Between castles and bastions: Dürer, Luther and the (circular) fortification

Entre castelos e baluartes: Dürer, Lutero e a fortificação circular

The Protestant Reformation had a decisive influence in the disintegration of Christianity as the unifying project of Western Christendom. The fragmentation of Europe was a long process during which war deepened, from the start, the differences between its peoples. In fact, the continued waging of war, especially when connected to the religious clashes of the sixteenth century, left a trail of trauma and erected walls that would be difficult to leap over.1 This is true not only concerning the widening conflict between East and West – between Christians and Muslims – but also the opening of huge rifts across the Christian community of Western Europe. Therefore, that the Reformation led to countless armed conflicts is undeniable; however did it have a truly perceptible impact on the way of conducting war?

The first widespread conflict that can be linked to the Lutheran Reformation took place during the second decade of the sixteenth century, with the German peasants’ revolt that erupted across a territory broadly located around the dukedom of Bavaria. That revolt was mainly felt in the countryside and consisted in a series of uncoordinated actions where there was no overall command, nor any type of unified strategy. The rebel forces did, however, have a military structure similar to that of the Landsknechts mercenaries. They were organized into Haufen (bands), Fähnlein (companies) and divided into Rotten. The strength of the Fähnlein varied significantly depending on the recruiting region and the nuclear unit (the Rotten) had 500 men, compared to

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1 Greengrass 2014, 308-351.
the usual 400 of the *Landsknecht Fähnlein*. However, those units were commanded by a similar number of officers, with the same rank titles: the *Hauptmann* (captain), *Fähnrich* (standard-bearer), *Feldwebel* (sergeant) and several *Rott-meister* (the Rott commander). Mercenary Göetze von Berlichingen, for example, was appointed captain of the “Heller *Haufen*”, in replacement of the radical leader Jäcklein Rohrbach, a former *Landsknecht* mercenary. This was Hans Müller of Bulgenbach, a nobleman Friedrich von Greiffenklau of Rheingau and another nobleman, Florian Geyer, who was in charge of a group of other dissident knights in the so-called “Schwarze *Haufen*” (black company). Many of the rebels were former *Landsknechts* or had some military experience as militiamen, which is in fact in line with the martial tradition of the region during the modern age.² They also had some modern armament such as artillery and firearms, probably obtained after Bamberg and Würzburg joined the rebel movement (c. April 1525). In Leipheim (4 April 1525), Böoblingen (12 May 1525) and Königshofen (2 June 1525), the rebels already counted on several artillery pieces. In any case, besides the symbolism of adopting the banner *Bundschuh* raised during the 1493 revolt (Fig. 1), some aspects are common to all of the *Haufen*: the fact that they were formed almost exclusively by infantry soldiers, just as in the armies of the Swiss cantons, and their use of armoured carts.

This particular tactic could be similar to the successful apparatus employed by the Hussites during Jan Zizka’s uprisings in Bohemia (c. 1414-1434) (Fig. 2). It involved the use of especially built wagons with protecting panels, behind which soldiers fired with every sort of missile weapon existing at the time, including portable fire-weapons and artillery³ used massively for the first time. Those war-wagons were deployed in strong defensive positions that were, in fact, carefully built hill fortifications that could even be protected by ditches. This last theme, the field fortificationst, brings us to the main subject of this paper: military architecture.

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² Tlusty 2011, 133-162.  
³ Heath 64-81.
According to authors such as Hale, some of the most noticeable architectural innovations of the Renaissance concern with the new fortification designs. Roughly speaking, they deal with the transition from the medieval castle to a type of lowered structure, designed to resist the impact of gunpowder artillery. This was a wide-ranging experimental process and many decades were necessary for a consistent formulation to be achieved. Within Europe, it involved notorious artists such as Filippo Bruneleschi, Francesco di Giorgio Martini or Leonardo da Vinci. The military architectural forms
evolved from a circular shape to a rectilinear outline, from which a specific element stands out as a real historical novelty: the angular bastion (Fig. 3 and 4). This particular innovation was, above all, an Italian invention. However, the first printed theoretical treatise on the matter was written by a German, Albrecht Dürer.

Surprisingly, Dürer’s work did not include a single example of this typology, even if it was published in 1527, i.e. at a time when the new angular proposals were already well established in Italy. Dürer’s main fortified reference was the Salzas fortress (Fig. 5). As this particular structure was built around 1497-1503, Dürer’s knowledge certainly resulted from his second trip to Italy, that took place between 1505 and 1507. The treatise proposed that this typology, mainly designed as a series of connected circular/semi-circular bastions, increase to a monumental scale (Fig. 6). This solution was based on solid defensive walls protected by several elaborate physical obstacles. Other specific improvements – for instance, detailed ventilation systems – were, from a technical point of view, far from being outdated or anachronistic (Fig. 7). Nevertheless, the concept behind those solutions had a serious disadvantage, because the design was envisaged to function as a unique curtain. Therefore, a complete practical implementation for the cities themselves, with their old medieval enceintes, was almost impossible. The solution required a device that could be adapted to the existing systems and still work efficiently. This would lead to the widespread adoption of the angular bastion, placed in judiciously chosen parts of old medieval circuits according to the principles of grazing and crossing fire.

4 Hale 1983, 1-29.
5 Boti 2001, 200-201.
6 Fara 2000, 339-353.
5 Castle of Salzas, drawing by Francisco de Holanda, Biblioteca do Escorial, courtesy of Livros Horizonte.

6 Proposal for a bastion, Albrecht Dürer, *Etliche, underricht zu befestigung der Stett, Scholsz, und flecken*, engraving (folding after the CIII engraving), Nuremberg, 1527.

7 Cut of a fortified wall showing the ventilation system for artillery fumes, Albrecht Dürer, *Etliche, underricht zu befestigung der Stett, Scholsz, und flecken*, Nuremberg, 1527.
It should be remembered that the most impressive fortified network of the time, the Hospitaller fortifications of the island of Rhodes, were built or improved between 1480 and c. 1520. The main forts have a clearly experimental nature and some of the works carried out in the fifteenth century are closer to a regular angular outline: this is the case of the bastion of Averne (c. 1496), protecting the tower of Saint George, and of the bastion protecting the tower of Spain (after 1481). The latter, in spite of its irregular design, seems to be well protected with artillery gun-ports on its faces and flanks (Fig. 8). One of the last fortifications to be erected, perhaps the most impressive out of all of Rhodes’ main circuit, is the bastion “Del Carretto” (1515-17). It has nothing to do with the angular design, being instead a perfect example of the circular typology: a semi-circular bastion with a diameter of over fifty meters that protects the tower of Italy, which stands as a circular “cavalier” (Fig. 9).

8 Bastion of the tower of Spain, after 1481 (1) and bastion of Averne (tower of Saint George), c. 1496 (2), drawing from “Fortresses of the Knights” (pp. 115 and 117), courtesy Steven Spiteri.

9 Bastion “Del Carretto” (1515-17).

The circular design also prevailed during the extensive plan to improve the fortifications of the English coast, ordered by Henry VIII. The plans for the new forts involved several influential personalities of the English court who worked on proposals – apparently – prepared by the king himself. Works began in 1539, and Stefan von Haschenperg, a Moravian nobleman from Bohemia, was assigned to the castles of Sandgate and Camber (c. 1539-43) (Fig. 10). Significantly, these forts were planned and rebuilt in close resemblance to Dürer’s theoretical prototypes.

It is also interesting to note that the choice of the circular outline was a conscious decision of the English king. In 1541, when Henry VIII was confronted with the criticisms made by a Portuguese engineer, his reaction was deeply negative. However, he sought to inform himself about what was being built in France. Here, the ascendancy of the circular forms remained. In fact, spies were even sent to Pas-de-Calais – von Haschenperg was one of them, the above-mentioned Portuguese architect could have been another one – with the task of recording the outline of the castle of Arles (1536-42).

Persistence of the circular fort would therefore probably be due not only to a functional need but also to an aesthetic option. In other words, could the circular outline have been abandoned for ideological reasons, the same way the Tridentine Reform would later express preference for churches with a longitudinal shape (Fig. 11)? This is a mere hypothesis that needs further investigation. Nevertheless, it seems clear that addressing this question naturally implies viewing Dürer within the political/religious context of the time.

By mid-1518 Dürer sent a personal offer to Luther, as is known, and in 1520 he wrote to Georg Spalatin (Burkhardt) expressing his wish to make an engraving of the German nobility.

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8 Hale 1983, 63-97.
10 Moreira 1989, 147.
theologian. In the same letter, Dürer asked for the shipping of Luther’s new printed works. This particular issue and the acknowledgement of the ownership of another 16 books by the same author, reveals a true interest in Luther’s doctrine. The question is to know with which aspects of the Evangelical movement the artist was related with. His contacts with some of the greatest reformers give us a first hint: Huldrych Zwingli, Andreas Carlstadt, Philipp Melanchthon, Erasmus, Willibald Pirckheimer. Sympathy towards the movement had an intriguing graphic peak when Dürer published his much-anticipated treatise on geometry, “Underweysung der Messung mit dem Zirckel und Richtscheyt” (Nuremberg, 1525) (Fig. 12). This work has an interesting engraving: a proposal for a statue evoking the victory of the Swabian League over the Peasants’ Revolt. However, despite its apparent glorification of the winners, it bears a strange ambiguity: the figure of a peasant crowning the monument, portrayed in a melancholic attitude and being stabbed in his back – a remarkable criticism, even if made in a metaphorical fashion.

11 Pietro Cataneo, I Quattro primi libri di Architettura, Venice, 1554.
12 Monument to the Peasant’s War, Underweysung der Messung, Nuremberg, 1525.

12 Fara 2000, 345.
13 Kemp 1990, 53-98.
Dürer’s interest in the subject of fortifications seems to emerge as something exceptional in his theoretical work. However, some facts may point in a different direction. In 1517 Dürer witnessed the siege of Hohenasperg in the company of Pirkheimer and Anton Tucher, and recorded the event in a particularly realistic drawing. This was the first manifestation of his interest in the theme, which the ensuing political and military events might have developed: Suleiman’s ascension to the throne (1520), the siege of Rhodes (1522), the Peasants’ War (1524-25) and the Hungarian defeat in Mohács (1526). However, the decision to write a treatise on military architecture followed the Imperial Diet of 1518, as Dürer was part of the delegation sent by the Nuremberg council. Both Luther and Emperor Maximilian I were present in Augsburg, so Dürer’s position seems to orbit halfway between his fondness for the Evangelical view and his acknowledgement of the importance of the patronage offered by the emperor.

The treatise was published following Maximilian’s death, which explains the dedication to the grandson of the deceased emperor, Ferdinand I, who was to succeed as king of Hungary and Bohemia following the death of Louis II in Mohács. The treatise reflects great concern with the geopolitics of the time and gives a rather interesting solution to deal with the instability within and outside that part of Eastern Europe: a great building campaign aimed at reinforcing the border in order to contain the Ottoman expansion. This would be done by taking advantage of local labour so as to prevent further uprisings such as the ones that had taken place in 1524-25.

Dürer’s architecture proposals seem to have come out of his travels to Italy (1484-95 and 1505-07). He recorded – in words – the fortress of Salzas as an example to follow and made the above mentioned highly detailed drawing of the siege of Hohenasperg, which turns out to be a comprehensive and spatially coherent graphic piece (Fig. 13). Both these narratives could have been the starting point for his theoretical proposals on military architecture. This can be noted in the well-known 1527 engraving depicting an idealised siege operation (Fig. 14), which has no similarity with the earlier drawing portraying the Hohenasperg siege. The engraving portrays an idealised situation, both regarding the topography and the form and structure of the forts. This last aspect is particularly relevant since the huge, semi-circular bastion is identical to one found in one of the main engravings of the treatise (Fig. 15).

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15 Panofsky 1971, 205-219.
16 Panofsky 1971.
13 Albrecht Dürer, siege of Hohenasperg, drawing, 1519, Berlin, SMPK, Kupferstichkabinett.

14 Albrecht Dürer, Siege of a Fortified Town, engraving, 1527.

15 Semi-circular bastion, Albrecht Dürer, Etliche, underricht zu befestigung der Stett, Scholsz, und flecken, engraving (CIIIv engraving), Nuremberg, 1527.
What impact did Dürer’s treatise had? *Etliche, underricht zu befestigung der Stett, Scholsz, und flecken* was published during a time of great experimentalism; since the end of the fifteenth century, the brothers Sangallo were moving closer to the angular outline, which was finally fixed in buildings such as the fortress Medicea, Poggio Imperiale (1495-1513) and the fort Sangallo in Nettuno, built between 1501-03 (Fig. 16). The propagation of these forms across Europe was clearly neither immediate nor complete. One of the most important aspects of the rectilinear outline, of which fort Sangallo can be considered the archetypal model – a square with angular bastions at its corners –, is closely linked to the conceptual change in the operational procedures during sieges. The main effort of the besieging forces was to be centred on demolishing the advanced defences, namely the projected bastions that reinforced the fortified *curtain* (Fig. 17). This was a long process that would be developed in the operational conditions of sixteenth-century battlefields. Perhaps because of that, the treatises reflecting the new military reality would only begin to be written – and printed – more than two decades after Dürer’s work, which is why it remained the main theoretical source on the matter for many years, especially in Central Europe, were it had several editions: in Nuremberg (1530 and 1538) and Arnheim (1608).

16 Fort Sangallo, Nettuno (1501-1503), ground plan.

17 The position of artillery batteries for sieges, Girolamo Maggi, 1564.

17 Sousa 2013, 68-112.
Dürer’s theoretical knowledge, disseminated via his own printed works, gained a substantial following of apprentices and admirers that ultimately paved the way to the transition from Gothic to Renaissance aesthetics. Therefore, it is not surprising that within the Holy German Empire the circular outline was kept as a viable option for reforming the older structures and building new ones. The military engineer Johann Tscherrte, who had an important role in defending Vienna during the siege of 1529, maintained several contacts with Dürer. There is an engraving that describes this siege (Fig. 18). It portrays a city enclosed by a medieval-type enceinte, although a semi-circular bastion of the type described in Dürer’s treatise can also be observed. Tscherrte also worked on many castles, notably in Komárno, current Slovakia. Komárno was rebuilt following the 1529 Turkish attack and underwent extensive works in 1546 and 1557. The angular bastion was probably built after the second Turkish attack of 1594: however, the cavalier is a much earlier type that can be rooted in Dürer prototypes (Fig. 19). Therefore, apparently, this outline persisted in northern Europe during several decades. The Schaffhausen castle, built between 1564-1589, is a fine example of the fortified forms influenced by Dürer’s circular design (Fig. 20), in a clear counter-current with the hegemonic angular outline that spread across the Latin territories. The wars in the Netherlands and the emergence of the first Germanic post-Dürer treatise on military architecture by Daniel Specklin, *Architectura Von Vestungen, Wie die zu unsern zeiten mögen erbawen warden* (Strasburg, 1589), would mark the definitive acceptance of the angular outline within Central Europe.

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18 Lytle 1983, 45-52.
19 Dürer painted Tscherrte’s heraldic shield.
20 January 2014.
A particularly interesting fact has to do with the persistence of circular forms in Europe’s westernmost point during the first three decades of the sixteenth century: Portugal. The tight web of influences that makes Portuguese military architecture a melting pot has, in turn, led to viewing it as anachronistic and outdated. Compared with the angular design, already employed by the Sangallo brothers since the late fifteenth and early sixteenth centuries, the main Portuguese building efforts can be viewed as anachronistic and outdated. That could be understandable when building was carried out within the now peaceful European borders, as a kind of acquired taste of part of the social elite. The Italianized castles in Vila Viçosa (c. 1525-30) and Évora Monte (1531?), apparently both inspired in drawings by Leonardo da Vinci, were not built for fighting but as instruments of rhetoric. Nevertheless, this did not change when facing a strictly military function, as the circular outline remained a conceptual option in the Portuguese colonial space until the 1540s (Figs. 21, 22 and 23).

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21 Bury 2000, 83.
22 Moreira 1989, 139.
21 Circular and semi-circular bastions, Diu (c.1538), drawing by Garspar Correia (after 1547).

22 Semi-circular bastion, Ormuz (c.1540), drawing by W. Kleiss (1978).

23 Semi-circular bastion of the citadel of Safim (Borj ed Dar), Lourenço Argueiro (1540), photo by Jorge Correia.

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23 Lizardo 2008, 145.
Hence, a question must be addressed: to what extent could these forms have been influenced by Dürer’s theoretical proposals? It is necessary to go back to 3 August 1520, when Dürer arrived to Antwerp.24 He visited the Portuguese feitoria in that city and met several times with the treasurer Rui Fernandes de Almada,25 between 14 April and 19 May 1521.26 It is possible that they had met before, as the Portuguese nobleman had been in Nuremberg a couple of years earlier, in 1519, and returned in 1534.27 Another influential Portuguese, the humanist Damião de Góis, who had been feitor at Antwerp, visited Nuremberg in 1536. Their relations – especially in the case of Góis – with some of the most distinguished German humanists and reformers, such as Melenchton and Luther, could have provided the chance to obtain a copy of Dürer’s treatise. And, since they were both part of the Portuguese courtier circle, and as the needs for defending the colonial outposts grew, having knowledge of the new fortification methods would be a valuable asset to obtain the King’s favour.

Dürer’s work could have played a formative role for Portuguese builders, as it enjoyed some European diffusion following its translation into Latin by Joachim Camerarius.28 There are several copies of the treatise in Portuguese libraries, and the Vier Bücher von Menschlicher Proportion (1528) was translated into Portuguese at the end of the sixteenth century; even more significantly, but lacking any confirmation from a primary source, the Portuguese architect Isidoro de Almeida, veteran from the wars of Piedmont, was in charge of the translation of the German treatise into Portuguese (c. 1552).29

The angular forms were finally introduced in Portugal in the middle of the sixteenth century. The Moroccan cities of Ceuta and Mazagão were extensively rebuilt between 1540-1543 under the supervision of Charles V’s chief engineer, Benedetto de Ravenna. However, they were still a long way from being adopted as the main architectural model. In 1550, Miguel de Arruda – who assisted Ravenna in Ceuta and Mazagão – probably designed the bastions of the curtain of Lagos according to a transition prototype (Fig. 24). In Morocco, the ramparts of Tanger were rebuilt during a long, slow process that involved many heated debates culminating in the construction of an angular citadel. This modern outline seems to have been finally fixed by the same Miguel de Arruda, who in 1546 and 1549 designed the fortresses of the island of Mozambique (built between 1558-83) and S. Geão near Lisbon (completed between c. 1568-73). The circular outline continued in force until 1557-58, since the last example within Portuguese territory was built in Peniche (Fig. 25).

27 Barata 1971, 76.
28 Conceição, 91.
29 Tavares 2015, 247-248.
This paper does not intend to draw conclusions, but rather to briefly present some clues that might suggest a reassessment of the importance of what are generally termed *transition forms*. The models considered to be definitive are, in fact, no more than mere solutions included within a larger process that does not always follow an evolutionary logic, but is the result of specific circumstances. Perhaps they are aesthetic choices, more grounded in an ideological basis and where the merely functional value is but one of the premises.

References


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