

Welcome back history friends to our coverage of Louis' arms and armies. In the last few episodes we brought you closer to the psychological aspects of warfare in the 17th century. We discovered that much of it was based upon the transformation of the man into a hardened and stoic soldier, capable of enduring terrible trials and tribulations on the battlefield. This was, we gathered, the only way for the Sun King to ensure that his armies were able to bear the kinds of campaigns that he expected to send them on, and it was of course the only way he could defeat the considerable reams of enemies sent against him. In this episode we begin examining in more depth exactly what such campaigns would have looked like – it is time, I believe, to address the formidable, stony elephant in the room. I'm talking of course, about the siege – what it looked like and how such exercises were brought to a successful conclusion, as well as their significance in an era better known for pitched battles. If you're ready my lovely Patrons, let's begin.

One of the most remarkable and in fact, forgotten facts of the era in which Louis XIV reigned was that of all the campaigns which French and allied arms were involved in, sieges were the cheapest and most effective way to defeat the enemy; consequently, despite what the literature or famous anecdotes of the age might say, this made the siege the most popular form of campaign as well. A number of factors combined to make Louis' reign the age of the siege. A large part of it had to do with the French frontier, which presented a sprawling challenge to would be engineers. A further aspect is explained by the availability of such engineers – the man known as Vauban. Vauban was Louis' premier military engineer for a solid three decades from the 1670s onwards, and his imprint on France, from its borders to its conception of how to defend itself, were ideas that remained ingrained until the French Revolution. His notions of holding the river crossings along the Rhine – such as Philipsburg and Strasburg for example, and of establishing a watertight stone defence in depth along the French border with the SN, were principles of defence that were firmly upheld right up to the point that Napoleon began chucking the French flag into all manner of places. The question of how Vauban did this, how he managed to establish the closest thing France had to a set frontier border, and how the thoughts of French security continued to confound him and challenge him right up to his death, will form the bulk of the next few episodes. Vauban's significance and impact upon France was such that by the time of his death, his legacy was well established enough that it actually saved France during Louis' last great war in the WSS. We know from past experience that the sheer weight of defences in the SN were so effective

at protecting France from its enemies, that the actual process of breaking through all of these immensely reinforced nuts was too laborious even for enemies as determined as Eugene of Savoy or the Duke of Marlborough.

These next few episodes shouldn't been seen as my efforts to do Vauban justice though; such an exercise isn't necessary because all we have to do is accept that his signature was upon virtually every siege, every fortress and every significant military development, and we'll be on our way towards appreciating that incredible man by default. No, what I'd rather do here is unwrap what may seem on the surface like a tedious or overtly complicated set of laws and principles that taken together constituted siege warfare. My aim is to bring you closer to the siege, to demonstrate its importance, the human character of the besiegers and the besieged, and what subsequent generations of warriors learned from the French and wider European example. Trust me, and this is coming from someone who previously had no real appetite for such details, all of this information is fascinating, and as lovely Patrons, it is my pleasure to bring it all to you, since you very much deserve it, and I really appreciate you. If you're ready, after this brief monologue or what have you, let's get into the meat of what this era is all about.

Louis XIV was someone who always enjoyed meticulous details. He liked controlling, micromanaging and bringing the contingent parts of an operation together to achieve a certain end. On this level then, sieges absolutely appealed to him. Much like I really enjoy diverting rivers, for whatever reason, Louis really seems to have relished the opportunity to organise and conduct the minutiae of details which went along with siegecraft. It likely helped that he had advisors like Vauban on hand to make sure things went off without a hitch, but Louis also became influenced by the sheer importance of sieges to France. It was impossible to ignore their importance owing to the geographical position of his country. It was bisected by large flowing rivers; it was surrounded by tough enemies; on its borders were additional natural barriers. Making use of and appreciating these facts were by no means a natural progression; a brief look at French history would have taught Louis that the vulnerability of his realm remained acute. Once his reign began in the early 1660s, France had to contend with a latent Spanish presence in key points along the border, while the independent cities of the HRE, as well as some considerable sovereign duchies besides, occupied important river crossings and strategic passes which necessitated a friendly relationship with their rulers. In time Louis would overcome such challenges by simply overawing and occupying much of these lands.

Although our coverage just ended in the late 1670s, and we're not quite at the point where French armies moved to reinforce French security by such means, these events are not far from our narrative. The French policy of occupying lands which appear to naturally come under the French jurisdiction, or seem geographically linked to that country's border, would become known as the 'reunions', and it was this process of occupation and annexation over the 5 years from 1679-1684 that provided the clearest indication of where Louis' ideas of French security lay. This episode won't necessarily have to spoil this incredible period though, because we can ascertain from our coverage of the FDW and even of the War of Devolution before that, that while Louis of course strived for glory, he became fixated upon another more important goal approximately halfway through the FDW – the goal being, establishing a series of defensive parameters to reinforce his realm's security, what Vauban would deem the 'fence of iron'. Vauban had long since urged Louis to make this switch in policy, and capture towns or fortresses which would increase French security rather than overextend the French influence. He said in 1673 that:

The king must think some about creating a fence of iron. I do not like this pell-mell confusion of our's and the enemy's fortresses...That is why, be it by treaties or by a good war, if you believe what I say, Monsieur, always preach squaring things off, not the circle, but the fence.¹

The French historical experience cannot be understated here. One must bear in mind how France in the late 1630s, after entering the TYW, was invaded by Spain through the SN, and that the various points of Spanish occupation in Franche-Comté, in the pro-Spanish Alsace-Lorraine and along the Pyrenees provided a foil to French security and a constant base from which Madrid could snipe at Paris. Believing French security to be in a constant state of flux, Vauban advocated a policy which would anchor the French border and remove the latent Spanish threat. That such a policy would provide Louis with the opportunity to distinguish his reign with some glory through conquest was a fortunate bonus for the eager Sun King, but to Vauban the end result was what mattered most.

France needed to make use of its natural defences as much as it needed to patrol its vulnerable points. The Rhine and Pyrenees formed the former aspects of Vauban's security policy, while the SN formed the latter. Dealing with the former required campaigns aimed at removing the foreign presence, and reconciling French influence there right up to the border.

¹ This is cited in Lynn, *Wars*, p. 75. Vauban uses the terms *pré carré* when talking about this fence of iron; the general consensus is that such a term can be translated into the latter. See also James Faulkner, *Marshal Vauban*, pp. 10-46.

This was seen in the French ejection of the duke of Lorraine, and the occupation of Alsace, not to mention the invasion and occupation of Franche-Comté in the same period. In the case of these moves, Vauban's advice was eagerly sought, as Louis wished to insure the crossings over the Rhine were as formidable as possible. On the other hand, though rivers to an extent did flow along the French border with the SN, Vauban recognised from an early stage that the lack of proper natural barriers would necessitate a great campaign of reinforcement here, as well as, it should be added, a great campaign of expenditure to raise these fortifications up. Let's look at the case of the SN now then, and examine what exactly this portion of the French border was designed to look like.

Vauban wished to establish 'two lines of defences, in imitation of an army's order of battle', along the border with the SN.² To do so he would have to incept a series of fortresses as the formidable front line, with an even more insurmountable second line behind that. In between the two lines, and behind the second line, was a running set of defensive lines and towers running from the River Meuse to the sea – these would serve as the last line of defence, and in time they would be so built up and reinforced that they would serve as a third line. If you remember back to the WSS, it was this third line that the allies were attempting to punch through when they were eventually halted by Marshal Villars tactical skill in the dying days of that war. Thus the legacy of Vauban was made plain, but let's look a bit deeper at these defensive lines. Major forts in the first line of defence include names you've probably heard of: Dunkirk, Ypres, Lille, Tournai, Valenciennes and Dinant. Many of these were captured during the War of Devolution – Dunkirk was sold to France in the 1660s, and Vauban was set the task of reinforcing it to stand as an impressive initial bulwark against outside incursions. In the second line we find still more familiar names: Gravelines, Arras, Douai, Cambrai and Rocroi – these fortresses began their lives as minor settlements, and indeed many would grow out of these into renowned cities in the modern iteration of France. They began their lives as geographically promising towns, and through Vauban's ingenuity and a great deal of money, they became the French second line of defence. The idea was that by presenting so many of these nuts for the enemy to crack, the essential interior of France need not fuss itself too much with its personal defences. Paris, for example, had abandoned the practice of building and expanding upon its walls by the mid-1670s – the task of defending this French jewel would fall to the fence of iron.

² Cited in Lynn, *Wars*, p. 75.

Fortresses were important not merely for the defensive lines they constituted. One should bear in mind that in the relatively open landscape of Europe during this period, fortresses were the solid and impenetrable bases for supplies, for the army to quarter itself from, and for a handy rendezvous or landmark from which to link up with an ally. The process of placing lands under contributions, we learned in previous episodes, was an essential aspect of the French war strategy, and it was achieved by occupying such important fortresses and placing the rest of the province or county in awe. Similarly, an army of lesser size could withdraw into one of these bastions and close the gates on a larger rampaging force outside. In some cases the defender would pull everything of value into his bastion, leaving nothing for the attacker to munch on over the tougher months. In some really extreme cases, such as when the French tried to deny any of the Palatinate's resources to the Imperials, the major fortress towns were occupied, everything was brought within the walls and everything of value outside was burnt or destroyed for good measure. The usage of fortresses for this purpose may seem obvious, and indeed this was the most straightforward purpose of a fortress town during wartime. At the same time, fortresses were often geographically important owing to their occupation along a river. One of these that comes to mind was Strasburg, in Alsace, one of few large fortresses that boasted its own self-contained bridge across the Rhine. The Strasburgian's aiding of Montecuccoli's armies in the mid-1670s meant that Louis singled that settlement out for seizure in the years after the FDW, and as we'll see later he would make good his promise to acquire it in time, with consequences that echo down to the modern day borders of France.

Vauban was adamant that fortresses in enemy territory could become a burden rather than a benefit if too many were haphazardly occupied. Thus the favourite French policy in time came to be the consolidation of as many self-contained and linkable fortresses as possible with the French frontier. These would be made into a permanent line, while additional fortresses would be captured, the lands they oversaw placed under contributions, and their defences destroyed once they were eventually traded back to the enemy in the peace treaty. It was a cynical strategy, but as Vauban well-understood the importance of having a manageable defensive line, he appreciated the simultaneous importance of not getting carried away with acquiring a load of fortresses for the sake of it. The occupation of a SN town deep in Flanders might appear good on paper, but if the practical cost of improving it, garrisoning it and critically, linking it back to the other defences was more trouble or expense than it was worth, there was little reason to hold on to it during the peace treaty. This psychology of

Vauban's would be passed onto Louis in turn, and it would have the effect of changing the French King's strategy in his later wars. While we see French arms invest a number of foreign fortresses in the FDW for example, by the time of the subsequent wars, with the French defensive line reconciled, the French war strategy becomes less concerned with the attack, and more interested in the defence. The only purpose of seizing a new settlement would be for the monetary gain it would grant French finances if contributions were required to make up for a financial shortfall, or if it was deemed strategically important to deny that settlement and its surrounding resources to the enemy. It wouldn't be incorrect to view the French war strategy from the 1680s onwards as the acquisition of bargaining chips for the purpose of trade, while previous years were ones of glorious expansion. Louis by no means abandoned the pursuit of glory in the 1680s, he simply identified glory as tied up in his ability to *defend* his borders, rather than *expand* upon them.

If you were to swagger on up to one of these fortresses, what kind of sight would greet you? Well that's a good question. One thing you need to know about this era is that was that it was one of technological advancement, and that fortress technology had reached incredible levels of sophistication and innovation by this point. The likes of Vauban, it may not surprise you to learn, were genius not merely in the attack, but also in the defence. That said, we have gathered in the past that impressive as it was, defensive technology provided only a foil to the attacker, and that a determined enough one generally emerged victorious in the struggle. This is another issue we'll examine in the future, but say you were determined to resist the attacking force, what kind of defences could rely on in an average French border fort along the SN? Let's investigate.

If a defender is always going to be at a numerical disadvantage to the attacker, then he needs to find a way of making the most of his position. This, of course, is what a fortress is designed to do – to defend a position with minimal manpower through the use of constructed defences. Yet, the defensive position of a fortress didn't begin only once the attack reached the walls. Some of the most insurmountable fortifications were not a simple fortress as we'd imagine it, but a sprawling line of defence that forced the attacker to advance with immense cost through a given bottleneck or choke point. Thus the grounds leading up to a fortress were often as important as the fortress itself. In the past, medieval castles emphasised height, and they often made use of natural defences or artificial manipulations of the terrain such as moats or earthen mounds upon which primitive artillery or defensive positions could be established. With the advent of gunpowder though, and the availability of weapons that could

shatter the tall but thin walls of such fortifications, innovation was badly needed. Cue the Italians.

The key method by which attackers could be repelled was not through high walls, the Italian engineers appreciated, but low, thick, reinforced walls set into the ground and appearing as part of the countryside. Through this way the fortress could be protected from cannon fire, and while they weren't invincible the walls wouldn't tumble as would an older form of castle. Perhaps the true genius of this design lay in its outer defences though, which as we mentioned played as critical a role as the fortress itself. It was all about contouring the surrounding terrain to expose the attacker to as much fire as possible. This was done often by sloping the ground towards the fortress, by making it difficult to hide from the weapons of the defenders, and by ensuring that it would literally be an uphill battle to reach the fortress. Such a process took time to organise, but if a defender found himself in doubt as to the integrity of his position, one of the first port of calls was often the digging and redesigning of the surrounding lands to upset the enemy's course. By providing a series of upwards slopes, by further adding to the fortress' height, one could provide additional obstacles, which the enemy could only surpass by purchasing the ground in additional time and lives. If the purpose was to delay the enemy until reinforcements arrived, then these costly barriers could prove pivotal.

When the attacker overcame the grounded defences and reached the walls, he was greeted with a still more grim sight. Adding to the impression that the fortress appeared sunken into the ground, the final natural obstacle was the deep ditch, sometimes filled with water, which led up to a steep slope. In between the top part of this slope and the actual wall of the fortress was what was called the covered way – essentially a final trench, where the defenders could place covered soldiers tasked with repelling the attacker with repeated fire. The idea was that this position was both easy to defend and easy to abandon once it became compromised, and while it was an essential part of the defence it was often the attacker that landed in this final trench before commencing his attack on the fortress proper. Thus it was a bloody and drudging affair, as the covered way became filled with dead or dying men on both sides. The visceral nature of the warfare must have been horrendous, as the trench was often cleared with a bayonet charge or other such hand-to-hand strategies. The idea was to make the attacker fight for every inch of ground. Yet we shouldn't imagine the fortress as a simple structure with four even sides – by the beginning of the 17th century new innovations were coming to the fore which stipulated that a pointed fortress, what we would recognise as a

kind of star design, was more effective at defending the fort than the simple four sided design.

The idea was to remove any of the previously problematic dead spots which enabled the attackers to manipulate the position of the defenders and exploit his shortcomings. From such dead spots the ruin of the fortress could be planned, so it was imperative that such dead spots were solved, and the process made in fact more dangerous for the attacker. By placing pointed defensive bastions on the top of fortresses, defenders had a wider field of vision, and since their position was elevated, both from the fortress and within the covered way, they could better defend their settlement from the enemy, giving said enemy, ideally, nowhere to regroup and plan the next step of the attack. The more important fortresses added further to these designs by placing guns atop them, adding numerous trenches directly below them or presenting a series of such fortifications before the fortress itself was even reached. In times when a gradual incline occurred, defenders could make ingenious use of the landscape and acquire a bird's eye view over the entire arena, anticipating in the process where the enemy planned to attack from and whether reinforcements should be sent to troubled areas. It should be added that because the walls were thicker and deeper set than the older design, larger and larger guns were fixable to them, and the fire of such guns became so dangerous that they forced the attacker to adapt his strategy in turn. One is reminded of the Ottoman innovation, later adopted by the Europeans, which saw the lines of circumvallation dug in a zig-zag pattern, to provide the attacker with the maximum amount of cover, and prevent a wild cannon shot from sailing through an entire trench and thus careening through vast numbers of soldiers. It was remarkably familiar to the trench systems of the FWW in a sense, except the trenches were aimed and dug towards the central objective of the fortress, and stalemates were impossible owing to the urgency of the attacker and the abilities of the defender.

It is difficult to wrap your head around the immense effort and complexity involved in the process of a siege. The major aspects of the siege involve the lines of circumvallation, which were a series of trenches dug towards the enemy fortress to essentially box it in and ensure the efficiency of the siege. The lines of contravallation were dug to protect the attackers from enemy reinforcements, and add further security to the whole process. The two lines were not always constructed, due to time constraints, and a more confident army often threw up the first line if they believed reinforcements were a long way off. This demonstrates the key part that information played during a siege. The attacker had to know the morale of the garrison, the importance which the enemy attached to this fortress and the presence of an enemy army

in the region. In addition, if the countryside was especially volatile, it was sometimes worth sending out a large party to put down any would be partisan resistance, in case large bands of guerrillas emerged as the siege was underway. The besieger normally constructed some form of defensive line for itself, and Vauban for his part rarely operated without the two lines, which is one of the reasons why his subordinates became so impatient and frustrated.

The best way to imagine what the besieger's lines of circumvallation looked like is as a series of semi-circle trenches dug parallel to the fortress – sometimes as many as three lines, dug increasingly close to the fortress. On the raised points of these lines were batteries upon which were mounted large guns – the calibre becoming smaller the closer one got to the fortress. The lines could sometimes start as far back as 600 yards, and by the time the second or third parallel line was constructed, the attacker would be close enough to hear and see the enemy's moves, of course the defender could hear and see him too! Vauban can almost solely be credited with the invention of parallels, when in the past the attacker would advance out of his limited trenches, the more laborious process of building a series of trenches in depth meant that the attacker possessed a serious defensive advantage in the event that the defender launched a sortie over his walls.

The incredible Ottoman innovation of zigzag trenches were implemented in between each of the parallels, effectively linking the wider trenches with smaller and more intricate ones. This became especially important the closer the attacker got to the fortress itself, and cover became critical in the face of the defender's distinct advantage. Vauban recognised the importance of the long process, seeing it as the most effective way to defeat a defending enemy. So experienced had Vauban become in the development of these tactics, that the process of building parallels with interlocking zigzag trenches became a formula for success rather than one strategy among a series of others; 'I guarantee an infallible success without a day's extra delay if you will defer to my opinion and follow faithfully the rules I lay down', Vauban once advised.³

It was within the final parallel that the so-called breaching batteries were located – these guns were tasked with packing the most punch, and thus their calibre was as or larger than the previous guns. In some of the later sieges the French began using mortars in the their initial parallels far back from enemy fire, and this process became so effective that the defender would often surrender on sight of these weapons rather than face their terrible wrath. The

³ Cited in Lynn, p. 77.

third parallel was also designed to counter the impact of the covered way by providing the attacker, essentially, with somewhere to hide as he exposed himself to enemy fire. It was essential that the attacker had a forward base from which they could sally forth, and thus much of the sorties launched would be against soldiers in these positions. Sometimes the more effective sorties would try to collapse or fill in the parallels dug over a series of hours, and thus would set the attacker's schedule back a great deal if they were successful.

Each position thus granted the individual with distinct advantages, but most operations were conducted at night for a number of reasons. The besieged would rarely launch a sortie during the day, and if he crept forward at night he could hope to surprise an otherwise overconfident, perhaps lax enemy unaware of his intentions. An effective sortie could create absolute havoc for the besieger, destroying his parallels, killing his men and paralysing his forward guns. Thus Vauban emphasised the need for vigilance at all times, and made much of the fact that a siege was by its very nature a long, laborious process, which by could lend itself to bored or idle soldiers if it took too long. Bored and idle men became unfocused and vulnerable to a sortie by the enemy, who could take advantage of the lax discipline and avenge themselves upon the sleepy attacker, delaying the end result by days and sometimes making the process too costly to continue. The major reason why the siege of Maastricht was so successful in 1673 was because Vauban insisted on rotating the soldiers to ensure that no man became bored and idle in his parallel as further trenches were dug.

This brings us to a further point – how on earth, literally, did the soldier manage to dig such detailed lines of approach without coming under fire by a garrison who knew exactly what they were doing? The answer is provided by three key points. First, the soldier rarely did all the digging himself, and he was often aided by the local peasantry who were conscripted to do the digging alongside the soldiery. Second, the trenches were dug in such a way that they would not expose the digger to enemy fire. For example, the first parallel was dug out of the range of enemy muskets, between 600-800 yards out from the walls of the fortress. Then, with this cover system in place, diggers could move forward at an awkward angle, forming a zigzag pattern until they reached the next parallel, whereupon the process would begin again. The entire time of digging, it was intended that the digger would not have to expose his person to the enemy, though of course he would be constantly sniped at, and cannon would be fired in his direction. This brings us to the third point – that affairs were often conducted not merely by a vast army of workers and soldiers, but also under cover of darkness. This

made the process somewhat grim, done as it was without the sun to warm or guide the soldier, but the limited visibility was a lifesaver.

If done right, the defending garrison would not be able to see anything at night – he would merely be able to hear thousands of shovels working the ground. When the sun rose, he would be greeted with the sight of a parallel trench in the distance. With each morning the enemy would appear to have gotten closer, until by the second week the enemy presented a real danger to your fortress, and you had to consider your next move carefully. Depending on the availability of workers and the importance of a fortress, trenches and parallels could be thrown forward and advanced over a few days, and sometimes entire battalions could be manoeuvred into position overnight. Thus, we begin to grasp the disadvantage of the defender and the important role which the relative tedium of fortress investment played in the overall strategy. At the centre of the process was the will of Louis XIV, though guiding its aims along was the person of Vauban, and this double team spelled doom for so many fortresses along the French border. In the next Xtra episode we'll continue our coverage of the siege works, to see how extensive this double team truly was. Thanks for joining me my lovely Patrons, and I'll be seeing you all soon.