the actions of the besiegers would soon start to infringe upon this subliminal zone. As blockade camps and encircling entrenchments gave way to more active approaches, it is not difficult to envisage that the mounting frustration of the defenders would lead to the adoption of increasingly desperate expedients to alleviate the tension. Some such pressures may well have persuaded the Xanthians (42 BC), for example, to launch the disastrous sally which allowed Brutus' troops to force their way inside the city alongside the retreating citizenry. It is likely that further research addressing the psychology of group dynamics would provide significant insights into this type of stress-conditioned behaviour.

Even if the besieger's encroachment upon its territory was viewed in a relatively sanguine light, once the city wall itself was menaced by these approaches, then the sense of invasiveness must have become apparent to everyone. After all, city walls in the classical world enjoyed a symbolic significance that may have been just as important as their task in protecting the citizenry.

[La] dialectique . . . entre securitas et dignitas se fonde implicitement sur l'idée que l'enceinte et la ville sont indissociables, la première n'étant en somme que la projection de la seconde vers l'extérieur. (Gros 1992, p. 211)

As city walls were an explicit statement as to the definition of the formal urban area (whether in terms of delineating the Aristotelian kosmos or the Roman pomerium), an attack on the same threatened to violate this bounded, ritually purified core with debilitating consequences for the communal Selbstverständnis. Furthermore, as city walls were also often regarded as embodiments of municipal pride and status (as in the absurdly extensive circuits at Augustodunum or Nemausus erected in the early Principate, Johnson 1983, p. 15), the damage inflicted in the course of a siege would

serve to negate such expressions of self-esteem with a possible attendant impact on the morale of the besieged. The collective sigh that Josephus reports as emanating from the defenders of Jerusalem (AD 70) once the rams had started to pound the 'Third' wall (BJ V.227), may suggest that it was only then, with their outer wall under direct attack, that the besieged realised the acuity of the danger that they faced.

That physical factors can alter the spatial perception and the related spatial behaviour of individuals and groups, presents us with a subsidiary explanation for the raising of counter-mounds, walls and turrets by those defenders confronted with Roman siege mounds and assault ramps. Apart from delaying the overtopping of their enceinte, such structures also served to preserve the field of view enjoyed by the besieged, maintaining their link with the wider world outside the walls. Without such measures, the defenders would have been obliged to accept the reality of their confinement and, through inaction, might have been in danger of acceding to the assailant's encroachment upon the communally-asserted area of inviolability. Once that basic claim to the control of territory had been conceded, then sustaining resistance to the cession of full independence became less plausible from a psychological perspective.

#### Altering the earth, assimilating the past

Of course, the impact of the besiegers' works must also have engaged the defenders even more directly in the way that their superimposition transformed a familiar, shared landscape. This sense of alienation is still palpable at Cremna, where the red ochre siege mound contrasts sharply with the prevailing grey of the local limestone geology, a distinction that must have been still more pronounced at the time of construction when the bare earth would not have been masked by a clothing of scrub. Such an obvious intrusion also represented a threat on the cosmological level. as it can be argued that the manner in which people understood how their world was constituted (and their place within that order) was often founded upon shared mythohistorical associations inextricably tied in with their immediate environs. The drastic alteration of established geographical 'realities' by hostile outsiders resulting in the transformation (or elimination) of the cosmological referents of the past, must have had a profoundly disturbing impact which may have served to erode the capacity to resist. But however unsettling the physical metamorphosis effected by the assailants. their assimilation of the socio-cultural references that identified and laid claim to the defenders' ancestral landscape, must have resulted in even greater emotional stress for the besieged.

Although the demolition of certain structures such as aqueducts would have proceeded as a matter of course (as in the Gordian siege of the Praetorian camp in Rome, AD 238), the extent to which a besieger might despoil the immediate surroundings would have depended upon the ready availability of the raw materials necessary for the completion of his works and engines, and on the tactical requirement to obtain a clear avenue of approach to the enemy walls (the motivation behind Titus' orders to remove the obstructions between Mount Scopus and Jerusalem). Whilst decisions of this nature may have been tempered by issues such as the amount of matériel already transported to the site by the besieging force and the scale of the projected siege system, less practical considerations may also have been taken into account.

Thus, for example, the decision by Sulla to ravage the sacred groves at Athens (87–86 BC) and the famous, well-wooded suburbs of the Academy and the Lyceum (related with such distaste by Plutarch, *Sulla* XII.3), ostensibly to provide timber for his extensive works before the Piraeus, was probably as much an act of calculated

vandalism, demonstrative of his implacable hostility, as any product of utilitarian calculation. That such conduct may have breached the conventions of acceptable behaviour has an interesting echo in a passage from Deuteronomy where the prohibition against the destruction of particular trees is made explicit:

When you are at war and lay siege to a city for a long time in order to take it, do not destroy the trees by taking the axe to them, for they provide you with food; you shall not cut them down. The trees of the field are not men that you should besiege them. But you may destroy or cut down any trees that you know do not yield food, and use them in siege works against the city that is at war with you, until it falls.

Deuteronomy XX.19–20

The idea that there were strictures against certain types of despoliation can also be discerned in two separate incidents that took place during Carthaginian campaigns in Sicily. In the first (Diod. Sic. XIII.86.1–3), in 406 BC, a Carthaginian general at the siege of Acragas ordered the destruction of nearby monuments and tombs in order to provide for his assault ramps. This was duly undertaken despite the fact that one of these tombs had been struck by lightning and the soothsayers had forbidden its demolition. The impious general died as a result of the plague that immediately struck the army and, with the appearance of the 'night spirits of the dead', the surviving commander ordered that the remaining monuments be spared and the gods propitiated by sacrifices. In the second incident (Diod. Sic. XIV.63.1–3), during Himilcon's siege of Syracuse in 396 BC, the Carthaginians plundered the temples of Demeter and Corê and destroyed most of the tombs in the area, including the costly monument to Gelon and his wife. Once again, 'by influence of the deity' (XIV.70.4), the army, severely weakened by disease, was routed by a sortie from the city.

It is not at all clear whether the Romans took the possibility of divine displeasure into account when pillaging for the requisite materials to undertake the construction of their siege works (after all, tombs in particular, would have provided extremely useful building blocks). Certainly, as we have already seen. Sulla had no compunction in ordering the devastation of the Athenian sacred groves, while his simultaneous plundering of the temple at Delphi (Plut. Sulla, XII.4-5) demonstrated that the dangers of sacrilege did not weigh heavily on the mind of this particular commander. The fact that references to the specific use of tombs for construction purposes remain a rarity in the sources (an exceptional example recording their employment as constituents of Cassius' substantial assault ramp at Laodicea in 43 BC) might suggest that defiling the monuments of the dead may have been an expedient of last resort. Certainly, at Cremna, the surveyors observed that the line chosen for the 'first blockading wall', although crossing a cemetery of rock-cut cists and free-standing sarcophagi, seemed to respect the actual graves themselves (Mitchell et al. 1995, p. 202). However, it should also be noted that the rebuilding of wall-circuits that took place at a similar time elsewhere in the empire (as in Gaul: Johnson 1983, p. 33), would appear to have included such spolia as a matter of course.

If there was a generally observed practice of avoiding spurious offence either towards the shades of the dead or particular local deities, then those commemorative monuments that acted as territorial markers may have been spared the indignity of quarrying. However, the familiar argument advanced by Parker Pearson and others (e.g., Parker Pearson 1993, 1995) concerning the utility of appropriating such monuments for ideological purposes, should still be acknowledged, for if monuments provided 'a way in which successive generations established a sense of place and time

in relation to the living and the dead' (Bradley 1993, p. 129), then their demolition and subsequent incorporation within the works of the besieger might be interpreted as reinforcing the new, alien claim to the landscape. Whatever the merits of this argument, it should be remembered that a besieger could make the same symbolic statement (without risking any supernatural intervention) equally effectively by razing and re-using other extra-mural structures.

That suburban buildings could provide a useful harvest of materials to a besieger was a point that was not lost on several Roman commanders. For one example amongst many, M'. Acilius Glabrio was eager to order the levelling of that part of Heraclea (191 BC) that lay outside the city walls as it furnished him with a full range of material that could be pressed into service in his field works (Livy XXXVI.22.11). Although preparatory demolitions of this nature may have taken some time to complete, the clearances enabled three separate assault ramps to approach the walls and the scavenging provided the construction material for the same. Additionally, there must also have been a calculated psychological element to the whole process, with the defenders being forced to acknowledge their weakness as passive witnesses to the destruction of their own property. Although such tactics may also have stimulated an angry response leading to a strengthening of the will to resist, it would have been difficult to avoid the explicit message as to the eventual fate of the city should operations have to be prosecuted to a close. The besieger may also have derived positive psychological reinforcement from the satisfaction of employing the enemy's own property as a means for achieving the reduction of the city and his troops would have remained motivated, their appetite having been whetted for further plunder.

In these circumstances, Livy's explanation that the depredation at Heraclea was made possible because the inhabitants of the suburbs had already fled within the defences, rings very hollow. With such advantages accruing, Glabrio would have been sure to have issued the same orders regardless of whether or not the residents had already evacuated their homes!

Given the convenience that extra-mural structures afforded to an assailant, it is perhaps surprising to note the scarcity of those accounts that mention active attempts by the besieged to prevent these assets from falling into hostile hands (although such preliminary preparations would only have been possible when the defenders had fore-knowledge of the impending siege). A case in point is provided by the Xanthians who demolished their own suburbs prior to the arrival of Brutus. Not only did this intervention withhold potentially useful construction material from the Romans but, even more importantly perhaps, the denial operation would have allowed greater sensitivity to be shown in the clearance process, with household shrines and similar foci being secured against desecration at the hands of the enemy. Such acts of deliberate sabotage by the defenders would have served to counter the feeling of powerlessness which may otherwise have been engendered by witnessing despoliation at the hands of the besieger.

In the same way as the destruction of particular monuments may have been shunned by the besieger, it is also possible that certain types of landscape manipulation may have required some form of propitiatory act before being undertaken. This was particularly likely in those cases involving interference with watercourses, as a healthy regard for the power of river-deities would appear to have been deeply embedded within the Roman psyche (see Braund 1996). If solemn ceremonies had accompanied the canalisation of the Orontes by the Syrian military establishment under Trajan's father (Braund 1996, p. 45), then the diversion of the Natesio to deprive Aquileia of its water supply (AD 361) must have been a similarly serious undertaking,

both from religious and engineering perspectives (after all, Julian more than anyone, would have been expected to recognize the potential sacrilege implied by the restraint on the river-deity's freedom). In these circumstances, it is perhaps surprising that we do not read of preparatory rituals being performed by attacking commanders to avert any charge of impiety, but the silence of the sources may simply reflect the generality of a practice that required no particular comment.

## 6.4 Summary

The preceding pages have attempted to place siege works within a broader symbolic landscape which is not restricted by the straightforward demands of form, function and tactics. But despite laying such emphasis upon these more cognitive issues, it would perhaps be wrong to make too much of the apparent distinction between the utilitas of siege structures and their symbolic connotations. After all, Umberto Eco would argue that the denoted and the connotative are both aspects of functionality: whilst the symbolic connotations 'may not be immediately identified with the 'functions' narrowly defined, they do represent (and indeed communicate) in each case a real social utility' (Eco 1980, p. 24). Accordingly, it may be preferable to follow Eco further and to identify a primary function for siege work construction (the 'practical' concern with the methods to be employed to ensure reduction) and a whole complex of accompanying secondary functions (the related, perhaps even unconscious, symbolic connotations of these structures and their siting; Eco 1980, p. 25). However, in order to understand these secondary 'functions', we must always refer back to the 'primary' starting point, as a symbolically constructed attack on the spatial and cultural environment of the besieged will only be relevant if it supports a more direct, physical intervention. Whereas in architectural discourse there may be some debate as to the degree to which secondary signifiers play a 'conscient [sic] and explicit' rôle in architectural design (Gandelsonas & Morton 1980, p. 248), it seems that in the context of siege operations at least, the structural components of the system were frequently laid out with categorical messages in mind. Not only were the defenders to face an unambiguous material threat, but their will to resist was also to be subjected to other, more insidious pressures.

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## Original sources

CAESAR De Bello Gallico, translated by H. J. Edwards, 1994. Loeb Classical Library.

DIODORUS SICULUS *The Library of History*, Books I-XV.19 translated by C. H. Oldfather; Books XV.20-XVI.65 translated by C. L. Sherman, 1933-67. Loeb Classical Library.

JOSEPHUS Bellum Judaicum, translated by H. St. J. Thackeray, 1927–28. Loeb Classical Library.

- LIVY Ab Urbe Condita, Books XXXI-XXXIX, translated by E. T. Sage, 1935–6. Loeb Classical Library.
- THE NEW ENGLISH BIBLE 1974, 4th Impression. Oxford University Press, Oxford.
- PLUTARCH Lives, translated by B. Perrin, 1914-26. Loeb Classical Library.

#### References

- BAUM, A., M. RIESS & J. O'HARA 1974. 'Architectural variants of reaction to spatial invasion.' Environment and Behaviour 6: 91-101.
- Bradley, R. 1993. Altering the Earth. SAS Monograph Series 8. Society of Antiquaries of Scotland, Edinburgh.
- Braund, D. 1996. 'River frontiers in the environmental psychology of the Roman world.' In D. L. Kennedy (ed.), The Roman Army in the East, JRA Supplementary Series 18, pp. 43-7. Journal of Roman Archaeology, Ann Arbor.
- Brett, L. 1970. Parameters and Images. Architecture in a crowded world. Weidenfeld & Nicolson. London.
- Broadbent, G., R. Bunt & C. Jencks (eds.) 1980. Signs, Symbols and Architecture. John Wiley & Sons, Chichester.
- BROWER, S., K. DOCKETT & R. B. TAYLOR 1983. 'Residents' perceptions of territorial features and perceived local threat.' *Environment and Behaviour* 15: 419–37.
- Eco, U. 1980. 'Function and sign: The semiotics of architecture.' In Broadbent et al. (1980), pp. 11-69.
- GANDELSONAS, M. & D. MORTON 1980. 'On reading architecture.' In Broadbent et al. (1980), pp. 243-73.
- GILL, D. 1993. 'A natural spur at Masada.' Nature 364: 569-70.
- Gros, P. 1992. 'Moenia: Aspects défensifs et aspects représentatifs des fortifications.' In S. van de Maele & J. M. Fossey (eds.), Fortificationes Antiquae, McGill University Monographs in Classical Archaeology and History 12, pp. 211–25. J. C. Gieben, Amsterdam.
- JENCKS, C. 1980. 'The architectural sign.' In Broadbent et al. (1980), pp. 71-118.
- JOHNSON, S. 1983. Late Roman Fortifications. Batsford, London.
- KOBAYASHI, A. 1989. 'A critique of dialectical landscape.' In A. Kobayashi & S. Mackenzie (eds.), Remaking Human Geography, pp. 164–83. Unwin Hyman, London.
- KÜLLER, R. 1980. 'Architecture and emotions.' In B. Mikellides (ed.), Architecture for People, pp. 87-100. Studio Vista, London.
- MITCHELL, S., S. CORMACK, R. FURSDON, E. OWENS & J. ÖZTÜRK 1995. Cremna in Pisidia: An Ancient City in Peace and War. Duckworth and The Classical Press of Wales, London.
- Parker Pearson, M. 1993. 'The powerful dead: Archaeological relationships between the living and the dead.' Cambridge Archaeological Journal 3(2): 203-29.
- Parker Pearson, M. 1995. 'Return of the living dead: Mortuary analysis and the new archaeology revisited.' Antiquity 69: 1046-8.

- ROTH, J. 1995. 'The length of the siege of Masada.' Scripta Classica Israelica 14: 87-110.
- SAYER, A. 1985. 'The difference that space makes.' In D. Gregory & J. Urry (eds.), Social Relations and Spatial Structures, pp. 49-66. Macmillan, London.
- TRIGGER, B. G. 1990. 'Monumental architecture: a thermodynamic explanation of symbolic behaviour.' World Archaeology 22(2): 119-32.
- WIGHTMAN, E. M. 1970. Roman Trier and the Treveri. Rupert Hart-Davies, London.

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