Part One

LANDSCAPES
Chapter 1

FRONTIERS

The Garden–Wilderness Dichotomy

In 1893 Frederick Jackson Turner presented his seminal essay titled “The Significance of the Frontier in American History,” a theory that has had an enormous impact on the perception of the United States’ environmental history. Crucial to Turner’s reasoning is the association of the word frontier with the advance of civilization, as opposed to “wilderness,” or uncontrolled nature.¹ The popularity of this thesis lingers on to this very day, even though environmental historians such as William Cronon have demonstrated convincingly that no such thing as a primeval wilderness existed when immigrants of European descent settled on the continent and increasingly moved westwards.²

Many different definitions of the term “frontier” exist, but all acknowledge that it essentially refers to a boundary, a dividing line of some kind. Scholars have identified political–military as well as cultural, ideological, or ecological frontiers, depending on their respective perspectives. These definitions are not necessarily mutually exclusive, but can cause unnecessary confusion if the word frontier is used as a simple synonym for related words (such as borderland or border). This is especially so since historical sources also employ a variety of terms to describe boundaries (limits, confines, poles), the different connotations of which are often difficult to grasp. Language differences make matters even worse. The word frontière in modern French has not the same meaning as frontier in English, for instance, because during the early modern period it became a common term to refer to political boundaries, regardless of their military or ecological significance.³

The following chapter uses the original medieval meaning of the word frontier as its starting point, and defines it as a military boundary, a dividing line between “the self” and “the other,” where the other is perceived as particularly threatening to the extent that warfare becomes a distinct possibility. The English word frontier derives from the French frontière, which in its turn originates in the Latin frons, a front(line) of an army or a house. It therefore implies a notion of linearity. The word frontière can be traced back to the early fourteenth century, while its use in Spanish and Italian is even older (twelfth and thirteenth centuries respectively).⁴ It was not the only medieval term to refer to military–political boundaries, however; and contemporaries often used it along-

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¹ The essay was published in 1921 as the first chapter of Turner’s book: The Frontier in American History.
² Cronon, “The Trouble with Wilderness.”
side words such as “limits,” “marches,” and “poles.” Henry VI of England, for instance, declared his intention in January 1427 to overcome the last French centres of resistance, strongholds, on the left bank of the Meuse River, located in Champagne, Thierache, Rethel [...], and their marches et frontieres.

The mentioning of strongholds is hardly a coincidence, for fortifications constitute an indispensable aspect of the ways frontiers were actually managed or defended. In the interest of clarity, this part of the argument analyzes frontiers in a general way, and leaves the specific ecological impacts of fortifications to the next chapter. Both frontiers and fortifications can be considered as “militarized landscapes,” a term coined by Peter Coates and his research group to describe landscapes modified by modern military organizations. Given the emphasis on premodern warfare and the complexity of the ecosystem concept, this study describes a militarized landscape as an ecological milieu in which interactions between armed forces and its physical features have become so encompassing that they can be considered as a defining characteristic. Militarized landscapes are prepared in a direct or indirect way for coping with the possibility of organized violence by armies, but they do not have to be actually engaged in armed conflict. Frontiers for instance can be studied as militarized landscapes because the risk of attack necessitates a more or less permanent military presence.

Because of its close association with enemy threats the concept of frontier is also closely connected to the construction of territories and ultimately to processes of state formation. Any study of the territory concept has to take its history of violence and warfare into account, for the very word territory relates to the military concept of terrain and Latin terrere, “to frighten.” This analysis adopts the interpretation of “territory” developed by Michel Foucault and Stuart Elden, which is that control over land or space (“territory”) and people (“populations”) is intrinsically linked. In this way, it connects the chapters of frontiers and policing to each another as two different aspects of territory formation.

The object of the following chapter is to use the historical development of frontiers as militarized landscapes in the Meuse Region to explain the origin of military domains, which constitute a core element in current debates about military forces’ “environmental footprint.” It seeks to establish whether the idea of a frontier as a frontline against wilderness, or uncontrolled nature, has a medieval origin, and to what extent these medieval perceptions had a role in the establishment of the military training areas that still exist today. This chapter thus lays the basis for the argument that there is little modern or progressive about the ways current military forces interact with ecological systems.

There is a general consensus that during the Middle Ages and the early modern period boundaries became more defined and tended to encompass larger entities. Whereas in the Central Middle Ages many areas in the Meuse Region were characterized

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6 Luce, *Jeanne d’Arc à Domrémy*, 203.


8 Elden, “Land, Terrain, Territory,” 801–7; Elden, “How Should We Do the History of Territory.”
by a multitude of jurisdictions and enclaves, some as small as individual villages or even hamlets, the nineteenth century is well known for the dominance of “nation states” with large and clearly demarcated borders or frontiers. Given that boundaries were initially drawn between fairly small entities and tended to become larger over time, it comes as no surprise that boundary markers first developed at the local level became central elements in processes of state formation. The brooks, ditches, hedges, isolated trees, and boundary stones that marked the limits between villages were eventually replaced by “natural frontiers,” the mountains, rivers, and forests that, in an ideal situation, separated (nation) states. The fifth line of the German national anthem states that Germany should extend *Von der Maas bis an die Memel* (“from the Meuse to the Neman”).

A basic awareness of agricultural developments in medieval Europe is necessary to understand these processes. The Central Middle Ages saw the appearance of nucleated villages, concentrated around a parish church and, in some cases, a noble house (“castle”; see chap. 2). This development corresponds with agricultural systems, or “agroecosystems” if one wants to stress the close entanglement of humans and ecological systems, that distinguish between an intensively cultivated “infield” and extensively used “outfield.” This infield is generally located near the village itself and consists of commonly managed agricultural lands that are fertilized regularly by the village flock, which explains the German name *Dungland*. The outfield by contrast is composed of areas that are cultivated more irregularly or possibly not at all. In such a context, it is only to be expected that boundaries between settlements are drawn in their extensive outfields and that the need to clearly demarcate them is a result from local conflicts. Moreover, the description of outfields and common land as *Wildland* or *terres sauvages* strongly suggests that the connection in Western Europe between general boundaries and wilderness originates in medieval agricultural practices.

The relevance of these changes for the historical development of frontiers can be demonstrated by referring to another medieval term: the march. Marches were specially designated jurisdictions located on the limits of the Carolingian empire (for instance, Brittany, Spain, Saxony), headed by a margrave whose main responsibility was to deal with potential enemy attacks. Marches were in effect the frontiers of the Carolingian Empire. The oldest occurrences of the term march, from the sixth century, did not refer to political boundaries, but to the uncultivated land between two properties, “wilderness.” In some German-speaking regions it was even synonymous with the term *Wald* (woodland). The notions of frontier and wilderness were thus closely connected to each other.

A charter from 1301 regarding the castellany of Couvin, located at the frontier of the Prince-Bishopric of Liège with the County of Hainaut, clearly shows the close association between military organization and agricultural practices. According to the councillors of Couvin the inhabitants of the castellany, the town itself, and its surrounding

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villages, constituted one “banner,” had the same war cry and alarm, and had access to the common pasture, woodlands, and waterways. The word banner, a flag that organizes armed forces into specific units, derived from bannus/bannum, the royal right to command, forbid, or punish. It could also, as in this example, refer to a territorial unit in which the inhabitants fought under the same banner and shared control over natural resources. The town of Geldern even designated in 1571 its Landwehr, earthen embankments with hedges planted on top of them, which demarcated the city’s territory, as a bantuin. The area included within the ban is thus denoted as a garden. In Venlo, the toponym bantuin has survived until this very day.

The description of specific territories as “garden” enclosures is of particular interest because it reinforces the aforementioned perception of frontiers as wilderness. Gardens figure after all as symbols of human mastery of the natural world. Calling one’s

12 Bormans, Cartulaire de la commune de Couvin, 21.
13 Geldern, Stadtarchiv, A, no. G9, Stadtrechnung, fol. 250v (1571) (transcript by Rien van den Brand, http://www.scriptoriumempeje.nl); Berens, Territoriale Entwicklung & Grenzbildung, 140; Hanssen, Inventaris, 481.
14 On the importance of perceptions in geopolitics see Black, Geopolitics.
own territory a garden means emphasizing the civilized or cultivated nature of one’s own lands versus the wilderness that lay beyond. The medieval Dutch word for garden, *tuyn*, in particular refers to a fence or an enclosed space. Late medieval accounts from Heusden, Geldern, Grave, and Venlo use the word as a verb to describe the making of a fence with planks, branches, and thorn bushes. The use of the garden concept is not just a play on words: wartime areas perceived as lying outside one’s own “garden” were far more likely to experience the full extent of armed forces’ destructive force, which contributed to the spread of actual wilderness (see chap. 3).

The symbolic depiction of a territory as a garden relates to the late medieval cult of Our Lady, in which Mary was commonly portrayed within an enclosed garden, which represented the Garden of Eden. This garden imaginary rose to particular prominence in the medieval County of Holland. The accounts kept by the count’s administration indicate that in the fourteenth century his army actually went to battle with a banner depicting a fence, and Willem van Oostervant, later known as Willem VI of Holland (1404–1417), founded a new chivalric order in 1387: the Order of the Garden (*Orde van de Tuin*). The County of Hainaut, united with Holland through a personal union, also used the term *jardinet* (“little garden”) to describe its territory in the 1390s. The diminutive might have been adopted to distinguish it from the *Jardin de France*, which denoted the Île de France.

This emphasis on the medieval origin of the garden terminology puts better-known early modern characterizations into perspective. The French engineer de Vauban’s description of France as a “square field” (*pré carré*) protected by a mixture of fortresses and “natural frontiers,” for instance, has its origin in these medieval ways of frontier perception. The same applies to the famous “Garden of Holland” (*Hollandsche Tuyn*), which will be forever associated with the Eighty Years War (1568–1648). An etching related to this conflict, dating to the late sixteenth century is of particular interest here (see figure 2). It portrays a lion defending his “garden,” a fence, against Spanish pigs. The rendering of Spanish forces as pigs not only reinforces the notion of an enclosed garden, but also emphasizes the civilized or cultivated nature of one’s own lands versus the wilderness that lay beyond. The medieval Dutch word for garden, *tuyn*, in particular refers to a fence or an enclosed space.
but might also refer to the forced conversion of Jews and Muslims. The anonymous artist has also given the sea a very prominent place, as an obstacle that the pigs had to cross. The apparent paradox of the wilderness–garden terminology, an aspect of frontiers that will be referred to again later, is indeed that the very defence of a "garden," a territory, against wilderness, could also be based on wilderness elements. It is precisely this military perception of frontier landscapes that we will now examine.

Studying the ways armed forces perceived, and ultimately managed, frontiers might seem to be relatively straightforward. The political–military importance of these areas after all ensured a relatively strong interest on the part of rulers and/or states. It is in fact well known that peripheral areas, and frontiers in particular, were generally charted before a political entity’s core regions. The oldest maps from the Meuse Region, made with a military purpose in mind, date to the fifteenth century at least. Charles the Bold, Duke of Burgundy, paid painters in the 1460s, during his conflicts with the Prince-Bishopric of Liège, to make two maps: one of the frontier between the Duchy of Limburg and

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the Prince-Bishopric, and an itinerary, a road map, that connects *les pays de par deça* ("the lands over here" or the Burgundian possessions in the Low Countries) with *les pays de par dela* ("the lands over there" or the Duchy of Burgundy and Franche-Comté).

The maps themselves do not seem to have been preserved, but it is possible to get an idea of what they might have looked like from a sixteenth-century map, now kept in the Royal Library in Brussels (see figure 3). This map, dating to 1544, depicts an itinerary from Luxemburg to Paris. It has to be read from the corner on the lower right to the one on the upper left. It was probably made in preparation for an actual invasion of France, given that Habsburg troops were actively fighting French forces at that time. The text on top says "Map from Luxemburg to Paris, to know the country so you will learn, 1544" (*Caerte van Lutsenborch tot Parijs, om die contreij te weten soo wordijs hier wijs, 1544*). While this map evidently used different conventions from military maps from the eighteenth and nineteenth century, it does show a clear emphasis on waterways and woodlands. These natural elements are depicted in a very schematic way, but it is still possible to identify the Meuse and Ardennes on the foreground.

Waterways and woodlands are in fact a prominent feature of all military maps, which were never meant to be realistic depictions of landscapes but guides to commanders on how to take advantage of them and avoid potential pitfalls. The eighteenth-century Ferraris map of the Southern Netherlands, named after the Habsburg engineer, the count de Ferraris (see figure 8), might appear to be more accurate than this medieval-looking map from 1544, but it still does not depict economic activities that were considered irrelevant for military commanders. In order to properly understand the assumptions and perceptions on which these maps are based, they have to be read in juxtaposition with the original written explanations that accompanied them, or with military handbooks. These sources confirm that military commanders saw woodlands and waterways as potentially dangerous environments, as obstacles to military movement, but also as potential aids to defence, as sources of fuel, and transportation routes.

A far more important question than issues of accuracy or completeness is whether these maps actually reflect the perceptions of army members in general. Only a handful of higher-ranking officers and engineers had access to them. The information encompassed in these maps was not public; it constituted a carefully guarded secret. While it is very unlikely that the average combatant was familiar with military maps, he still shared the same feelings towards woodlands, waterways, and other kinds of "wilderness" and expressed these sentiments in various kinds of tales and stories. John M. Collins actually made a connection between military perceptions of woodlands and fairy tales in his military geography handbook, as both depict woodlands as "dangerous." He

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intended this just as a joke, and failed to see that the connection between tales or sagas and armed forces is very real. The average storyteller in premodern Europe was far more likely to be an adult male than the stereotypical "Mother Goose" character. The essential feature of a good narrator, aside from being able to speak fluently, was experience of travel. Soldiers and sailors therefore constituted a substantial group among such storytellers. The Brothers Grimm for instance paid J. F. Krause, a pensioned non-commissioned officer of the Saxon cavalry, because he was a famous storyteller, to obtain some typical soldiers’ tales.

The roots of these stories lay, at least partially, in the Middle Ages, and more specifically in chivalric romance (see figure 4). The tale of "Les Quatre Fils Aymon" or Renaud de Montauban and the horse Bayard, for example, can be dated to the twelfth century, and describes events that supposedly took place in the Ardennes during the reign of Charlemagne. It had a major role in contributing to the perception of the Ardennes as an impassable wilderness, and was still told in Lorraine during the eighteenth and nineteenth century with minor adaptions; the four knights had simply become soldiers.

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27 Collins, Military Geography, 41.
In a medieval context the actual narration was typically left to minstrels or heralds rather than combatants, but these storytellers also had a strong connection to warfare. Heralds accompanied armies on campaign to record events and identify noble participants. The herald Gelre for instance, the author of one of the most famous armorial books in medieval Europe, wrote a series of poems in which he praised the chivalric deeds of knights from the lands of the Meuse and Rhine. Minstrels on the other hand had to raise the morale of the troops. The blacksmiths' guild of Liège, one of the most powerful associations in the city, enlisted two minstrels for life in 1403 to accompany them on military campaigns and processions.

The *Rymkronyk* of Jan van Helen ("Heelu"), written in 1288–1290, which narrates the duke of Brabant's victory in the battle of Wörringen (1288) and the actions that led up to it, is another good example. It recites real events that happened relatively recently and is therefore not a fictional tale in the same way as the Romance d'Arthur or Lancelot's quest to find the Grail, but still draws on the same stereotypes. It claims in effect that when Duke Jan I of Brabant advanced through the Ardennes in the winter of 1286–1287 to besiege the fortified church of Sprimont, he rode through the "wildest lands of the German Empire." The poet also added a very practical element, however, one that can also be found in later military descriptions: the Ardennes were considered inhospitable because invading forces found it difficult to procure sufficient amounts of food there (they were full of snow, and consisted of forests, mountains, and rocks). The duke, anticipating these problems, ordered his men to carry provisions with them on packhorses. The supposed impassability of the Ardennes, or indeed any other huge stretches of wilderness, was therefore connected to logistical issues.

The Duke of Brabant's response to these supply problems deserves further scrutiny. It demonstrates that fast moving mounted forces were able to overcome most of the risks posed by these barren environments. Areas of wilderness certainly had their share of armed forces passing through. One just has to distinguish between huge invading forces and smaller armies with local bases to fall back on. Only the first category was relatively rare, at least when compared with more fertile lands, such as along the banks of the Meuse. The nobility of the lands between the Meuse and Rhine enjoyed a particular warlike reputation during the Central and Late Middle Ages, mainly because of their willingness to serve for pay or booty when an opportunity presented itself.
The main difference between these two kinds of forces can be demonstrated by taking the French invasion of the northern Meuse Region, in 1388, as an example. This expedition was directed against Guelders and Jülich and had to pass through the Ardennes, Hohes Venn, and Eifel. Despite the assembly of numerous wagons for this purpose, the chronicler Jean Froissart claims the army column measured no less than forty-five kilometres in length, logistical preparations would prove to be utterly inadequate in the face of difficult terrain, hostile inhabitants, adverse weather (incessant rains), and the cold climate. The size of this invasion force quickly became a liability rather than an asset: no fewer than three thousand labourers had to clear the roads between Virton and Neufchâteau in the Duchy of Luxemburg.\(^{35}\) The famous French poet Eustache Deschamps served in this army, and later commented on his experiences in several ballads. One explicitly warns against the dangers of a winter campaign, another complains about the money and horse he lost. The French army eventually accomplished its goal, the duke of Guelders and the count of Jülich signed a peace treaty, but the campaign was hardly the glorious victory the soldiers had expected. Many French noblemen were taken prisoner by their German counterparts, who were not hampered by these same environmental constraints, possibly because they knew the local terrain, and wore lighter armour.\(^{36}\)

Given the predominance of large stretches of wilderness in the Meuse basin, such as the Campine/Kempen, Peel, Hohes Venn, Eifel, Ardennes, Woëvre, and Argonne, the use of the Meuse River as a symbolic frontier between the kingdom of France and the Holy Roman Empire might seem to be self evident. It should be stressed therefore that while the ecological characteristics of the Meuse Region have a significant role in explaining the political history of these lands, there is nothing predestined about the use of the Meuse as a frontier marker. This particular use, which has consequences to this very day, as the current basin of the Meuse River is divided among five states, is an accidental outcome of centuries of historical developments, in which political, economic, cultural, and military impacts were at least as important as ecological ones.\(^{37}\)

During the Early Middle Ages the Meuse Region was in fact not a frontier at all. It constituted the core of the Carolingian Empire. The Carolingian dynasty came originally from the middle part of the Meuse basin, more precisely from Hesbaye, the fertile lands to the north of Liège. Names such as Pepin of Landen and Pepin of Herstal are very revealing in this regard. Charlemagne also established his empire’s capital in Aachen. This does not diminish that contemporaries already perceived the Ardennes as a wilderness. The main point is that in the Early Middle Ages an area such as the Ardennes could become the core of an empire despite its apparent wilderness character. Charlemagne


liked to hunt in the Ardennes and might actually have killed some of the last aurochs living in Western Europe.\textsuperscript{38}

The wilderness aspects of large areas of the Meuse Region became relevant in the specific context of the division of the Carolingian Empire. It is hardly a coincidence that the two major agreements that settled disputes over this inheritance came about in the Meuse Region: the treaties of Verdun (843) and Meerssen (870). It is particularly as a result of the latter treaty that most of the Meuse Region, which had become part of Lothair I’s Empire, was incorporated into the eastern half of Charlemagne’s former imperium.\textsuperscript{39} The Meuse only served as a limit between what later became the kingdom of France and the Holy Roman Empire in Champagne and the Argonne. Further north the Scheldt replaced it as the official dividing line. Even in these southern areas, the importance of the Meuse River can be called into question. A list of testimonies, assembled in 1288 on request of emperor Rudolf of Habsburg (1273–1291), regarding the exact limits of the Empire in the Argonne, demonstrate that not the Meuse, but a small river, the Biesme, a tributary of the Aisne, served as the actual boundary marker.\textsuperscript{40}

The gathering of these testimonies reflects the emperor’s growing discomfort with French expansion towards the east. It is precisely in the late thirteenth century that the kings of France incorporated the Meuse River into a discourse that presented their kingdom as delineated by four rivers (the Meuse, the Saône, the Rhône and the Scheldt). The year 1301 was a crucial turning point, for Count Henry III of Bar (1291–1302), whose county lay on both banks of the Meuse River, had to acknowledge Philip the Fair (1285–1314) as his overlord for “Bar non-mouvant,” more or less the part of his county located on the left (western) river bank. This made him a fiefholder of both king and emperor, whereas until this point the entire principality had been part of the Empire. In other words, the Meuse River became a dividing line because of European politics in the Central Middle Ages. This still did not turn the river into a real frontier; however, since the County of Bar still occupied both riverbanks. The Meuse only served as a frontline in the 1420s, when troops loyal to Henry VI (King of France, 1422–1453) occupied almost the entire kingdom of France north of the Loire River. Partisans of Charles VII (King of France, 1422–1461) only held out in a handful of fortresses east of the Meuse River: in other words, in the Holy Roman Empire. It is in this specific context that Jeanne d’Arc, born in Domrémy, on the left bank of the Meuse River, rose to prominence.\textsuperscript{41}

The example of the County of Bar refers to a fundamental aspect of the distinctions between the Meuse’s symbolic and practical value as a frontier marker. During the Middle Ages, the ways in which the various principalities that actually composed “France” and the “Holy Roman Empire” interacted with each other and drew boundaries were often more important than perceived boundaries between these larger entities. Most


\textsuperscript{39} Pettiau, “Un espace frontalier”; Suttor, \textit{La Meuse}, 231–37.


\textsuperscript{41} Dauphant, \textit{Le Royaume des quatre rivières}, 121–22; Toureille, \textit{Robert de Sarrebrück}, 78–86.
of these smaller principalities straddled both riverbanks (see map 2). The Meuse River only served as a frontier along rather small stretches of its course: in 1250 between Namur and Luxemburg near Poilvache, between Namur and Liège from Andenne until Huy, and between Loon and Brabant on the one hand and Guelders on the other around Stokkem and Maaseik and Oss and Cuijk. In some of these areas copper boundary poles were put in the Meuse during the Late Middle Ages. Processes of political amalgamation reduced its role as a dividing line even further (see map 3). Today, it only serves as a border between the Dutch and Belgian provinces of Limburg (see map 1).  

The limited role of the Meuse as a frontier marker can be explained by drawing attention to its economic importance. The river was one of the main transport routes in Western Europe since at least Late Antiquity, especially for large volume goods such as wood, metal, or stone. Such traffic inevitably led to attempts to control trade networks and extract income (for instance, tolls). Military transportation also had to rely on rivers because moving artillery or large quantities of food and ammunition over land was a very laborious task. The detailed accounts of the fifteenth-century Burgundian administration make it clear that the transportation of the heaviest guns, which could easily weigh two tons, necessitated the use of specially reinforced wagons drawn by over thirty horses. Their ammunition, specially extracted stone or cast iron balls, had to be carried along in wagons that also required more horses than usual: a wagon carrying twelve bullets needed nine horses instead of the usual three or four. Charles the Bold had to mobilize almost three thousand horses to transport his artillery (one hundred and twelve guns) and associated material during the 1473 campaign against Guelders.  

There were in effect many drawbacks to land transport: it was slow and cumbersome, and the horses and wagoners needed to be fed and paid. When the dukes of Burgundy assembled their armies they did so preferably near waterways: Mézières in 1465, Namur in 1466, and Maastricht in 1473. Transporting artillery over water does require, however, that a commander controls both riverbanks, or at the very least that his boats do not have to pass through hostile territory. Artillery became more standardized from the sixteenth century onwards and consequently easier to handle, but during this entire research-period sieges required relatively large amounts of heavy artillery (e.g., twenty-four pounder guns, howitzers, and mortars instead of twelve or six pounders), which had to be specifically brought up for that purpose. Dutch military treatises from the early seventeenth century indicate that the transportation of sixty-seven tons of ammunition required either one hundred thirty five wagons or five boats. It is indeed revealing that a plan of the French engineer Filley to block an Allied advance towards Dinant in

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1695 by constructing a dam in the Meuse was never executed because it also made a French counterattack towards Namur impossible.\(^{45}\)

The use of the Meuse River for transporting troops and their horses was far less important, because marching over land was faster and easier. The militias of cities located next to the Meuse made frequent use of river transport, but the actual number of troops could be as low as a dozen.\(^{46}\) The accounts of Venlo from 1412 specify, for instance, that it paid for the transportation of about fifty men on two *baardsen* to Batenburg, a fortress located between Lith and Grave. A *baardse* was a relatively shallow and small ship, which made it ideal for navigating rivers as well as carrying out military expeditions on the North Sea. In the medieval County of Holland the use of ships, cogs as well as *baardsen*, during military campaigns was so conventional that the number of people that each settlement had to supply was measured in oars (similar arrangements existed in Scandinavia and Scotland).\(^{47}\)

River transport remained a distinct possibility well into the early modern period as long as the navigability of the Meuse itself allowed it.\(^{48}\) A temporary drop in the water level, or conversely, a sudden flood, made it impossible for boats to pass through. Even in the best of circumstances the river could only be navigated from Commercy onwards. Commercial traffic was only possible between Sedan to the North Sea. The Freiherr von Natzmer (1654–1739), a former officer of the Dutch army, remembered in his memoirs how the low water level of the Meuse significantly complicated their retreat from Maastricht in 1676, since the sick and wounded, as well as the cannons, could not be transported by water.\(^{49}\) The construction of new forts at Stevensweert (near Maaseik) and Navagne (near Visé) by the Habsburg government in respectively 1633 and 1634 also attempted to secure traffic over the Meuse after the Dutch conquest of Maastricht.\(^{50}\)

Throughout these six centuries many rulers tried to reunite the entire Meuse Region, and several of them could claim to have been temporarily successful. Any of these actions could, potentially, have led to the unification of the region under one political entity. Charles the Bold (1467–1477), for example, made major efforts to restore Lothair’s former empire (855–869) and effectively controlled almost the entire northern half of the Meuse Region by the early 1470s. He died at the battle of Nancy while fighting for control over the southern half. Charles V (1506–1555) again united a considerable part of the region, by occupying the Duchy of Guelders, but the Dutch Revolt caused a renewed separation. The armies of Louis XIV (1643–1715) seized large stretches of the Meuse basin, even taking Maastricht in 1673, yet eventually had to abandon many of their conquests.


\(^{50}\) Sengers and Simons, *Geschiedenis*, 82–83; van Hoof and Ramakers, “De militair-strategische betekenis;” xxix.
Napoleon I (1804–1814) ruled over the entire Meuse Region after the incorporation of the kingdom of Holland into the French Empire (1810) until his abdication caused renewed divisions. The Meuse Region might have been perceived as a symbolic frontier since the Early Middle Ages, but it only became a real one as a result of specific political events.

Managing Frontiers

Armed forces’ perception of frontier landscapes was to a large degree based on the garden–wilderness dichotomy, which reflects the basic fact that armies operating in the Meuse Region came from societies that depended on agriculture for their survival. This agrarian origin also had a major influence on the ways armed forces actually operated in frontier landscapes. Let us first analyze the core of frontier strategies: concentrated defence (strongholds) versus drawn-out linear fortifications. Both options had their value and limitations. The choice for one or the other can therefore be used to gain insight into the nature of the perceived threat, the “other” standing on the opposite side of the frontier.

Fortresses control their surrounding territory, not only through their strategic location, but also by operating as a seat of government. A classic example is the city of ’s-Hertogenbosch, founded at the end of the twelfth century in what was originally a forested area (the name literally means the Duke’s Forest). This city functioned as the centre of the northern part of the duchy of Brabant; the Meierij of ’s-Hertogenbosch. When the Dutch captured the city in 1629 they could therefore lay claim to the entire district. It was also a key stronghold in the defence of the Meuse River; first for the dukes of Brabant and later for the Dutch Republic.51

The city of ’s-Hertogenbosch was only one of many new towns founded in the Central Middle Ages with strategic considerations in mind. Rulers throughout the Meuse Region granted charters of liberties and urban rights for similar purposes to settlements as Geertruidenberg, Nieuwstad, Stokkem, Montmédy-Haut, and Marville. Villagers typically received such privileges in the expectation that they would defend a ruler’s fortress or to consolidate the frontier more generally.52 The main difference between these medieval towns and their sixteenth- and seventeenth-century counterparts (Mariembourg, Rocroi, Philippeville, Willemstad, Stevensweert, Charleroi, and Longwy) is that armies, and more particularly soldiers, often had an active role in the latter’s construction, a reflection of processes of state formation. Another noteworthy characteristic is the concentration of these early modern defences around the Meuse River where it enters the inhospitable landscapes of Marche-en-Famenne and the Ardennes. This part of the Meuse Region became especially important as a corridor within the context of the Habsburg–Valois rivalry in the 1540s and 1550s.53

51 De Cauwer, Tranen van bloed, 143, 261–63; Deprez, “La politique castrale.”
52 Aarts and Hermans, “Castle Building,” 17–18; Berens, Territoriale Entwicklung & Grenzbildung, 125, 137; Reichert, Landesherrschaft, 2:585, 2:609–10, 2:615; Yante, “Franchises, paysages et environnement,” 134.
53 Gaber, “Marville et l’espace frontalier”; Hasquin, Une mutation, le “Pays de Charleroi”, 18–23,
While these fortresses did control strategic access points, they were still unable to defend a "frontline" on their own. Only in exceptional cases were rival strongholds built so close to each other that one might speak of a true frontier in the sense of a frontline. The best example is the long-standing rivalry between Bouvignes and Dinant with the destruction of Dinant by Burgundian forces (1466) as a notorious climax. The town of Bouvignes, in the County of Namur, was founded in the twelfth century as a counterpart to Dinant, in the Prince-Bishopric of Liège, on the opposite (left) bank of the Meuse River. Copper boundary poles were put into the river to demarcate their respective territories, and by 1465 the cities' respective fortifications had been expanded to such an extent that gunners could actually target their adversary's defences.\footnote{Borgnet, \textit{Bouvignes}; Bormans, Lahaye, and Brouwers, ed., \textit{Cartulaire de Dinant}, 2:103–10.}

The example of Bergeijk, in the Campine/Kempen on the Brabant–Loon frontier, on the other hand, might be more typical for most frontiers within the Meuse Region. Of particular interest is a charter from 1415, written down in the context of a local boundary dispute. Such disagreements invariably involved witness testimonies of the oldest members of a village. In this charter villagers of Pelt (Overpelt and Neerpelt) declared that several decades earlier, possibly in 1334, an official of the count of Loon wanted to burn neighbouring Bergeijk in retaliation for a Brabant attack on the count's town of Beringen. The villagers managed to convince him not to do so by pointing out that the count also owned twelve manors in the district. Apparently, a fixed boundary had not yet been established in the heathlands of the Brabant–Loon frontier. The inhabitants of Bergeijk again narrowly avoided a raid in 1388, when they persuaded the duke of Guelders that their lands depended on both Brabant and Liège. That very same year the councillors of Theux wrote down an agreement between the inhabitants of the lordship of Franchimont in the Prince-Bishopric of Liège, and those of the Duchy of Limburg. It stated that livestock could graze on the common land from sunrise to sundown and that, if one of the principalities was involved in an armed conflict, villagers could pasture their animals on the lands of the other side.\footnote{Bormans, "Chambre des Finances," 20–21; Vangheluwe, "Bergeijk," 309–24.}

The aforementioned charters demonstrate that medieval principalities were assemblies of lands over which a ruler could claim some right (notably taxation or justice). Power was not exerted uniformly across the whole territory.\footnote{Chouquer, \textit{Traité d'archéogéographie}, 23–38; Genicot, "Ligne et zone"; Noordzij, \textit{Gelre}, chapters 3–4.} Over time general boundaries did of course become more clearly defined, but it is illuminating that even in the late eighteenth century, when the Ferraris map was drawn, major issues regarding the exact location of the borders between the Austrian Netherlands and the Prince-Bishopric of Liège still remained unsolved. The gunners who made this map went to considerable trouble to denote enclaves and contested boundaries.\footnote{Brussels, KBR, Cartes et plans, MS IV 5.567: Carte de Ferraris.}

The awareness that premodern frontiers could assume the shape of both zones and actual frontlines is crucial for understanding how armed forces interacted with frontier...
Chapter 1

Lands. Many armies, especially up to the early eighteenth century, simply intended to raid and devastate, or otherwise extract income from enemy lands (contributions), rather than to occupy territory. Revealing in this regard is a treaty from 1707, signed by representatives of the French king and the Dutch Republic. The French government agreed to pay contributions and not to raid the land of Cleves, and in return the Dutch would not invade the lands to the west of the Meuse River with a force of fewer than four thousand men. In other words, in 1707 a force of four thousand men was accepted as a dividing line between an army bent on establishing contributions and one able to occupy territory.

When the French engineer de Vauban devised his famous “iron belt” (frontière de fer) in the late seventeenth century, two lines of fortresses along the frontiers of Louis XIV’s kingdom, he left a gap between the Meuse River on the one hand and the Moselle and the Rhine on the other. In this area it was assumed that the Ardennes, a “natural frontier,” constituted an adequate barrier. As the treaty from 1707 demonstrates, this defence system deterred only large invasion forces, not fast-moving bands of mounted raiders. From 1644 to 1748 the French monarchy thus had to construct special defensive lines on the Meuse and Semois rivers to cope with this threat.

These linear defences deserve closer attention because they show the difficulty of using the Meuse, or any other river, as an obstacle. The French government connected major strongholds (Mézières, Sedan, Mouzon, and Stenay) to each other through the

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59 Desbrière, Chronique critique; Parker, The Army of Flanders, 11; Satterfield, Princes, Posts and Partisans, 86–88.

Figure 5. Detail of a map depicting fords in the Meuse River from Saint-Mihiel to Revin, 1640 (Paris, BnF, Cartes et plans, GE BB–246 (IX, 128–129 Partie du cours de la Meuse avec les guez sur icelle)).
garrisoning of medieval fortresses along the Meuse, and the creation of new watchtowers and earthen embankments (redoubts) near fording places. Soldiers of the royal army concentrated in the former points of defence, while guarding the latter linear defences became the responsibility of thousands of armed peasants, drawn from the lands between the Meuse and Aisne. The costs of this defence were manifold: it drained manpower from the regular army, removed peasants from their work, and consumed massive amounts of timber. A surviving report from 1710 indicates that the construction of a single redoubt required one hundred and twenty-eight fascines (bundles of branches) and two hundred and fifty palingades. Yet these lines rarely succeed in keeping well-organized raiders at bay.\textsuperscript{60}

The character of the Meuse River itself lay at the heart of the difficulties: depending on the season multiple fords could appear or disappear, and each had to be fortified (see figure 5). This unpredictable behaviour also lowered the life expectancy of earthen fortifications considerably: the seasonal flooding of the Meuse ensured that if these redoubts were not properly maintained they became completely unusable in a few years due to erosion. Yet worst of all was that despite these defensive efforts enemy forces crossed the Meuse River anyhow, either because armed peasants could do little to oppose them, or because they found other ways to get across, by using boats or swimming. The French government responded to these issues by establishing a different defensive line, on the Semois, a tributary of the Meuse, and by increasing the number of guards. M. de Lagrange, lieutenant de roi in Rocroi, even ordered the cutting of wood alongside the main road from Sedan to Bouillon in 1701 so that enemy troops could be spotted more easily.\textsuperscript{61}

The problems faced by French generals were hardly unique, as every effort to defend the Meuse River faced the same difficulties: ‘s-Hertogenbosch depended on temporary fortifications (blokhuizen) and patrolling by boat to fend off attacks from Guelders in the fifteenth and sixteenth century, and Imperial troops constructed earthen redoubts to defend themselves against Belgian rebels on the west bank of the Meuse in 1789–1790. Such defensive efforts could be hampered by harsh winters, when invading forces could simply walk over the frozen Meuse, as well as dry summer months (see figure 30).\textsuperscript{62} The Duke of Alba’s attempt to keep William of Orange on the east bank of the Meuse River in 1568 famously failed when the prince’s army found a ford in the Meuse between Stokkem and Obbicht on the night of October 5 to 6. Credit for this operation probably has to go to Karel van Bronckhorst, lord of Obbicht, who fought with the rebel army. In order to prevent surprises such as this, Michel de Warisoul, castellan of Samson, sent a report in September 1568 to the count of Berlaymont, stadtholder of Namur, listing all possible


crossing points between Dinant and Huy, including suitability for cavalry, infantry, and wagons. There were no fewer than thirty-one.  

This concern with potential routes in the Meuse River is representative for a more general friction between road networks and the conservation of wilderness. Frontiers were landscapes characterized by the threat of a potential enemy attack. The standard response to an invasion was blocking the invader’s road of advance. Depending on local landscape features this could entail the obstruction of routes with cut down trees (abatis) and ditches, the destruction of bridges, and the obstruction of river traffic with stakes or palisades. In 1422, for instance, the forester of Hainaut’s lieutenant led his wardens and an unspecified number of labourers into the Forêt de Mormal to block roads with cut down trees and destroy bridges so that enemy troops would not be able to pass through. They needed thirteen days to complete this task. Contemporary thus not only perceived wilderness as dangerous because of its inherent nature, but also because these landscapes were far more likely to serve as hostile environments during armed conflicts.  

Such needs could outweigh economic ones, creating certain tensions. In 1488, during the siege of the castle of Namur, which was built adjacent to the confluence of the Sambre and Meuse, the besiegers blocked traffic on both rivers by putting chains between the pillars of an existing bridge over the Meuse, constructing a temporary wooden bridge over the Sambre, and placing a large floating barrel on the Meuse near one the artillery towers in the city wall. The creation of two separate barriers across the Meuse was necessary to close off the river before and after its junction with the Sambre (see figure 8). The city of Maastricht (from the Roman “Mosa Trajectum” or bridge over the Meuse/Maas) likewise assumed considerable strategic importance because of its location on a major Roman road, connecting Bavay to Cologne, and its control over one of the few stone bridges over the river. Maastricht retained its military value from the fourth century CE, when the Roman army built a fort there, until its demilitarization in 1868.  

Most roads in the Meuse Region, as elsewhere in Western Europe, were tracks leading from one settlement to the next. A 1632 handbook for the maréchal des logis, the officer in charge of billeting troops, depicts a variety of local road networks. The state of such paths, filled with mud piles and holes, and rarely designed to accommodate any movements beyond local traffic, obviously left much to be desired. Officers of the

66 De Solemne, La charge du mareschal des logis; Duyck, Journaal, 3:395; Mourroux, “Stenay, ville militaire,” 50–51; Parker, The Army of Flanders, 72–74; Richer, Abrégé chronologique, 183; van Hoof and Ramakers, “De militair-strategische betekenis.”
bishop of Liège's army, for example, complained in April 1756 about soldiers losing their shoes in the mud when chasing vagrants in the Campine/Kempen (see chap. 4). They explicitly stated that the roads were impracticable for a military unit.68

Given that building high-quality paved roads rarely became a viable option before the eighteenth century, relatively few solutions were available to solve these problems. Accounts from the village of Chatelineau, near Charleroi, show that during the seventeenth century the villagers regularly procured hundreds of fascines to lay on local tracks.69 In several of these instances, it is clear that these efforts were, directly or indirectly, stimulated by armed forces passing through. The main alternatives to not improving the tracks would be that the soldiers stayed longer in the area or were diverted from the tracks and trampled agricultural land in the process. Many legal acts or court records of war-related damage speak of armies cutting down hedges and damaging agricultural fields when passing through.70

While armed forces complained regularly about the state of the road network, they also contributed to road degradation themselves. In 1665, for example, a new regional road connecting Liège and Sedan (le Chemin Neuf) was finished. This road had considerable economic value because it did not have to pass through the Spanish Netherlands. It thus allowed traders to avoid potential conflicts between the French and Habsburg monarchies, economic or otherwise. But French forces also took advantage of this new route to invade the Meuse valley in 1667–1668, and effectively rendered the road unusable until repairs could be carried out.71

Armies ultimately responded to the constraints on movement posed by land roads as well as rivers, such as the Meuse, by constructing canals (and later railways as well). Canals provided a relatively easy, and economical, way of transportation, just as rivers did, but their straight outline and constant water level made them much more reliable in terms of navigation. Of no less importance is that these same characteristics also made them much easier to defend. What we see here is a combination of military and economic goals, or at least the assumption that military and economic objectives can be complementary, in a way that resembles military concern with horse supply (see chap. 4). The Fossa Eugeniana (1626–1633) and the Canal du Nord (1806–1810) for example, both of which were never finished, aimed to divert traffic from the Meuse and Rhine Basins, and therefore the Northern Netherlands, towards the Scheldt Basin (favouring Antwerp). Yet at the same time these canals constituted a military defence line, a potential frontier. This is especially obvious in the Fossa Eugeniana because intermediate forts were built to defend this canal, and soldiers had an active role in its construction. The Zuid-Willemsvaart (built in 1822–1826), on the other hand, ran parallel to the

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68 Liège, AEL, Etats, inv. no. 2974: Petition April 10, 1756.
69 Kaisin, Annales historiques de la commune de Chatelineau, 125, 127, 154, 345.
71 Harsin, “Etudes sur l’histoire économique,” 89–95. See also Mengels, Chronyk, 45–46.

Such waterways might seem the perfect alternative for the relatively unpredictable Meuse River, but they created problems of their own. Canals drain water from surrounding areas, especially the rivers they are connected with, and in this way make the latter even more difficult to navigate. In 1460, for example, the citizens of ’s-Hertogenbosch dug a canal near the fortress of Nederhemert, on the frontier of Brabant and Guelders, between two arms of the Meuse River. Creating this new watercourse isolated the aforementioned fortress, a fief of Duke of Guelders, but it also served to avoid Heusden’s toll stations. The town council of Heusden continued to protest that it made the Meuse impassable in inquests of 1494 and 1514. Communities obviously wanted to convince their ruler that the tax burden should be reduced, but that does not mean that the grievances put forward in such documents were unfounded.\footnote{73 \textit{Enqueste ende informatie (1494)}, 196; \textit{Informacie up de staet faculteyt ende gelegentheyt}, 433; Hoeckx et al., eds., \textit{Kroniek van Molius}, 118–19.}

The complaints of the council of Heusden can be seen as emblematic for environmental problems near the Meuse estuary. Both Rotterdam and Dordrecht in the Middle Ages had almost direct access to the sea. By the sixteenth century processes of land reclamation and the silting up of significant parts of the Meuse had made this contact increasingly problematic. Defence of the sea, “the most important frontier of the republic,” rested mainly on warships, but it was precisely these ships that found it increasingly difficult to navigate the Meuse estuary.\footnote{74 Krayenhoff van de Leur, \textit{Militair-historische schetsen}, 89–92. de Jong, “Staat van oorlog”, 65; Denessen, “Twee havenuitdiepings-projecten; van Hoof, “De kustverdediging.”} Such problems were not just the result of ecological processes; they were aggravated by an increasing divergence between warships and other vessels during the seventeenth century. The pressing need to carry more guns, symbolized by the adoption of so-called ships of the line, necessitated the creation of larger vessels.\footnote{75 Bruijn, \textit{Varend verleden}, 81–84, 92, 95–97, 102–3, 184–85, 216.} The Admiralty of the Meuse, tasked with defending the Meuse estuary, therefore had to turn the small town of Den Briel into its main harbour, which was connected by the “Brielse Maas” to the main or Old Meuse in 1607. By 1650 even this forward post had to be replaced by new docks in Willemstad and Hellevoetsluis.\footnote{76 Don and Voorne-Putten, 58–59, 67–74; Filarski, \textit{Kanalen}, 52–54; 80–81; van Mastrigt, \textit{Willemstad prinsheerlijk}, 48–53, 91–92, 101–4.}

Armies valued wilderness because it served as a barrier, but at the same time its very naturalness made movements, especially counterattacks or offensive strategies, problematic. Rather than adopting an entirely defensive attitude towards frontiers, or abandoning wilderness as protective elements, armed forces ultimately came to their own unique solutions to solve the tension between road networks and wilderness,
movement, and blockades: they created their own artificial “wilderness.” The most famous example of such an attempt is the Hollandic (or Dutch) Water Line.

The term Hollandic Water Line refers to a series of inundations intended to safeguard the core of the Dutch Republic, the County of Holland, if an attacker managed to invade the country. In effect it gave new meaning to the image of the *Hollandsche Tuyn*. Its basic conception originated in the desperate year 1672, when French and Münster troops overran large parts of the republic. It was only later that Dutch engineers developed a more complicated system of sluices and access dikes that allowed commanders to inundate specific areas and defend a handful of access points. The essential aspect of this Hollandic Water Line, or Lines, for one should distinguish between the Old (1672–1795) and New Hollandic Water Line (1815–1956), was therefore that large stretches of land had to be prepared for a potential inundation but were not flooded permanently. Their long-term ecological significance, which continues to this very day, lays in the preservation of large wetlands or marshes that would otherwise have been drained and turned into agricultural fields, rather than the handful of years the lands were actually flooded.\(^77\)

The French government by contrast adopted its own equivalent of the Hollandic Water Line, based on the preservation of woodlands near frontiers. This policy developed only gradually. The marquis de Langeron, a French general, left an account of an inspection tour along the French frontiers in 1773–1774, meant as an educational opportunity for his young son, on how to follow in his father’s footsteps. When he passed near the Forêt de Mormal he remarked that it is a good thing that the count de Nicolaï, marshal of France, prevented the *grand maître des eaux et forêts* from constructing a major road through these woodlands. It would have facilitated an enemy invasion.\(^78\)

In 1776 the king of France passed an official regulation, which gave military engineers far-reaching powers to prevent anyone from creating new routes in frontier zones, which included the entire French-controlled part of the Meuse Region, without the approval of a special commission (*la Commission mixte des travaux publics*), dominated by military engineers. Given that any significant clearing of woodlands created a potential invasion route, the French military had a primordial role in the preservation of forest belts alongside France’s borders, which are clearly observable even today. These landscapes, symbols of European “wilderness,” are the result of a deliberate policy based on military perceptions of frontiers that date back to the Middle Ages at the very least.\(^79\)

Up till this point we have considered frontier landscapes in terms of access, and more particularly defence against a potential enemy attack. Armies’ interactions with frontier landscapes also included a set of impacts, however, that were not directly related to defensive needs, and might occasionally even run contrary to them. These will be referred to as “garrison services” because of their vital role in sustaining a military pres-

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The French engineer de Vauban speaks of a place forte’s need for dépendances. In order to study the relationship between these services and actual defensive needs, let us first examine the case of the fortress of Montfort, for which source material is relatively abundant. Besides a series of accounts, the oldest of which date back to 1294–1295, a map drawn by order of the Habsburg government has been preserved, which gives an exceptional depiction of the landscape there in the early seventeenth century (see figure 6).

Henry of Guelders, bishop of Liège (1247–1274), founded the imposing fortress of Montfort on the right, or eastern, bank of the Meuse, close to Maaseik, in the 1260s. It quickly became a key fortress in the defence of the County of Guelders’ southern frontier, because of its function as a seat of government. The lordship of Montfort is a classic example of what English medievalists have recently called “lordly” or “elite” landscapes: lands filled with symbolic elements of power. Several brooks in the area were channelled towards this fortress to create huge fishponds, and the lordship also contained several forests, the most important of which was the Echterwald, located on the Guelders–Jülich frontier between the towns of Echt and Vucht.

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81 Coenen, “Kasteel Montfort”; Meihuizen, De rekening.
82 Creighton, “Castle Studies,” 5–17; Creighton, Designs Upon the Land; Liddiard, Castles, 97–121.
ponds or woodlands can be considered as status claims since access to game and freshwater fish was a social privilege. It was also a rather uneconomic way of land use. The owner of such lands showed that his socio-economic base was so secure that he could afford to use his lands for display rather than agriculture.83

It has become common practice to use this concept of elite landscapes to question or at least downplay the military role of medieval fortresses (or "castles"; see further in chap. 2), but the example of Montfort demonstrates that this is an oversimplification. There is no reason why a landscape feature such as a fishpond, which had obvious prestige value, could not have had a defensive role as well. In the case of Montfort, the fishponds were so extensive that a direct attack on the east side of the fortress became impossible. The chronicler Jean de Stavelot also wrote that in 1436 urban militias from the Prince-Bishopric of Liège first had to drain the ponds next to the fortress before they could assault it. This task took no fewer than three days.84

By the early seventeenth century, when the engineer Tassin drew a map of the lordship, the landscape had changed markedly in many respects, a situation also reflected in inspection reports. The Echterwald was at this point the only major woodland remaining in the area; the others had become simple heathlands. Several of the ponds became dry during the summer months, at which time the local population used them for pasture. Overexploitation was a major cause of the degradation of this elite landscape, but it cannot be seen in isolation from fifteenth- and sixteenth-century political events: the fortress no longer served as a ruler’s residence, subjects of the Count of Jülich diverted one of the brooks supplying the ponds with water, and the lordship had suffered repeatedly during invasions. The impoverishment that resulted from these wars forced stewards to use lands in a more productive way. The deathblow to the last vestiges of the original lordly landscape came in 1650–1653, when soldiers stationed in the fortress dug a canal that drained the last remaining ponds.85

The slow growth of the lordship’s permanent military presence might have had an essential role in bringing about these landscape changes. The oldest surviving accounts of the duchy, from 1294–1295, indicate that the "high bailiff" tasked with defending this fortress had at his disposal five knights doing guard duty because of feudal obligations, two gatekeepers, two sentinels, five watchmen, a crossbow maker and his son. A "garrison" of sixteen grown men and a child in times of war might seem wholly inadequate, but it is very much in line with the ways most fortresses were managed up to the late sixteenth century (see chap. 4). If an actual threat was imminent the garrison could easily be augmented to a hundred men and more. A garrison of about eighty soldiers was only established around 1578, and later expanded to about two hundred.86

83 Coenen, "Een kasteel"; Coenen, "Kasteel Montfort"; Gentenaar and Hupperetz, "Personeel en werkzaamheden."
84 Coenen, "Kasteel Montfort," 76–77; Coulson, Castles, 72–76; Creighton, Designs Upon the Land, 80; de Stavelot, Chronique, 365–66.
86 Coenen, "Kasteel Montfort," 86; Coenen, "Het keerpunt," 95; Meihuizen, De rekening, 8, 15 (text accounts).
These soldiers actively contributed to the overexploitation of natural resources by fishing in the moats, digging peat, and probably hunting as well. This behaviour was quite similar to that of their medieval predecessors, the main issue being that they were far more numerous.\textsuperscript{87} Archaeozoological research of animal remains in Franchimont, a fortress located in the Prince-Bishopric of Liège with a similar strategic role, suggests that game, especially red deer and wild boar, constituted a significant part of its occupants’ diet in the late fifteenth and early sixteenth century. According to the bishop’s regulations from 1503 the household of the castellan residing here should include three horsemen (the castellan himself, his page, and a groom), four infantrymen, a gatekeeper, two sentinels, and two servants (male or female).\textsuperscript{88}

The appearance of large permanent garrisons in most parts of the Meuse Region from the late sixteenth century onwards therefore contributed to changes in frontier landscapes, as military governors, invariably members of prominent noble families, incorporated these same elements of lordship in the landscapes that they had to defend. A court record from 1660 Namur indicates for instance that the Prince of Chimay, governor of the city, had his own hunting park (garenne) in the forest of Hastimoulin. A local chronicle from 's-Hertogenbosch likewise mentioned in the year 1697 that the governor’s hunters killed a deer and a wolf.\textsuperscript{89} This reveals that the governor employed gamekeepers to manage his hunting grounds, and that wolf and deer had become so rare in the area that their killing became noteworthy. Soldiers’ fondness of hunting could in effect cause considerable damage and friction, with citizens as well as governors, because they rarely respected hunting regulations or private property (see chap. 3).\textsuperscript{90}

Complaints about soldiers taking firewood from woodlands near their garrison should be read in a similar light. Providing garrison members with fuel, often coal or peat rather than wood, was the responsibility of the inhabitants in whose houses they lodged, the urban council, or the state, but these mechanisms often proved insufficient. Furthermore, the upkeep or expansion of fortifications and military material, notably gun emplacements, required substantial amounts of wood. Military garrisons would make sure they had access to nearby woodlands.\textsuperscript{91} In one case this even meant appropriating their actual management. During the Central and Late Middle Ages the Ravensbosch near Valkenburg was the main forest within this prestigious lordship. From the sixteenth century onwards it also became a major supplier of wood for the garrison of Maastricht. Records kept by the chief engineer demonstrate that he bought trees (oak, ash, field elm) to plant in this forest in 1750, in the aftermath of the reoccupation of Maastricht by Dutch forces, and had a major role in the establishment of new regulations for the forest’s management in 1765. He also had a say in the appointment of new

\textsuperscript{87} Arnold, \textit{German Knighthood}, 85; Wadge, \textit{Archery}, 114–15. \\
\textsuperscript{89} Douxchamps-Lefèvre, \textit{Inventaire}, 3:268; van Bavel et al., \textit{De kroniek}, 414–15. \\
\textsuperscript{90} The Hague, NA, Raad van State, inv. no. 2079, November 1, November 20, 1716; March 17, May 1, 1717; Verbois, \textit{Rekem}, 296; Verschure, \textit{Overleven}, 199. \\
\textsuperscript{91} Illaire et al., eds., \textit{Les cahiers de doléances}, 129, 158, 167, 209, 474, 524.
forest wardens. It is indeed significant that in the early nineteenth century, when Dutch soldiers no longer had access to nearby woodlands, the garrison planted coppice wood in the outworks to secure their wood supply.92

Besides wood and game, garrisons also needed access to pasture for their horses.93 Because of the sheer volume of forage consumed, cavalry forces typically stayed in regions with ample access to grasslands. The French government stationed a disproportionate part of its cavalry forces in the Meuse basin from the seventeenth century onwards because the river valley provided extensive pastures for their horses. In 1789 ten of the sixty-one French cavalry regiments had garrisons in the Meuse Region. Frontier cities and towns for their part were quite content to receive them because they could sell their hay to the military and use the horses’ manure to fertilize their fields. The town of Rocroi went so far as to build new barracks and stables at its own initiative in 1721.94

Still, the intensive use of the Meuse and Sambre valleys by French cavalry units might have had other unintended results. Military consumption of hay and pasture removed a powerful incentive for local peasants to drain these areas and turn them into agricultural lands, thereby slowing down population growth in these areas. A 1693 plan to drain the meadows of the Sambre valley in order to use these fertile lands as agricultural fields was never executed because it would have prevented mounted regiments from garrisoning or even assembling in this area.95 In sum, military management of frontier landscapes produced significant ecological results because it contrasted with agricultural or economic needs.

Military Training

After examining how armed forces perceived and managed frontiers in a general way, let us turn to one specific aspect of frontier management: military training. This particular feature of army–ecosystem interactions at landscape level deserves to be examined separately because it plays a key role in claims that today’s military forces have become protectors of nature. It also draws attention to a neglected feature of military history, for few authors have devoted serious attention to how medieval and early modern armies practised military manoeuvres in peacetime; that is, beyond commenting on the adoption of “drill.”96 Military training is defined here as any activity that aims to prepare someone, or a group of people, for warfare. Since this study is specifically

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92 Maastricht, RHCL, 07.E01, inv. no. 1: Guarnisoensboek, B, September 29, 1749, January 12, 1750; January 16, March 18, 1765; January 20, 1768, August 1, 1768; February 17, May 11, 1769; January 22, November 19, 1770; inv. no. 9, 1824 no. 76; Anon, “Houthem-Sint-Gerlach,” 11–14.
93 Quicke, “Une enquête,” 397.
96 Houlding, Fit for Service; Kleinschmidt, Tyrocinium Militare; Rogers, Soldiers’ Lives, 68–69; Settia, “Military Games.”
concerned with frontier landscapes, the main emphasis will be on weapon handling and unit manoeuvres.

Frontiers are an obvious place for military training, because relatively few people lived there, armed forces were already present in these areas, and the chance that actual fighting would take place was relatively high. Military training can also be initiated to intimidate an antagonist, or to show off an alliance, in a way not dissimilar to joint U.S.–South Korean military exercises in recent years. It reinforces the perception of frontiers as a "frontline" by sustaining and intensifying alleged distinctions between the "self" and the "other," differences which could later justify the breaking of taboos during actual armed conflicts (notably killing other human beings).

Because large sections of a population could be called upon to serve in an armed capacity, military training became incorporated in other activities. In the Middle Ages in particular preparation for war often assumed the form of "games" or "sports." The Rule of the Order of the Templars (1128–1129), which served as a model for other military orders as well, specified that a member of order could engage in target practice, but was not allowed to wager any objects of value. He could also participate in buhurts, informal mounted combats in which the participants were often not in armour, but only if the commander was present. The Templars were a monastic order of fighting men. Military training was thus an important part of their lives, but the leisurely elements normally attached to it were not acceptable and forcefully removed or restricted. The rules regarding hunting confirm this impression. There is no doubt that hunting and warfare are directly linked to each other, and that hunting skills can be quite useful in warfare (the killing of other living beings, arms handling, riding, tracking, acting as a group, and so forth), but there was a world of difference between falconry and killing dangerous animals. Members of the Templar Order were therefore only allowed to hunt lions or accompany hunting expeditions when a Christian might be endangered. Hunting for pleasure, especially falconry, was strictly forbidden. Brothers of the Teutonic Order could likewise hunt large carnivores such as the wolf, bear, lynx, and lion, but were forbidden to use dogs. They could also shoot birds as target practice.

The development of formal military training during the early modern period might have put further pressure on the close association of hunting with preparation for war. The prince de Ligne, a member of the oldest and most prominent noble families in Hainaut, and a general in Habsburg service, criticized existing practices in 1780 when he wrote that "you do not tell a recruit: I will make you a hunter, you have to take him from the woods." In the late eighteenth century "hunter" (Jäger, jager, chasseur) had become a general name for a particular kind of unit, "light troops" that typically wore green uniforms and might be armed with hunting rifles, but were apparently not necessarily composed of men with extensive hunting experience. A handful of units did establish

98 Curzon, La règle du Temple, 84, 183–84 (rule nos. 95, 315, and 317), Perlbach, ed., Die Statuten des Deutschen Ordens, 47 (rule no. 23). See also Cummins, The Hound and the Hawk; Harrison, Dark Trophies; Manning, Hunters and Poachers, chap. 2.
a strong connection with forestry departments, but for these specialist units replacing wartime losses was a major problem (see chap. 4). 99

The connection between hunting and woodlands, mountains, or wilderness is hardly a coincidence. It demonstrates that the ambiguous perception of frontiers as both wilderness and garden barriers is omnipresent in military training practices as well. Preparation for war, especially arms handling, is a very disruptive activity. The choice for particular practice areas close to or within frontiers is therefore closely related to the ways armies cooperated with society at large. They could opt for sparsely populated lands (wilderness), or close off their exercise fields from local inhabitants (gardens).

Studying military training in a historical context can be problematic, because arms handling is a skill that large parts of the general population were expected to master. The available sources are therefore biased towards more large-scale and notable military exercises, many of which included significant performance elements. The main issue from an ecological perspective is how important such events actually were in the long-term evolution of frontier landscapes. Their effects might be quite similar to that of actual battles, except that killing one’s adversary was not the primary goal.

The oldest medieval tournaments, in the late eleventh and twelfth century, were indeed very hard to distinguish from real combat: they included fighters on horseback and on foot and there were very few rules. The well-known Chronicon Hanoniense of Gislebert of Mons (ca. 1150–1225) makes it clear that many of these early tournaments were held in the Meuse Region, and more specifically on the frontiers of its numerous principalities (such as Trazignies or Maastricht). David Crouch has rightly argued that the northern part of France, and the Southern Netherlands, including most of the Meuse Region, played a key role in the tournament’s early history. 100 Even in the thirteenth century, when tournaments became more “urban” in character, they were still held in frontier areas (such as Andenne or Geertruidenberg). 101

Tournaments were organized on or near frontiers because of their political significance, but also took the presence of major roads, and the ecology of frontier landscapes into account. A horse’s hoof exerts a force more than six times greater than a human heel on a level surface. 102 One can imagine the effects of a few hours of martial play with hundreds of horse hooves moving about on carefully tended agricultural fields. It is for good reason that many tournaments were held after the harvest was brought in, or even better, on land of relatively low value. The tournament of Chauvency (1280), arguably one of the most famous tournaments of the entire Middle Ages, was held in the river valley of the Chiers, between the town of Montmédy and the fortress of Chauvency, according to the verses of Jacques Bretel (1285). Such open grasslands were the most convenient

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99 de Ligne, Fantaisies militaires, 110.


102 Liddle and Chitty, “The Nutrient-Budget of Horse Tracks.”
place to organize a tournament; they were not enclosed and served simply as pasture and for hay production (see figure 7).  

By the fourteenth century the tournament proper, the melee or the charging of two groups of knights at each other, had all but been surpassed by the individual joust. Most tournaments were now held within towns, and group combat subsisted as only one part in a series of competitions. This should not be taken to mean, as has often been claimed, that tournaments lost their military relevance altogether: When Charles V (Emperor 1519–1556, Lord of the Netherlands 1506–1555) came to the Low Countries in 1549 to present his son, Philip II (1555–1598), as his successor, there were both huge public activities, such as a mock battle outside Brussels, and still large-scale but more private forms of spectacle, such as the storming of a “castle of love” in the hunting park of Mariemont (Hainaut), where eight knights disguised as “savages” held four noble ladies prisoner.

The latter performance, which involved at least several hundred soldiers, is particularly revealing because the young prince is portrayed as an ideal successor surrounded by noblemen from all over the Habsburg Empire in the context of a controlled space, a hunting park and gardens, which just happen to serve as symbols for the unity of one’s own territory. It should also be stressed that while all this might seem more like the-

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atre than military training, the front of this castle, described as a *bastillon*\(^{104}\) in a fiscal account recording the tournament’s expenses, was composed of bricks, and the actual assault involved a range of manoeuvres, including livestock raiding, an attack on a convoy, and live firing at the *bastillon*. The besieging army included cavalry, infantry, artillery, pioneers, and at least one engineer. Three hundred and seventy-six infantrymen were drawn from the frontier with France to participate in this event. There were no human fatalities, but at least one horse died as result of a lance thrust, a nobleman suffered burns because his beard and clothing caught fire, and several others fell from the castle’s walls during the attack. It can be very difficult to distinguish theatrical elements from practical military needs, and the question remains to what extent contemporaries actually made such distinctions.\(^{105}\)

The tournament of 1549 establishes a useful link between medieval tournaments on the one hand and early modern military training exercises on the other. Despite the supposedly “revolutionary” character represented by the adoption of drill in the late sixteenth and early seventeenth century, particularly in the Dutch army, there is relatively little evidence for how armies practised unit manoeuvres. A new kind of military handbook made its appearance in this period, one that stressed the importance of drill and provided numerous illustrations to accompany the text, but it is quite unclear to what extent such manuals represent actual practice. David Parrott and Erik Swart have stressed the informal character of contemporary military training, based more on experience than formal drill.\(^{106}\) A notarial act from 1652 Rotterdam, concerning a soldier who refused to follow orders, mentions that the unit to which this man belonged exercised outside the walls, the same spaces Habsburg and French forces utilized for their military reviews.\(^{107}\) It is useful to note that open fields or heathlands regularly served as background for target practice as well, even though permanent shooting ranges existed from at least the fourteenth century. The citizens of ’s-Hertogenbosch, for instance, dragged a newly cast gun to the heath and marshes outside the city in 1545 in order to test it, according to the city’s accounts.\(^{108}\)

The connection between military exercises and city walls, the city’s “frontiers,” was mirrored at a much larger scale by the establishment of major training camps on state frontiers from the late seventeenth century onwards. The establishment of these camps should be seen in the context of a significant growth in the size of armies in the period from 1660 to 1760, which made it necessary to practise manoeuvring with bigger forces. Surviving reports and plans demonstrate the intention of training soldiers

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\(^{104}\) A small *bastille*, meaning a *blokhuis* or bulwark (see chap. 2).
\(^{106}\) Parrott, *Richelieu’s Army*, 38–48; Swart, “De mythe van Maurits en de moderniteit.”
in camping and foraging as well as military manoeuvres in the strict sense of the word (including mock battles, sieges, and bridge building). Camps were typically pitched in grasslands or heathlands, but with access to running water. The French army thus established training grounds next to the Sambre, near the village of Aymeries, in 1727, 1732, 1753, 1754, and 1755. As surviving maps indicate, these areas were sparsely populated, and therefore easy to rent or appropriate, and provided the necessary wide-open spaces. The soldiers even had to flatten the prospective sites so that no obstacle impeded manoeuvres. Yet all this made these encampments more vulnerable to sustained rain showers and the resultant flooding. The Dutch training camp in Oosterhout, organized in the heathlands near Breda in 1732, had to relocate twice because of incessant rain and the flooding of the campsite, and was eventually broken up prematurely.

Because campsites were chosen for their strategic locations, it comes as no surprise that some of them were held near or on actual battlefields. When Walloon regiments of the Imperial army performed the manoeuvres prescribed by their new drillbook, in 1767, 1768 and 1770, they did so near Jemappes, the same common lands, used as pasture, where they were defeated by a French republican army in 1792. While the ecological effects of one encampment or battle would be ephemeral, the focus on specific areas could lead to long-term effects. This was especially so if camping involved major landscape changes. Dutch officers of the military academy in Breda for example referred to some artificial hills near the city as the “English Mountains” at the end of the nineteenth century. They thought British troops had constructed them during the 1793–1795 campaigns against France, while they were actually remains of Dutch practice camps from 1769 and 1776. These hills served as huge butts to prevent any cannon balls from flying off the range. The published testimony of a corporal of the English footguards confirms that the British army was not responsible for the hills’ construction, but that its members were well aware of their military origin. It is worth noting that both Dutch and British soldiers contributed to the lowering of the groundwater level by digging wells in these heathlands, where water was relatively scarce.

While such notable events involving relatively large numbers of combatants were closely connected to frontiers, due to their very transient character they provide little evidence of long-term ecological consequences. Less prominent military activities, however, also produced lasting effects, because they occurred repeatedly on the same piece of land. As far as the Meuse Region is concerned, the appearance of permanent training grounds can be traced back to the creation of brotherhoods or guilds of crossbowmen from the thirteenth century onwards. These were later supplemented by archers.

110 Paris, BnF, Département Arsenal, MS 6452 (456); MS 6452 (457); MS6452 (458B,1); MS 6452 (458B,3); MS 6453 (461); MS 6453 (462); Département cartes et plans, GE D–16345.
111 Nauwkeurig dag-verhaal van ‘t campement bij Oosterhout, 3, 21, 23; van Seters, “Het Campement bij Oosterhout anno 1732,” 140. See also Duyck, Journaal, 3:485.
113 Brown, An Impartial journal, 187–89; de Bas, “De Kalix Berna of Kalbergen.”
(hand)gunners, and swordsmen’s guilds. The oldest surviving such charter dates back to 1266 Namur and was granted by Guy of Dampierre, Count of Flanders and Margrave of Namur (1253/1263–1305/1298). Because these men trained regularly, at least once every two weeks, they were considered a military elite; they had a major role in the maintenance of law and order, were always the first choice for military expeditions, and served as permanent guards on city walls during conflicts.114

From an ecological viewpoint, it is important to note that only a relatively small part of the adult male population engaged in these exercises, in contrast to late medieval England, where every adult male was supposed to own a bow and arrows and practise regularly. The terrains allocated to these associations tend therefore to be described as enclosed spaces (courtils) or gardens115, while in England target practice usually took place on common land and frequently led to the massive destruction of gardens (enclosures).116 Such shooting ranges, which could contain fruit-bearing trees and vines, were often located just inside or outside the city walls (“frontiers”), mostly in dry moats, especially if these ditches had lost their original function due to the expansion of the fortifications. In the fifteenth century one of the companies of crossbowmen in Dinant, according to the town’s cartulary, practised shooting at the foot of the walls, the other in part of the dry moat.117 Shooting guilds lost most of their military importance over time, and were disbanded in most garrison towns as early as the late sixteenth century, as central governments considered them unwanted competition for regular military units.118

The relative decline of these militias corresponded with a more general shift towards paid troops, “soldiers.” As mentioned earlier, it is unclear where these men trained, and whether they occupied a specific terrain for such purposes, before the eighteenth century. The garrison orders of Namur are one of the few sources to provide good, detailed information. They indicate that the infantry, artillery, and cavalry more or less had their own drill grounds in 1759–1761. The cavalry exercised in the open fields outside the Porte de Jambes (near the like-named village, to the southeast of the city), the artillery next to the Meuse, outside the Porte Saint-Nicolas, and the infantry mostly outside the Porte Bulet (see figure 8). This does not mean that access to suitable grounds was easy. The garrison had to pass review in April 1761 outside the Porte Saint-Nicolas instead of Porte de Jambes, for example, because of obstruction by the city council. The governor complained to that same body in 1771 and 1772 that owners of the training fields near Jambes not only sowed them, but that one man even turned his lands into a garden (that

114 Borgnet, Histoire, 4–6, 14, 26–27, 43–44; Devillers, “Notice historique sur la milice communale”; Thewissen, De gezworen schutterijen.


118 Denys, Police et sécurité, 118–30; Thewissen, De gezworen schutterijen, 251–56.
Figure 8. Depiction of Namur and its immediate surroundings, map of the Count de Ferraris, 1777 (Brussels, KBR, Cartes et plans, MS IV 5.567: Carte de Ferraris, fol. 116). Reproduced with permission of the Bibliothèque Royale de Belgique/Koninklijke Bibliotheek van België.
is, he enclosed it). Apparently, the sowing had been allowed earlier only as a special favour.119

The governor’s opposition to the enclosure of fields was reminiscent of an earlier conflict, in 1749, shortly after the Dutch garrison reoccupied the city. The governor wanted to establish training grounds large enough to accommodate the entire garrison, and demanded access to the Plaine de Salsinnes, to the west of the city, near the castle, which in his view were common lands and therefore suitable for military training. He also argued that the garrison already used them for military exercises before Namur had been lost to the French in 1745. Internal correspondence reveals that Dutch officers preferred to use this plain to prevent citizens from constructing earthen embankments with hedges or dig ditches, which facilitated an attack on the castle. The governor got his way and a training field was established, but it remained the property of individual citizens. The aforementioned references to the garrison orders of 1761 prove that the Dutch army eventually did lose access to these grounds and that such conflicts over land use were not solved for the long-term.120

The garrison of Maastricht meanwhile experienced similar problems. In 1790 it reached an agreement with a citizen named J. M. Theelen, who leased the right to cut the grass on the fortifications, to use fields next to the walls for training purposes. The soldiers could train there before the harvest, from February until the first half of May, for five years. Yet the contract also specified that cavalry units could not enter. The leaseholder was evidently well aware that this resulted in far more extensive compaction of the soil. In order to provide their cavalry with suitable space for manoeuvres, the garrison appropriated about six hectares of land in Amby, a village to the east of Maastricht, that very same year. This land, known as the Geuselderenbroek, consisted of a significant part of the village’s common land as well as some meadows owned by major landowners. Its extensiveness also made it suitable for advanced manoeuvres with all infantry regiments together. Detailed fiscal accounts have been preserved, which demonstrate that, since charging on marshy ground is very difficult for cavalry units, soldiers turned them into suitable training fields by flattening the soil and digging drainage canals. The only concessions made to the villagers consisted of allowing them to pollard the trees on the edges of the field, and pass through with their wagons or carts, but only outside the drill season, and all tracks had to be levelled afterwards.121

During the eighteenth and especially nineteenth century military forces increasingly began to feel the need for larger areas where they could practise on a permanent basis without causing conflicts or, conversely, without being disturbed. These camps

119 The Hague, NA, Raad van State, inv. no. 2079, Orders March 23, 1714, August 5, 1715, September 10, September 11, 1716; inv. no. 2081, Orders April 24, May 16, 1741; inv. no. 2087, Orders May 9, May 22, May 23, May 25, May 26, 1759; May 20, May 23, 1760, April 24, May 26, May 27, May 28, 1761; inv. no. 2088, Orders June 16, September 14, 1771, September 25, September 28, September 29, December 13, 1772; May 25, May 26, September 20, 1773; May 23, May 24, May 25, June 22, September 30, 1774.

120 The Hague, NA, Raad van State, inv. no. 2598: Plaine de Salsinnes.

121 The Hague, NA, Raad van State, 2074: Garnizoensorders Maastricht, Geuselderenbroek.
also served changing military needs, notably an increased emphasis on target practice and more diverse kinds of terrain on which to manoeuvre. The Napoleonic garrison of Maastricht, for example, reoccupied the Geuselderenbroek. In marked contrast to their predecessors, they also used it for target practice in 1808, which in turn prompted an immediate complaint by the city’s mayor to the prefect. The new Netherlands government subsequently established several large training grounds on heathlands in the 1820s. The Belgian army followed suit and founded the camp of Beverlo in 1835. This has proven to be one of the most long-lasting training grounds in the Meuse Region. The camp’s location, in the middle of desert-like heaths and drift sands of the Campine/Kempen, gained considerable strategic importance in the aftermath of the Ten Days’ Campaign (1831), as it controls a major road leading from Eindhoven to Hasselt. It was originally made near the garrison of Diest, but transferred to this desolate wilderness because the lands were inexpensive (see figure 9).

Parts of the camp, now military domains, have received protection in the 1990s because of their value for endangered flora and fauna, mostly species that depend on

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122 Maastricht, RHCL, Frans Archief, inv. no. 710: letter of August 1, 1808; Biemans, August von Bonstetten, 87, 129, 203; Teunisse, Onderdaan in Oranje’s oorlog, 71, 72–74, 94, 102–3, 119, 121–23, 125, 127; van der Heijden and Sanders, eds., De levensloop, 78.
heathlands and drift sands for survival. The ecological value of these military domains is therefore similar to that of other training areas in Western Europe: they preserve landscapes that have become very rare elsewhere due to changes in agricultural practices. The Belgian army’s disruptive activities—the trampling of the soil, earlier by horses and now by mechanized vehicles, and the burning of vegetation as result of live firing—more or less ensure that this desert-like landscape does not turn into woodlands. These domains’ garden-like character (they are not freely accessible and often enclosed) makes them a safe haven for endangered species as well. While the military deserves credit for this protection, they also made a significant contribution to the disappearance of these same heathlands and drift sands. The Belgian army after all used the labour force of a penal company, the only unit to be stationed permanently in the camp, to turn one hundred and forty hectares of heathland into gardens (a quarter of the total), grasslands (an eighth), woodlands (one half), and plant nurseries (an eighth) in 1847–1849.

These changes were initially very practical responses to the challenges posed by this landscape: the lack of cover made soldiers’ tents and huts very vulnerable to the wind, there was very little or no running water, and food for man and horse alike had to be imported from elsewhere. Soldiers thus planted pine trees to strengthen the soil and shield their encampment from the wind, dug wells, and used their own horses’ manure for the fertilization of these lands. By the 1850s, a new canal and a railway made the camp more accessible. Such landscape changes considerably raised the status of the army, for it made itself useful in peacetime by turning the wilderness of the Campine/Kempen into valuable land. But none of the more ambitious programs, such as a horse-breeding project, were ever put into practice. Perhaps its most enduring influence is the town of Leopoldsburg (Bourg-Léopold), created in 1835 because so-called camp followers were not allowed to live in the actual camp; a stringent reminder that the military–civilian divide had now become the norm.

Conclusion

Military domains, rather than being a symbol of progressive behaviour, are actually the isolated remains of what were once far more encompassing and diverse strategies of frontier management. Armies in the Meuse Region contributed to landscape variety on frontiers from the thirteenth to the nineteenth century because their actions were well integrated into the fabric of societies in the past, even though they often opposed economic needs. Military concerns helped preserve some of the last remaining stretches of wilderness from agricultural expansion, as they were efficient barriers against an enemy attack.

Developments within armies themselves—a relative increase in scale, and standing forces, combined with modifications in agriculture, notably enclosure movements—

stimulated the appropriation or acquisition of permanent training grounds from the eighteenth century onwards. These areas laid the basis for current military domains. They are considered ecologically valuable because the military’s disruptive activities preserve landscapes that have disappeared elsewhere, such as heathlands and drift sands, while also providing a refuge for endangered species. Given that such military domains are to a greater or lesser extent closed off from the general public, one might say that they have preserved a wilderness by turning it into a huge garden. But comparing these last refuges with the large stretches of wilderness preserved by historical armed forces gives a somewhat gloomy perspective of ecological conservation today.