Introduction

The character of the Low Countries' Wars

Some time in 1614 the young prince of Spain, later King Philip IV, received a spectacular present: a complete set of toy soldiers made of wood. It included infantry regiments and cavalry companies with their various banners, weapons and equipment; horses and cannon for the artillery; the distinctive shops and tents of armourers, sutlers and other camp followers; and special materials to construct artificial lakes, forests and pontoon bridges. There was even a toy castle for the 'army' to besiege. This, the first child's 'war-game' known in Europe, reproduced in replica the most famous army of its day: the Army of Flanders, maintained by Spain in the Low Countries.

A special pamphlet printed in Spanish and Latin accompanied the toy because its designer, Alberto Struzzi, intended it to educate as well as amuse. 'This army will be no less useful than entertaining,' Struzzi informed the prince. 'From it one may observe the expenditure that is necessary if a king is to emerge victorious, and how if money (which is the sinews of war) fails, the prince's intentions cannot be achieved.'[1] More specifically, the war-game aimed to make Prince Philip aware of the existence of the Spanish Netherlands and of the army that defended them. It was never too early to teach a future king of Spain that the security of his empire depended in large part on maintaining a strong military presence in the Netherlands, and that his army there could function efficiently only if it was paid.

The original of Alberto Struzzi's toy army was a fighting force at its zenith. In 1604, after the longest continuous siege in modern European history, the Army of Flanders had forced its Dutch enemies to surrender the heavily fortified port of Ostend. In 1605 and 1606, led by Ambrosio Spínola (the victor at Ostend) the Army crossed the rivers Rhine and Maas and threatened the heartland of its enemies. In 1614 (the year in which the toy reached Spain), Spínola and his forces occupied the duchies of Jülich and Berg in the Rhineland and in 1620 they marched into the Rhine

[1] Albertus Struzzus (=Alberto Struzzi), *Imago militiae auspiciis Ambrosii Spinolae, belgicarvm copiarvm dvctoris* (Brussels, 1614, 12 pp.; Latin and Spanish). AGS *CMC* 3a/1824 no. 7 contains Struzzi's accounts for making and transporting his 'war game' from Brussels to Spain; he only received reimbursement for the costs in 1630: AGS *E* 2044/192, order of Philip IV to pay 'Alberto Struçi que truxo el exército de figuras'. Alas, the model army perished in a fire in the royal palace in Madrid in 1884. For its creator's career, see M. A. Echevarría Bacigalupe, *Alberto Struzzi. Un precursor barroco del capitalismo* (Leuven, 1995), and R. A. Stradling, *Philip IV and The Government of Spain, 1621–1665* (Cambridge, 1988), p. 321.

Palatinate and crushed all opposition there within a few weeks. Although the siege of Bergen-op-Zoom failed in 1622, three years later Spínola forced the surrender of Breda, an event celebrated in the most famous painting of the Spanish Golden Age: 'Las Lanzas' by Diego Velázquez.

Alberto Struzzi brought no model fleet with him – a remarkable omission considering that the Army of Flanders sought to subdue a maritime state whose chief strength lay in its seaborne commerce. But there was no mistake: in 1614, the Army of Flanders remained almost exclusively a land-bound force. A powerful navy had once existed in the Low Countries, based on the naval arsenal at Veere in Zealand, but in 1572 Dutch rebels captured the arsenal, containing over 2,000 naval guns and copious munitions, and thereafter the royal fleet could not refit or replace its warships. In 1576 it lost all its seaports too.

In 1583, under the command of Alessandro Farnese, prince (later duke) of Parma, the Army of Flanders recaptured the port of Dunkirk. At once Parma created an Admiralty Board and ordered the construction of new warships. Thus began the 'Flanders fleet' (*Armada de Flandes*) which for the rest of the war operated against the Dutch, capturing prizes, protecting Spanish merchantmen and ferrying troops between Spain and the South Netherlands. Yet the activities of the Dunkirk fleet did not win the war. In the words of a Spanish minister in 1601: 'If we bring out 100 ships they bring out 400, and if more, more; and they are always happy to lose ten of their ships if they can sink one of ours.'[2] All Spain's attempts to challenge Dutch naval superiority by sending warships from its own Atlantic fleet into the North Sea ended in disaster. Only a small part of the *armada* assembled in Santander in 1574 ever set out; storms drove back the fleets of 1596 and 1597; and although those of 1588 and 1639 reached the English Channel in battle strength, both met with overwhelming defeat.

The failure to achieve naval mastery in the North Sea seriously compromised Spain's efforts to suppress the Dutch Revolt: as one of Philip II's naval advisers put it in 1577, without a fleet in the Low Countries it could take fifty years to reduce the 'rebels'.[3] Profound changes and innovations in military organization and military practice had created a stalemate in land warfare in western Europe. The first important break with the norms of medieval warfare stemmed from the defeat of the mounted knights of Burgundy by squares of Swiss pikemen in the 1470s. The triumph of the Swiss infantry at the battles of Morat, Grandson and Nancy removed a crucial restriction on the scale of warfare in Europe. The high cost of a war-horse and full cavalry armour meant that the size of the social class that could afford to fight on horseback determined the size of each army. No such restriction

[2] AGS *E* 634/64, 'Discurso del estado de la guerra de Flandes', by Juan Bautista de Tassis (1601). On the history and achievements of the Dunkirk fleet, see R. A. Stradling, *The Armada of Flanders: Spanish Maritime Policy and European War, 1568–1668* (Cambridge, 1992).

[3] BNM *Ms.* 1749/361–79, memorial of Alonso Gutiérrez to the king, 23 Oct. 1577.

limited the number of men who could be equipped with a helmet and sixteen-foot pike. The eclipse of cavalry by infantry meant that victory in battle came to depend not so much on the quality of the combatants or on the excellence of their armament, but on their numbers. A government bent on war now had to mobilize and equip every man it could find.

In his *Discourses on the First Decade of Titus Livy* (completed in 1519) and his *Art of War* (1521) Niccolò Macchiavelli of Florence publicized the principal lessons of the Swiss victories: infantry had defeated cavalry, quantity had overwhelmed quality, and they would do so again. In the words of Sir John Hale: 'Respect for Macchiavelli's military ideas continued to increase as his political reputation became more alarming.'[4] Nevertheless, despite the accuracy of Macchiavelli's assessment of the changed military situation, few of his plausible predictions for the future of European warfare came true. He foretold larger armies, more battles and, consequently, shorter and more decisive wars. Only the first of these forecasts materialized – larger armies – and even then not for the reason Macchiavelli had postulated, and not in his lifetime!

The increase began with the French, whose armies steadily increased in size. Whereas Charles VIII and Louis XII invaded Italy with armies of 22,000–29,000 men, Henry II captured Metz with 36,000 in 1552 and mustered 40,000 on his last campaign in 1558. The total armed forces of the French crown, at least on paper, rose from 41,000 in 1515 to 69,000 or more in 1544, and to 80,000 by 1567–8.[5] Meanwhile France's principal adversary, the Emperor Charles V, led 42,000 men on his invasion of France in 1544; 56,000 to defeat the Schmalkaldic League in Germany in 1546; and 55,000 men to besiege Metz in 1552.[6] In that year, assailed by enemies on all fronts, Charles raised 109,000 men in Germany and the Netherlands, 24,000 more in Lombardy and yet more in Sicily, Naples and Spain: a grand total of about 150,000 men. In 1574 his son Philip II maintained 86,000 men in the Netherlands alone with tens of thousands more in the garrisons of Italy and aboard his Mediterranean fleet.[7]

In all these armies, the increase in numbers took place principally among the infantry, especially among the pikemen, thus fulfilling Macchiavelli's prophecy. Yet the 'puissant pike' did not in any sense *cause* the increase; rather a transformation in the role and nature of siege warfare compelled every major state to double the size of its forces.

[4] J. R. Hale in *The New Cambridge Modern History*, III (Cambridge, 1968), p. 181.

[5] Figures from J. A. Lynn, 'Recalculating French army growth', in C. J. Rogers, ed., *The Military Revolution Debate* (Boulder, 1995), pp. 122–3. Professor Lynn stressed the stability of these figures ('less military growth than might have been expected': p. 124); but some would consider an increase of 100 per cent significant.

[6] G. Zeller, *Le siège de Metz par Charles-Quint* (Nancy, 1943), pp. 35–6.

[7] AGS *E* 1199/2 and 1201/112, *relaciones* of the Imperial army in 1552; IVdeDJ 68/309*ter*, *Relación de bilanço* of Mar. 1574 (86,235 men).

Although cannon first appeared in the West in the 1320s, they do not seem to have been used to batter down walls before the 1370s, and the practice remained fairly rare until the 1420s.[8] For the next century, however, whenever good siege guns bombarded the traditional 'vertical system' of defence the outcome was predictable. As Macchiavelli wrote in 1521: 'No wall exists, however thick, that artillery cannot destroy in a few days'.[9]

Shortly afterwards, Macchiavelli changed his mind. In a report written in 1526, he proposed three distinct methods of successfully resisting siege artillery, each one using an important Italian architectural innovation: the bastion. Two faces of these quadrilateral gun-platforms projecting from the walls pointed outwards while the other two stood at right angles to the main wall and provided a devastating flanking fire in the event of an assault (see figure 1). Arranged in star-shaped patterns and bristling with heavy artillery, bastions also created interlocking fields of fire that precluded assaults on the bastions themselves (see Plate 1). Macchiavelli's first two methods of creating an 'artillery fortress' involved tearing down all existing walls and building a new defensive system. One, more ambitious, included within the new defences all the suburbs and all neighbouring high ground from which an enemy might threaten; the second, resulting in a smaller circuit of fortifications, involved abandoning and levelling all areas deemed indefensible.

Both methods, Macchiavelli admitted, involved colossal expense: not only the outlay on building the fortress itself but also the social costs of razing the suburbs lying just beyond the medieval walls, often the site of important buildings such as hospitals, religious houses and industrial plant (mills and furnaces). Construction normally took years. Macchiavelli therefore proposed a third technique of installing modern defences that, although weaker than the others, would prove far quicker and cheaper to build. Governments could drastically modify existing fortifications by reconfiguring the towers and gateways into bastions and by using earth to increase the depth of the medieval walls and add outlying redoubts (ravelins, hornworks and crownworks). Admittedly, earthen ramparts, when unprotected by brick and stone, would not last for long before the weather eroded them (contemporary estimates ranged from four years, with minimal maintenance, up to ten), but while they lasted

[8] See H. Koller, 'Die mittelalterliche Stadtmauer als Grundlage staatliche Selbstbewusstseins', in B. Kirchgässner and G. Scholz, eds., *Stadt und Krieg*, Stadt in der Geschichte XV (Sigmaringer, 1989), pp. 9–25; and C. J. Rogers, 'The military revolutions of the Hundred Years' War', in Rogers, *The Military Revolution Debate*, pp. 68–73. France was the first European centre of artillery warfare but, by the 1490s, Spain had 180 large and medium pieces and five state-run gun and powder factories: see W. F. Cook, 'The cannon conquest of Nasrid Spain and the end of the Reconquista', *Journal of Military History*, 57 (1993), p. 52.

[9] Macchiavelli, *The Art of War* (1521; Eng. edn, New York, 1967), chapter 7. See also the similar views of the late fifteenth-century military engineer di Giorgio discussed in F. P. Fiore, 'L'architettura militare di Francesco di Giorgio: realizzazioni e trattati', in C. Cresti, A. Fara, and D. Lamberini, eds., *Architettura militare nell'Europa del XVI secolo* (Siena, 1988), p. 40.

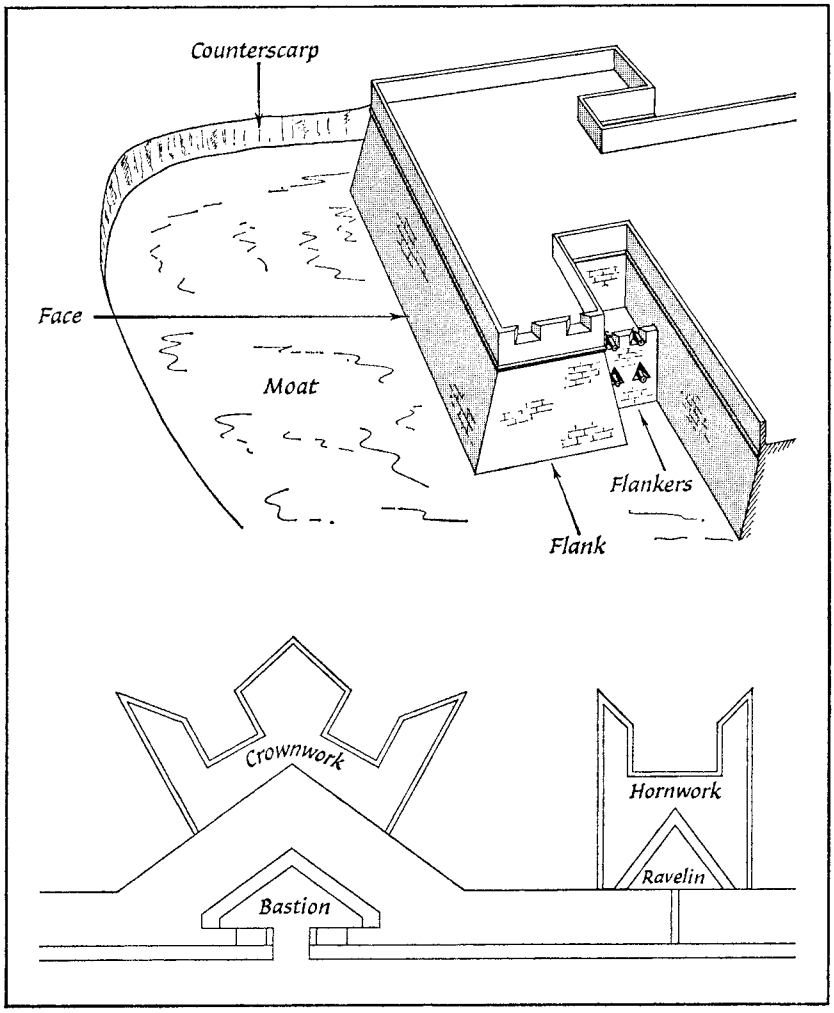

Figure 1. The bastion *top* and the new defence-works

they could absorb incoming fire effectively. With enough determined defenders, they could defy even the largest armies of the day.[10]

[10] Macchiavelli's 'Relazione di una visita fatta per fortificare Firenze' (1526), in S. Bertelli, ed., *Niccolò Macchiavelli: Arte della guerra e scritti politici minori* (Milan 1961), pp. 289–302, at p. 295. See also the perceptive discussion of D. Lamberini, 'La politica del guasto. L'impatto del fronte bastionato sulle preesistenze urbane', in Cresti, Fara and Lamberini, *Architettura militare nell' Europa del XVI secolo*, pp. 223–4.

Even today the *trace italienne* (as the new style became known outside Italy) looks formidable. The fortifications of Berwick-on-Tweed, for example, built to the new design on the Anglo-Scottish frontier between 1558 and 1568, still impress observers (Plate 1). Artillery fortresses like Berwick revolutionized siege warfare because they precluded the conventional method of attack: making a breach in the walls by artillery or mines and following up with a massed assault. Instead, bastions kept the besiegers' guns and sappers out of effective range so that they could no longer reduce the walls to rubble. Plates 2 and 3 demonstrate the superiority of the *trace italienne*: in Plate 2 Dutch bombardment in 1591 easily breached the two medieval circuits of high walls around the town of Deventer, allowing the Dutch troops to effect their entry. Afterwards, the Dutch turned Deventer into an artillery fortress with a full circuit of bastions and ravelins outside the medieval walls (Macchiavelli's first technique), ruling out any easy capture in the future (Plate 3).

Normally, an artillery fortress fell only after a long blockade during which the besiegers constructed and manned a double perimeter of fortifications: a circumvallation against the beleaguered town and a contravallation against the possibility of attack by an army of relief. Plate 4, a contemporary print of the siege of the Spanish garrison of Amiens by Henry IV in 1597 together with an aerial photograph of the surviving imprint of the siege-works as modern crop-marks, illustrates the new techniques of positional warfare. In line with Macchiavelli's 'third method', the town had strengthened its medieval walls with a number of modern bastions and added two ravelins across the moat to protect weak spots. The surrounding siege-works consisted of diamond and star-shaped earthen redoubts joined by walls that both sealed off the town and protected the besiegers' main camp (at the bottom right of the print). Almost three hundred years later, from the air, these earthworks still showed up clearly as crop marks. The siege of an artillery fortress constituted the greatest engineering venture of early modern Europe.

The obvious superiority of the artillery fortress over all previous defensive systems led to its rapid spread to all the sensitive frontier-zones of Europe. In the 1530s, Francis I invited Italian architects to update the fortifications of France's northern frontier. In 1542, after they had constructed bastions all along the border with the Netherlands, Francis declared war on Charles V confident that his own frontiers were proof against counter-attack. Like the Maginot Line of the 1930s, however, France's defences extended only as far as the nearest neutral territory. In 1544 Charles V marched into the duchy of Lorraine and entered France through its eastern provinces, which lacked artillery fortresses. He captured one town after another and had advanced within fifty miles of Paris when Francis concluded a hasty peace. Meanwhile, the emperor also ordered Italian architects to erect artillery fortresses in the Netherlands. The bastions of Francis I at Doullens, La Capelle and Thérouanne soon faced those of Charles V at Charlemont, Philippeville and Mariembourg. By 1572, when the Dutch Revolt began, twelve Netherlands towns

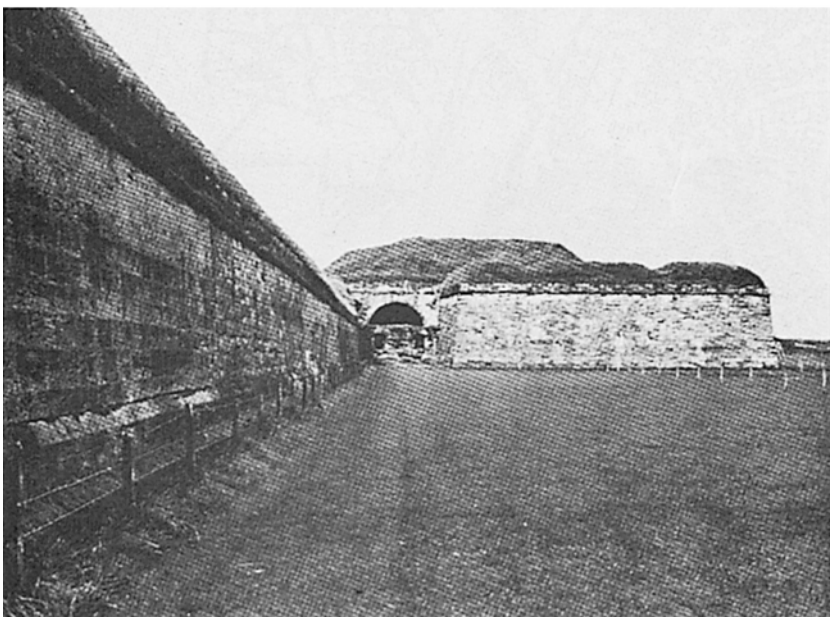

Plate 1. The new fortifications, Berwick-on-Tweed, 1558–68; *above* aerial view; *below* a bastion with flankers

had been turned into artillery fortresses and the walls of eighteen more had been rebuilt in part – a total of 27 miles of new walls.[11]

The 'revolutionary' nature of the new fortifications lay in their stultifying effect on the conduct of war. In 1572 the siege of Mons lasted six months, as did the siege of Haarlem the following year; two years later, Leiden survived two sieges that tied down the Spanish field army for a total of four months. Just as the triumph of the pike squares already guaranteed the superiority of defensive over offensive tactics in mobile operations, now defence became superior to offence in siege warfare too. This realization consoled an English observer in the Low Countries on the morrow of the seemingly complete victory of the Army of Flanders commanded by Don John of Austria over the Dutch at Gembloux in January 1578. Don John might have won a battle, William Davison observed with grim satisfaction, but he had still to:

> Expugne one towne after another, the least of a nomber wherof cannot cost him less than half a yeres siege with an infinite charge, loss of men and hazard of his fortune and reputation bycause (as men of warr are wont to say) one good towne well defended sufficeth to ruyn a mightie army.[12]

An analysis of the Army of Flanders' campaigns for the following twelve years reveals that, unfortunately for the Dutch cause, Mr. Davison's dictum did not always prevail, because not all towns in rebellion possessed the *trace italienne*. Between 1578 and 1590 troops commanded by Don John and his successor, Alexander Farnese duke of Parma (or by their lieutenants), captured 95 Netherlands towns: an impressive total for any early modern army.

Two-thirds of the places captured by the Army of Flanders during this period fell through direct military action. The fifteen towns that required a blockade all boasted a *trace italienne*: many capitulated without a shot being fired against the walls. The fourteen towns that negotiated their surrender after bombardment also possessed modern walls (at least partially); so did Maastricht, taken by storm after a four-month siege (and two failed assaults) in 1579. By contrast, the other eight towns taken by storm lacked bastions, as did the twenty-two places that waited until the siege artillery arrived before surrendering (had they waited for bombardment to

[11] For an authoritative account of the origins of Italian-style defences, see S. Pepper and N. Adams, *Firearms and Fortifications: Military Architecture and Siege Warfare in Sixteenth-Century Siena* (Chicago, 1986), chapter 1. For their spread, see A. Fara, *Il sistema e la città. Architettura fortificata dell'Europa moderna dai trattati alle realizzazione, 1464–1794* (Genoa, 1989); idem, *La città da guerra nell'Europa moderna* (Turin, 1993); and G. Parker, 'The artillery fortress as an engine of European overseas expansion, 1480–1750', in Parker, *Success is Never Final: Empire, War and Faith in Early Modern Europe* (London and New York, 2002), pp. 194–218.

[12] Baron J. Kervijn de Lettenhove, *Relations politiques des Pays-Bas et de l'Angleterre sous le règne de Philippe II*, X (Brussels, 1891), p. 380, Davison to Lord Burghley, 29 Mar. 1578. The perceptive military commentator, Fourquevaux, writing in 1548, already recognized as a general rule that no town defended by the *trace italienne* could be taken other than by formal siege: Raymond de Beccarie de Pavie, Sieur de Fourquevaux, *Instructions sur le Faict de la Guerre*, ed. G. Dickinson (1548; London, 1954), f. 85.

Towns captured by the Army of Flanders, 1578–90

	Towns taken by siege				*Towns taken without siege*				
Year	Surrender after blockade/ bombardment	Surrender after formal siege	Taken by storm after siege	Surrender after siege artillery arrived	Surrender after nearby town fell	Taken by surprise or ruse	No defence	Betrayed by garrison	Total
1578		3	2	5	2				12
1579			2	2	2		5	1	12
1580		1	2	2		2			7
1581	1		1						2
1582	1	1		6		1	1	1	11
1583	2	1		5		1	5	2	16
1584	4	1			1		1	1	8
1585	3							2	5
1586			2	2	2		1		7
1587		1						3	4
1588	1	1							2
1589	2	5						1	8
1590	1								1
Total	15	14	9	22	7	4	13	11	95

Source: Appendix L

commence, according to the prevailing 'Law of War' they would be sacked if taken by storm). The Army took the other places either by surprise (4 places), or because the fall of a neighbouring town made defence untenable (leading its garrison to surrender or flee: 13 places), or because the garrison betrayed their town for money (11 places).[13]

Of the 60 places taken by the Army of Flanders through direct military action between 1578 and 1590, although some fell to a relatively small force in a matter of hours, the artillery fortresses resisted the efforts of tens of thousands of troops for months. Not surprisingly, the number of towns in the Low Countries equipped with the *trace italienne* steadily increased and so did the size of the armies fighting the war.[14]

[13] See Appendix L, page 261 below, for sources. On the circumstances in which a town could be sacked, see G. Parker, 'The etiquette of atrocity: the Laws of War in early modern Europe', in Parker, *Success is Never Final*, pp. 143–68; and J.-L. Charles, 'Le sac des villes dans les Pays-Bas au seizième siècle. Etude critique des règles de guerre', *Revue internationale d'histoire militaire*, 24 (1965), pp. 288–301.

[14] The argument that the proliferation of artillery fortresses directly caused an increase in army size, made here and also in G. Parker, *The Military Revolution: Military Technology and the Rise of the West, 1500–1800* (2nd edn, Cambridge, 2000), chapter 1, has been challenged: see the essays by John Lynn and Simon Adams in Rogers, *The Military Revolution Debate*, and Parker, *Military Revolution*, 'Afterword'.

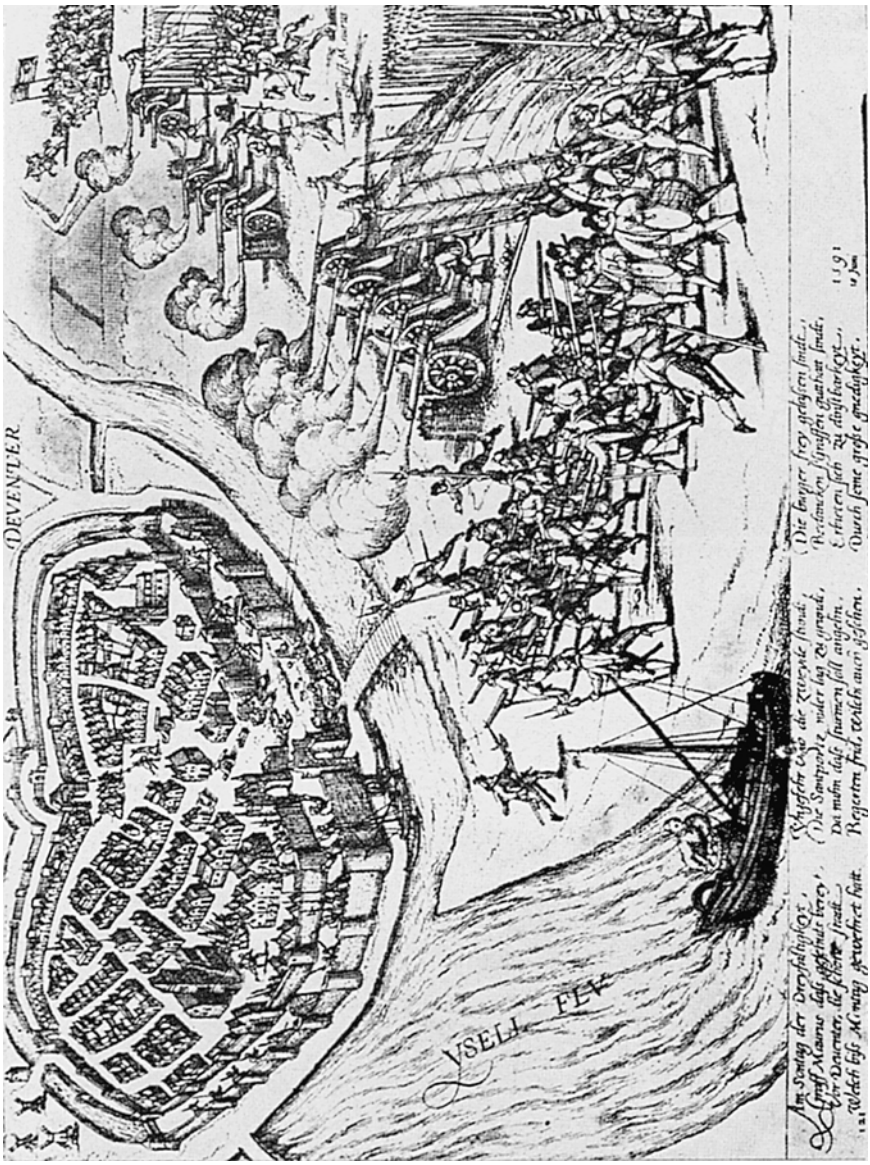

Plate 2. The fortifications of Deventer – the old town walls present no obstacles (1591)