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Author(s)	Bara, Xavier
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Dutch Military Power at the Time of the Early Bakufu Army, 1861–1864

BARA Xavier*

Abstract

During the Bunkyū Era (1861-1864), the Tokugawa Bakufu created its first regular army, while the Kingdom of the Netherlands was its main provider of Western military science. Consequently, the bakufu army was formed according to a new model that introduced regulations and equipment of Dutch origins. However, what was the real military power of the Netherlands behind this Dutch primacy in Japan? The article presents an overview of the Dutch defences and army in the early 1860s, in order to evaluate the gap between the Dutch military influence in Japan and the Dutch military power in Europe.

Keywords：Royal Dutch Army, Belgian secession, middle power, fortifications, Prussian-Dutch entente

* Belgian Doctoral Student (University of Liège), Research Student (Osaka University), and Reserve Second Lieutenant (Belgian Army, Horse-Jagers), the author is a military historian and experimental archaeologist specialized in the armies of the Austro-Prussian rivalry between 1848 and 1866, and in their influence in some other armies of the same period, including the Dutch army.

Introduction

In 1862, the bakufu army was established by the Bunkyū Reforms, in order to revive the shogunal power of the Tokugawa.[1] Indeed, the bakufu was confronted with a major crisis and needed to strengthen its political and military power to deal with the inland threat of the sonnō-jōi and anti-Tokugawa feudal states, and with the overseas threat of the Western powers.

This new army, the first standing and modern force to be raised in Japan, was organized and trained on the basis of the Dutch model. Since the mid-17th century and until the end of the seclusion policy in 1854, the Netherlands were the exclusive Western power to maintain relations with Japan, and the Dutch factory at Dejima, an artificial island in the harbour of Nagasaki, was the Japanese window to the Western World. The Tokugawa Bakufu collected information about the events in the outside world from Chinese junks, or occasionally from Asian embassies from China, Korea, or Ryūkyū, but also from the "fūsetsugaki", or reports on ordinary news, submitted by the Dutch chief factor.[2] Moreover, since 1840, the chief factor also presented reports of special news at the initiative of the Dutch Minister of Colonies and written by the Governor-General of the Dutch East Indies.[3] The objective was to counter the colonial rivalry of Britain that increasingly threatened Dutch interests, by informing the bakufu of the dramatic changes in the Far East after the First Opium War (1839-1842). Japan saw the Western World from the Dutch spyglass and even after 1854 the Netherlands maintained a privileged situation for many years. By consequence, the Japanese knowledge in Western medicine, physics, mechanics, and many other sciences, was called "rangaku" or Dutch learning, and the language used for the Western sciences in Japan was Dutch. Military science was also a part of the rangaku and, naturally, in 1862, the Dutch model was chosen for the new bakufu army.

In the early 1860s, the Dutch influence prevailed in the military modernization of the Tokugawa Bakufu and the numerous Japanese states. But, what was the real politico-military power of the Netherlands at the time of the Bunkyū Reforms?

National Defence

In 1830-1839, a civil war between the Northern- and Southern-Netherlands[4] broke the United-Kingdom of the Netherlands into two new states: the Kingdom of the Netherlands in the North and the Kingdom of

1) *Rikugun Rekishi* (*History of the Army*), Katsu Kaishū Zenshū (Collected Works of Kaishū Katsu), Volume III, Roll 20, Chapter 6, Kōdansha, Tōkyō, 1974, pp. 321-323.
2) Fuyuko Matsukata, *Oranda Fūsetsugaki to Kindai Nihon* (*Dutch News Reports and Modern Japan*), Tōkyō University Press, 2007, pp. 35-39.
3) Ibid., pp. 151-166, 193-194.
4) These geographical areas were also called Northern- and Southern-Belgium, Belgium being in fact the most ancient and official name of the unified Greater-Netherlands.

Belgium in the South. On 19 April 1839, the Treaty of the XXIV Articles was signed in London and the Kingdom of the Netherlands received the Northern provinces of Zeeland, South-Holland, North-Holland, North-Brabant, Utrecht, Gelderland, Overijssel, Drenthe, Friesland, and Groningen. Moreover, the Treaty of London concluded the partition of the provinces of Luxemburg and Limburg between Belgium and the Netherlands. The Eastern halves of these two provinces became Dutch, and their Western halves were conceded to Belgium. To enhance the security of these buffers, the Dutch Luxemburg and Limburg joined the German Confederation offering the collective defence to its member-states. Theoretically, the Dutch Luxemburg and Limburg were not only protected by their union with the Kingdom of the Netherlands but also by German powers such as the Austrian Empire or, more closely, the Kingdom of Prussia, the Kingdom of Hanover, the Grand Duchy of Hesse, or the Duchy of Nassau. Moreover, as members of the German Confederation, the Dutch Luxemburg and Limburg were requested to become sovereign states; as such the medieval Grand Duchy of Luxemburg and Duchy of Limburg were re-established as modern states with their territories reduced by the Treaty of London. In order to maintain their union with the Netherlands, the Dutch monarch was installed by the local constitutions as the hereditary ruler of the two minor states, with the titles of Grand Duke of Luxemburg and Duke of Limburg.[5] For this reason, the sovereign was referred as "King Grand Duke", and was at the head of a Netherlands-Luxemburg-Limburg union, with Luxemburg and Limburg being in fact vassal states of the Netherlands, and subordinate to the policies decided by the royal cabinet at Den Haag. In addition to its metropolitan territories, the Netherlands also owned overseas colonies, mainly the Dutch East Indies in Asia, the Dutch West Indies in America, and the Dutch Gold Coast in Africa.

Since the Belgian secession of 1839, the Netherlands were diminished not only by the shock of the defeat and by the heavy loss of land and population, but also by the following economical crisis and growing domestic instability. After the revolution of 1848, liberal politicians, pleading for democratization and citing financial difficulties and the weakening of the country's status as a major power, opposed the ambitious plans for rearmament developed by the conservatives grouped around King Willem III. But, during the 1850s, the economy started to slightly grow again with the industrialization of the kingdom and the trade of the East Indies. After 1853, the conservatives were also back in power, forming successive cabinets with Floris van Hall, Justinus van der Brugghen, Jan Rochussen, Jacob van Zuylen van Nijevelt, and Schelto van Heemstra as chairmen of the council of ministers.[6] Moreover, in 1850, a defence committee was created with the mission to improve military strategy and capacities. In fact, it was also a conservative nest with a second purpose of countering the liberal policies of disarmament emanating from the Second Chamber of the States-General.[7] This conservative return was limited, but important enough to permit some improvements in the army dur-

5) Annex to the Treaty of London, 19 April 1839, Article I, Article II, article III, Article IV, and Article V. Constitution of the Grand-Duchy of Luxemburg, 27 November 1856, Article 1, Article 3, Article 76, Article 77, and Article 79.
6) The Dutch chairman of the council of ministers was the equivalent to a prime minister.
7) The States-General is the Dutch parliament, and the Second Chamber is its house of representatives.

ing the late 1850s and early 1860s. Finally, in 1862, power returned to the liberals, with the second cabinet of Johan Thorbecke. However, due to the stable economical situation of the kingdom and the increasing political crisis in Europe, the partial military modernization continued, with rifled firearms, fortifications, railpower, and ironclad warships.

Since the 1840's, the Netherlands had established a new military strategy based on fortifications, the water lines, a British mediation during the diplomatic crisis, and an expected Dutch-Prussian alliance in wartime.[8] The French Empire was considered as the main potential enemy. However, secondary plans were prepared for the contingencies of war against German countries.[9] On the Northern and Western sides Dutch territory was surrounded by the North Sea and defended by the coastal artillery and the home fleet. To the south of the Netherlands, the delta of the rivers Maas, Waal, and Rhine was a natural obstacle, just as the Ijssel River in the eastern borders. Along these water lines, a network of expensive and sophisticated fortresses was erected as the outer defence around the national stronghold of the Western provinces and could be flooded if necessary to stop the enemy. These fortifications, about 50 places,[10] were not only protecting the main accesses to the national territory against a foreign invasion, but also acted as the rear bases for the field army if it was campaigning outside of the national borders. Luxemburg and Limburg were included in that plan with their strategic fortresses of Maastricht, Venlo, and Luxemburg City. The Luxemburg fortress, "Gibraltar of the North", was composed of 22 forts and, as a fortification of the German Confederation, was also garrisoned by a Prussian contingent. Moreover, the Dutch general staff had studied since 1857 the integration of railways into its military strategy.[11] In addition to the mobilization of the Dutch domestic lines, in 1858 the North Line, a project for a strategic railway between the Luxemburg fortress and Trier in the Kingdom of Prussia, was under construction to rapidly transport Prussian allied troops into the grand duchy, to flank the enemy, and to repel any invasion of the Rhineland.[12]

In the case of Prussian neutrality, the strategy would be defensive. But, in the case of Prussian intervention, the Netherlands would take the initiative in the attack. The field army, under the leadership of Field-Marshal Prince Frederik, the Prussian-educated uncle of King Willem III, was to be assembled in the plain of North-Brabant before passing the outer defensive lines and rushing southward against the French enemy. Eventually, some Prussian troops would enter Limburg, not only a country in union with the Netherlands, but also a member of the German Confederation, while the Limburg Contingent would be reinforced by a brigade from the

8) Willem Bevaart, *Nederlandse Defensie 1839-1874* (*Dutch Defence 1839-1874*), Dutch Ministry of Defence, Section of Military History, Den Haag, 1993, pp. 67-80, 119-153.
9) Committee of Defence 313, 21 and 22 July 1851.
10) Royal Order of 25 January 1854.
11) Willem Bevaart, *Nederlandse Defensie 1839-1874* (*Dutch Defence 1839-1874*), Dutch Ministry of Defence, Section of Military History, Den Haag, 1993, pp. 436-438.
12) Nationaal Archief (Dutch National Archives), Inventaris van het Archief van het Nederlands Gezantschap in Pruisen 1814-1890 (Inventory of the Archives of the Dutch Legation in Prussia 1814-1890), Ingekomen en Minuten van Uitgaande Brieven Betreffende de Aanleg Spoorwegen tussen Luxemburg en Pruisen 1856-1858 (Received Letters and Minutes Concerning the Installation of the Railways between Luxemburg and Prussia 1856-1858).

Duchy of Nassau, a prosperous German country ruled by cousins of the Dutch king and which had formerly been in union with the Netherlands.[13] Meanwhile, Prussian divisions, probably from the VII Army-Corps of Westphalia and VIII Army-Corps of the Rhineland, would join the Dutch field army to counter the French invasion.

However, from the early 1860s, Prussian-Dutch relations became increasingly ambiguous and endangered this strategic entente.[14] On one hand, Prussian military power, even more since its revival by the Roon Reform, was neccesary for the defence of the Netherlands against France. On the other hand, Prussian ambitions of hegemony in Germany was a threat for Luxemburg and Limburg.

Metropolitan and Colonial Armies

In spite of some modernizations in the organization, equipment, and training of the army achieved by ministers of war General-Major Eduard de Casembroot and General-Major Cornelis van Meurs under the conservative cabinets in power between 1856 and 1861, and even though its military system was in accordance with Western standards of the time, the Netherlands had ceased to be a major power after the Belgian secession.

In 1862, and during the entire period of the liberal second Thorbecke cabinet until 1866, the minister of war was the conservative Colonel Johan Blanken.[15] Another conservative officer monopolized the posts of chief of the general staff, and president of the committee of defence: the extremely influent Lieutenant-General Baron Charles Nepveu.[16]

The annual expenditures of the army increased from 10,558,000 guilders in 1850 to 12,836,000 guilders in 1862, and reached a peak of 17,381,000 guilders in 1859.[17] It was an important amount, especially compared to the national revenue of about 150 million guilders[18] in the early 1860's, and considering that the navy had a separate budget. However, a large part of these expenditures was dedicated to the extremely costly fortress-

13) De Militaire Spectator, Journal of the Dutch Army, *Iets over het Duitsche Bondsleger en het Limburgsch Bondscontingent* (*On the German Confederate Army and the Limburgian Confederate Contingent*), Broese & Company, Breda, 1859, pp. 306-311.

14) Nationaal Archief (Dutch National Archives), Inventaris van het Archief van het Nederlands Gezantschap in Pruisen 1814-1890 (Inventory of the Archives of the Dutch Legation in Prussia 1814-1890), Ingekomen en Minuten van Uitgaande Brieven Betreffende de Verhouding van Limburg en Luxemburg tot de Duitse Bond 1848 1851-1867 (Received Letters and Minutes Concerning the Connection of Limburg and Luxemburg with the German Confederation 1848 1851-1867).

15) Blanken was born in 1806 in the Province of Friesland, and was commissioned an artillery officer in 1824. Knight of the Military Order of Willem 4th Class since 1834, in 1860 he held the command of the 2nd Regiment of Fortress Artillery and, in 1861, was assigned as director of the artillery arsenals and workshops. The minister of war was promoted general-major in 1863, and lieutenant-general in 1865.

16) Nepveu was born in 1791 in the Province of Utrecht and studied as an army cadet and a page of the king in 1807-1808. He started his career as an infantry officer, but served mainly in the general staff, and as aide-de-camp of the king. In 1840, Nepveu was already a general-major and, in 1852, a lieutenant-general. He was also an experienced war veteran who fought in Russia in 1812, when the Netherlands were provisionally forced as an ally of France, was a prisoner of war in Siberia until 1814, and battled during the Waterloo Campaign of 1815 and during the Belgian secession. Nepveu was awarded Knight of the Military Order of Willem 3rd and 4th Classes.

17) H. Aalderink, *Onze Defensie* (*Our Defence*), Noorman & Co., 1898, pp. 81-82. Willem Bevaart, *Nederlandse Defensie 1839-1874* (*Dutch Defence 1839-1874*), Dutch Ministry of Defence, Section of Military History, Den Haag, 1993, p. 604.

18) Journal de l'Armée Belge (Journal of the Belgian Army), Volume XVI, *Notice Statistique Indiquant les Ressources Militaires des Principaux Etats de l'Europe* (*Statistic Account Setting the Military Ressources of the Main States in Europe*), 1859, p. 38.

es and their artillery that formed the core of the strategic doctrine for the defence of the kingdom.

In Europe, the Royal Dutch Army counted 60,874 regulars on a war footing, but only 22,868 troops on a peace footing, the other regulars being in semi-permanent service. The army was reinforced by the "Schutterij",[19] a non-standing home guard of about 45,000 troops, most of them as line infantry, and by the contingents of Luxemburg and Limburg. In the plans of the defence committee, the metropolitan forces mobilized 108,000 troops.[20]

The regulars were recruited by the Militia Law of 19 August 1861.[21] In a population of 3,500,000 inhabitants,[22] including Luxemburg and Limburg, 33,000 men reached the military age of 20.[23] As stipulated by Article 2 of the Militia Law, a contingent of 11,000 citizens in healthy condition and with a height of 1.57 m or above were selected among them by lottery. These recruits, called "miliciens",[24] were conscripted for five years (Article 6): the first year in permanent service and the following four years in semi-permanent service. In fact, this system of semi-permanent service was not unique to the Dutch army. It was a very common measure in the European Armies, especially in medium and minor countries, usually enacted to save the budget. In addition to the conscripts, the regular army included 12,000 volunteers.[25] The officers were also volunteers and, since 1828, were all educated at the Royal Military Academy, in the Castel of Breda, which was modelled on the Prussian cadet schools. The home guard was defined by the Schutterij Law of 11 April 1827. In each city and municipality, a ratio of two men per 100 (excepting citizens who had already been recruited into the regular army) had the duty to serve for five years in the schutterij. But, in peacetime, their annual military training was very limited.[26]

19) The "Schutterij", literally translated in "shooter force", is originated from the medieval militia of archers.
20) Hendrik Hardenberg (General-Major), *Overzicht der Voornaamste Bepalingen Betreffende de Sterkte, Samenstelling, Betaling, Verzoriging en Verpleging van het Nederlandse Leger* (*Overview of the Main Provisions on the Strength, Organisation, Finances, Care, and Nursing of the Dutch Army*), De Gebroeders van Cleef, Den Haag, 1861, pp. 402-403.
21) Recueil Militair Bevattende de Wetten, Besluiten, en Orders Betreffende de Koninklijke Nederlandse Landmacht (Military Compendium Including the Laws, Decrees, and Orders Concerning the Royal Dutch Army), *Wet van de 19den Augustus 1861 Betrekkelijk de Nationale Militie* (*Law of 19 August 1861 Related to the National Militia*), Ministry of War, Brothers van Cleef Publishers, Den Haag, 1862, pp. 206-272.
22) Journal de l'Armée Belge (Journal of the Belgian Army), Volume XVI, *Notice Statistique Indiquant les Ressources Militaires des Principaux Etats de l'Europe* (*Statistic Account Setting the Military Ressources of the Main States in Europe*), 1859, p. 38. Exactly 3,523,823 inhabitants in 1859.
23) Willem Bevaart, *Nederlandse Defensie 1839-1874* (*Dutch Defence 1839-1874*), Dutch Ministry of Defence, Section of Military History, Den Haag, 1993, p. 195.
24) Militiamen.
25) Willem Bevaart, *Nederlandse Defensie 1839-1874* (*Dutch Defence 1839-1874*), Dutch Ministry of Defence, Section of Military History, Den Haag, 1993, p. 194.
26) Ibid., pp. 376-377. H. Aalderink, *Onze Defensie* (*Our Defence*), Noorman & Co., 1898, p. 217.

The Royal Dutch Army in the European Military Balance of the Early 1860s

	Standing Regulars	Full-Strength Regulars
Russia	1,100,000	1,300,000
Austria	390,000	800,000
France	409,000	409,000
Britain	223,000 (half in overseas service)	223,000
Prussia	210,000	210,000
Spain	200,000	200,000
Belgium	78,000	100,000
Netherlands	23,000	61,000

Nevertheless, as a consequence of the Belgian secession, the Dutch army was only a medium military power in Europe, similar to the Bavarian, Saxon, or Danish armies. All the major powers, and most of the countries surrounding the Netherlands, had larger regular armies.

Overseas, the KNIL,[27] or Royal Dutch East Indies Army, was made up of about 30,000 volunteers: Dutch and East Indian natives but also a few thousand Africans from the Dutch Gold Coast and numerous European mercenaries drawn primarily from German countries, Belgium, and switzerland. Moreover, the KNIL was supported by the "hulpkorpsen", auxiliary forces raised by native princes.[28] They were constituted in combined corps often called "legions" and composed of a line infantry battalion, a squadron of dragoons or lancers, a battery of horse or mountain artillery, and eventually some jagers[29] and pioneers. This system was inspired by the military forces in the British East Indies, with a royal army of European and native troops controlled by the colonial government, and small princely armies of natives as auxiliary forces. The West Indies were defended by their own garrison: the 27th West Indies Jager Battalion, a corps of guides, and an artillery battery.[30] Finally, the Royal Dutch Navy, fourth largest fleet in the world, provided an elite naval infantry corps of 2,000 marines.

Infantry

In the early 1860s, the Dutch European infantry disposed of grenadiers, which were elite troops for the shock assault, jagers, which were an elite light corps of sharpshooters, and line infantry, which was the main force.

27) Abreviations from the Dutch words "Koninklijk Nederlands Indisch Leger" meaning "Royal Dutch East Indies Army".
28) B. Cats, *Hulpkorpsen in Voormalig Nederlands-Indie* (*Auxiliary Corps in the Former Dutch Indies*), Armamentaria 23, Legermuseum (Army Museum), Delft, 1988-1989, pp. 149-171.
29) The "jagers", "hunters" in Dutch, are an elite light infantry.
30) Naam- en Ranglijst der Officieren van het Koninklijke Leger der Nederlanden en van Nederlandsch-Indien voor 1861 (List of the Names and Ranks of the Officers of the Royal Army of the Netherlands and the Dutch Indies), Noorduyn en Zoon, 1861, p. 321.

After the Belgian secession, only two grenadier and two jager battalions remained in the royal army and, in 1843, they were regrouped into a combined elite unit: the Regiment of Grenadiers and Jagers. This regiment was garrisoned in Den Haag, acting like an infantry reserve and a royal guard. However, grenadiers and jagers had different specialities and were fielded as separate battalions. A grenadier battalion was 798-men strong and a jager battalion was 802-men strong.[31] Each of these battalions had a staff and five companies, including a skirmisher-grenadier company in the case of the grenadier battalions. Concerning the line infantry, until 1830, the royal army numbered 18 regular regiments. But these formations were reduced to 10 regiments in 1840 and to eight from 1843. The organization of the infantry regiment and battalion was defined in 1850, followed by only a few changes confirmed in 1861. A line regiment had its staff, four field battalions, and one depot battalion, for a total strength of 4,926 troops on war footing. Only the Russian and Austrian regiments had such large strength, but the Dutch line infantry maintained only eight of these regiments. Each field battalion was subdivided in four fusilier companies and one skirmisher company.[32] It was an organization similar to a Prussian battalion, but with a skirmisher company added in 1852. The regular line infantry constituted four brigades of two regiments, supported by field artillery, commanded by general-majors, and headquartered in Maastricht, Den Bosch, Groningen, and Arnhem. The division structure had been abolished since 1850,[33] and the army corps, headed by lieutenant-generals, were composed of regular and schutterij brigades of infantry, with engineers and services, and eventually a cavalry brigade.

The grenadiers and linetroops were dressed with a shako Model 1854, and a dark blue tunic and light blue trousers Model 1855.[34] The grenadiers were identified by the grenade insignia, the red shoulder caterpillars, and the red collar and cuffs with the yellow lace bars. In the line infantry, the collar and the cuff straps were white. The fusiliers were recognized by the red horsehair plume on their shakos, while the skirmishers wore a plume of green horsehairs and shoulder straps with white caterpillars. The uniform of the jagers had a general likeness to the dress of the other infantry corps, but was fully green with yellow bar laces and piping and a hunting horn insignia.[35] Except for the shako and some typical Dutch elements, the infantry dress had a style under Prussian influence. The entire infantry was provided with the leather equipment Model 1856 and the haversack Model 1860 in hairy cowskin, except for the jagers who were characterised by equipment and haversack entirely in black leather.[36]

31) Hendrik Hardenberg (General-Major), *Overzicht der Voornaamste Bepalingen Betreffende de Sterkte, Samenstelling, Betaling, Verzoriging en Verpleging van het Nederlandse Leger* (*Overview of the Main Provisions on the Strength, Organisation, Finances, Care, and Nursing of the Dutch Army*), De Gebroeders van Cleef, Den Haag, 1861, p. 422.
32) Ibid., p. 423.
33) Royal Order of 21 November 1850 (Nº70) , Art 2.
34) Recueil Militair Bevattende de Wetten, Besluiten, en Orders Betreffende de Koninklijke Nederlandse Landmacht (Military Compendium Including the Laws, Decrees, and Orders Concerning the Royal Dutch Army), Ministry of War, Brothers van Cleef Publishers, Den Haag, 1854, Royal Order of 15 March 1854 (Nº64), p. 143. Op. cit., 1855, Royal Order of 12 July 1855 (Nº87), pp. 109, 112-113.
35) Op. cit., 1855, Royal Order of 12 July 1855 (Nº87), pp. 109, 111-112.
36) Martien Talens, *De Ransel op de Rug* (*The Haversack on the Back*), Volume I, Brabantia Nostra, 1996, pp. 96, 104.

In the infantry, the main weapons were the rifle-muskets Nr.1 and Nr.2, in calibre 17.6 mm.[37] These firearms were previous percussion muskets Nr.0 Model 1848 and Nr.3 Model 1842 that had been rifled in 1860. Their system was similar to the French Minié, but was in fact based on the studies of the Belgian gunnery. A specific weapon was in service in the light infantry: the skirmisher rifle-musket Model 1852.[38] This weapon, using a barrel for a 16.7 mm calibre, required a different type of ammunition than that of the muskets of the grenadiers and fusiliers. Many Dutch firearms were locally produced or modified in Delft or Maastricht, but they were also often ordered from Belgian manufactures in Liège, or to Prussian gunsmiths in Suhl. This technology was in accordance with the most recent evolutions in the weapon industry, such as the French rifle-muskets Model 1842 T and Model 1857, the Austrian rifle-musket Lorenz Model 1854, or the British rifle-musket Enfield Pattern 1853. In addition to the bayonet, the grenadiers had another blade as side arm: the infantry short sabre Nr.2. The non-commissioned officers also had a side arm: the cutlass Model 1859.

The Dutch infantry of 1862 was trained by the Regulation for the Exercises and Manoeuvres of 1861. In fact, it was an adaptation of earlier regulations, the most recent ones being from 1855 and 1857, to the introduction of rifled muskets in the service.[39] Like the previous regulations, the version of 1861 was subdivided in the soldier, platoon, battalion, and regiment schools. It included formations in column and line of battle, flank and front marshes, change of direction, square, salvo fire, skirmishing, musket loading in four steps, bayonet charge, and various other instructions. During the 1850's, the establishment of skirmisher companies in the infantry battalions, the adoption of the skirmisher rifle-musket Model 1852, and the observations made during the Crimean War, had slightly modified tactics. Then, in 1860, the conversion of the grenadiers and the fusiliers to rifle-muskets brought new improvements to the regulations. In 1861, the musket drill was simplified and the tactics became more mobile and aggressive. These regulations were very close to those used in Prussia, such as the Exercise Regulation for the Infantry of the Royal Prussian Army of 1847, or in France.

Cavalry

In 1840, as a result of the Belgian secession, the Dutch European cavalry was reduced to only three cuirassier regiments, two light-dragoon regiments, one hussar regiment, and one lancer regiment.[40] The following year, the drastic reform continued and the remaining formations were converted into two heavy-dragoon regi-

37) G. De Vries and B. J. Martens, *Nederlandse Vuurwapens : Landmacht, Marine en Koloniale Troepen 1813-1866* (*Dutch Firearms: Army, Navy and Colonial troops 1813-1866*), S. I. Publicaties, Arnhem, 2001, pp. 164-168.

38) Ibid., pp. 160-164.

39) Reglement op de Exerciten en Manoeuvres der Infanterie (Regulation for the Exercises and Manoeuvres of the Infantry), Royal Academy of the Navy and Army, van Broese, 1855. Reglement op de Exerciten en Manoeuvres der Infanterie (Regulation for the Exercises and Manoeuvres of the Infantry), Royal Military Academy, van Broese, 1861.

40) Hendrik Hardenberg (General-Major), *Overzicht der Voornaamste Bepalingen Betreffende de Sterkte, Samenstelling, Betaling, Verzoriging en Verpleging van het Nederlandse Leger* (*Overview of the Main Provisions on the Strength, Organisation, Finances, Care, and Nursing of the Dutch Army*), De Gebroeders van Cleef, Den Haag, 1861, p. 342.

ments, two light-dragoon regiments, and two lancer regiments.[41] The heavy-dragoons were less expensive cuirassiers, without their cuirasses. In 1843, the cavalry evolved again and was composed of three dragoon regiments, two lancer regiments, and one Limburg horse-jager squadron.[42] The dragoons were a medium cavalry, combining characteristics of the previous heavy- and light-dragoons and also able to dismount for fighting like a mobile light infantry. In 1846, the lancers were disbanded and their squadrons were distributed to reform the cavalry into four dragoon regiments and the Limburg Horse-Jager Corps. The dragoons formed two brigades of two regiments, with batteries of horse-artillery. Finally, in 1855-1856, the Limburg Horse-Jager Corps, progressively strengthened to a regiment of six squadrons, was converted into dragoons as well. This Limburg Contingent formed the 5th Dragoon Regiment of the Royal Dutch Army, ensured the defence of the Duchy of Limburg, and provided the cavalry to a combined brigade of 5,498 troops with two line infantry regiments, the jager battalion, the field artillery, the pioneers, and some gendarmerie of the Duchy of Nassau.[43]

From 1855, this standardization of the entire Dutch and Limburg cavalry into the multipurpose dragoons had as its primary reason the sparing of finances. All the regiments being of dragoons, they received the same cheaper equipment. They wore a standard dress: cavalry shako Model 1854 with a plume of horsehairs, dark blue coat Model 1849 with plastron and short tails, white epaulettes, dark blue overall trousers, cartridge box and belts Model 1842/1860,[44] sabre Model 1854,[45] and cavalry carbine Nr.1 Model 1854.[46] The shabraque and the furniture for the horses were also standardized. Only the regimental insignia and facing colour were different on the uniforms and the shabraques. This dress had a French influence but this was diminished by a Prussian-like Germanic sobriety, and the sabre was developed after a study on the Prussian Model 1852.

Each dragoon regiment was organized into four sabre squadrons, the depot squadron, and a staff, with a total strength of 911 sabres.[47] The 5th Regiment (Limburg), 1,078-men strong, had five sabre squadrons instead of four. Only about 5,000 men were still in the ranks of the Dutch cavalry, and all of them as dragoons, except for 362 troops in two marechaussee[48] squadrons. It was quite small compared to the Russian (300,000[49]),

41) Ibid., p. 345.
42) Ibid., p. 375.
43) De Militaire Spectator, Journal of the Dutch Army, *Iets over het Duitsche Bondsleger en het Limburgsch Bondscontingent* (*On the German Confederate Army and the Limburgian Confederate Contingent*), Broese & Company, Breda, 1859, p. 309.
44) Martien Talens, *De Ransel op de Rug* (*The Haversack on the Back*), Volume I, Brabantia Nostra, 1996, pp. 123-124.
45) Recueil Militair Bevattende de Wetten, Besluiten, en Orders Betreffende de Koninklijke Nederlandse Landmacht (Military Compendium Including the Laws, Decrees, and Orders Concerning the Royal Dutch Army), Ministry of War, Brothers van Cleef Publishers, Den Haag, 1854, Royal Order of 17 April 1854 (Nº40), p. 239. Jan Puype, *Blanke Wapens: Nederlandse Slag- en Steekwapens sinds 1600* (*Dutch Blades: Cutting and Thrusting Weapons since 1600*), Tijdstroom, 1981, p. 16.
46) G. De Vries and B. J. Martens, *Nederlandse Vuurwapens : Landmacht, Marine en Koloniale Troepen 1813-1866* (*Dutch Firearms: Army, Navy and Colonial troops 1813-1866*), S.I. Publicaties, Arnhem, 2001, pp. 168-172.
47) Hendrik Hardenberg (General-Major), *Overzicht der Voornaamste Bepalingen Betreffende de Sterkte, Samenstelling, Betaling, Verzoriging en Verpleging van het Nederlandse Leger* (*Overview of the Main Provisions on the Strength, Organisation, Finances, Care, and Nursing of the Dutch Army*), De Gebroeders van Cleef, Den Haag, 1861, p. 426.
48) The Royal Marechaussee is the Dutch military constabulary or gendarmerie.
49) Including the Cossack cavalry.

Austrian (70,000), French (65,000), Prussian (37,000), British (19,000), or even Belgian (10,000) cavalry, which were organized in various specialized corps. However, the quality of the small Dutch cavalry was usually considered as correct and the French influence was important. The troops were disciplined and well trained on the basis of the cavalry regulations of 1855 and 1862 in swordsmanship, musketry, horsemanship, scouting, skirmishing, and attacks in line of battle or in foragers.[50] In comparison with the line infantry, the dragoons were more professional, with 80 volunteers among the 144 privates of each sabre squadron, while a fusilier company numbered 40 volunteers in 160 privates. The mounts were rapid and healthy horses of light cavalry, usually bred in the farmlands, woods, and swamps of the Eastern provinces like Gelderland, home of the Dutch cavalry tradition, and who served in the army for eight years.[51]

Artillery

The artillery was considered as an elite in the Royal Dutch Army and had three main components: the horse-artillery that was highly mobile and operated with the cavalry, the field artillery that was also horse-drawn but was heavier and supported the infantry, and the fortress artillery with the heaviest batteries that ensured the static defence and, if necessary, sieges. Moreover, the artillery had its own train service for the driving of the limbers, caissons, and other carriages. But, after the Belgian secession, the organization of the Dutch artillery reflected the new military strategy centred on the fortifications. The field battalions were disbanded and, in 1841, the artillery was reduced and formed into the corps of horse-artillery, two mixed regiments of field and fortress batteries, and one fortress regiment.[52] Until the early 1850s, other reforms followed. In 1845, the field artillery was subdivided in heavy and light batteries.[53] In 1848, the field artillery regiment was created with the eight field batteries of the former mixed regiments, while the fortress batteries were regrouped in two distinct regiments.[54] In 1852, a third regiment of fortress artillery was established, in order to reinforce the Dutch artillery, and to emphasize even more the role of the static defence; while the field artillery regiment was increased to 12 batteries.[55] The last major change in the organization was decided in 1860 when the field regiment received its own two train squadrons.[56] Consequently, around 1862, the artil-

50) Reglement op de Exerciten en Evolutien der Kavallerie (Regulation for the Exercises and Movements of the Cavalry), Royal Academy of the Navy and Army, Nys, 1855. Reglement op de Exerciten en Evolutien der Kavallerie (Regulation for the Exercises and Movements of the Cavalry), Royal Military Academy, van Broese, 1862. "Attack in foragers" is the terminology used by the cavalry for an attack in spread order, like skirmishing on horseback.

51) Journal de l'Armée Belge (Journal of the Belgian Army), Volume XX, *De la Cavalerie* (*On the Cavalry*), 1861, p. 134.

52) Hendrik Hardenberg (General-Major), *Overzicht der Voornaamste Bepalingen Betreffende de Sterkte, Samenstelling, Betaling, Verzoriging en Verpleging van het Nederlandse Leger* (*Overview of the Main Provisions on the Strength, Organisation, Finances, Care, and Nursing of the Dutch Army*), De Gebroeders van Cleef, Den Haag, 1861, pp. 345-365.

53) Ibid., p. 378.

54) Ibid., pp. 381-382.

55) Ibid., p. 413.

56) Ibid., p. 415.

lery of the royal army had the corps of horse-artillery with four batteries, one field artillery regiment with 12 batteries, and three fortress artillery regiments with 42 batteries. This domination of the fortress artillery was unique in the European armies and confirmed the priority of the fortifications for the new military strategy of the Netherlands. In comparison, the French artillery had 22 regiments, including the batteries of the Imperial Guard, but only five of them were siege regiments.[57)]

For the dress, the horse-artillery had a colback with a red bag on the right side of this furry headgear, and wore dark blue dolman[58)] and overall trousers with yellow laces. The field artillery had a simple uniform: an artillery shako Model 1854 with black horsehairs, a dark blue single-breasted coat with cuff straps and short tails, yellow epaulettes, black facing with red piping on the collar and cuffs, and overall trousers. The fortress artillery had a similar uniform, but with trousers for foot troops. In the entire artillery the equipment was made of black leather. The hussar style for the horse-artillery was of French and British origins, the use of a coat and epaulettes in the field and fortress artillery was a French influence, but the black facing with red piping revealed also a Prussian influence.

The main artillery pieces crewed by the horse-artillery were light 6-pound and 12-pound cannons drawn by six-horse teams, while the field artillery was provided with heavy 6-pound and 12-pound cannons drafted by eight-horse teams.[59)] The rifling of the barrels was accomplished in 1861-1862, approximately at the same time as in the artillery of the major powers. In the fortress artillery, the enormous pieces fired projectiles of 60 pounds or 80 pounds. In addition, the gunners were equipped with an individual weaponry: a sabre for the horse- and field artillery, but like the infantry for the fortress artillery.

Conclusion

In 1862, the Tokugawa Bakufu constituted its regular army under the influence of rangaku, despite the scarcely medium-rate strength of the Royal Dutch Army in the European military balance. The plan of the Bunkyū Reforms was an army of 13,995 troops with 8,306 footmen, 1,068 horsemen, 3,215 gunners, and 1,406 officers.[60)] For the bakufu, the Dutch model meant an army using Dutch as its technical language, trained with translations of Dutch regulations, and mainly equipped with Dutch firearms or Japanese replicas. This overwhelming Dutch influence in the Bunkyū military reform was largely exaggerated in comparison to the real power of the Netherlands.

57) Journal de l'Armée Belge (Journal of the Belgian Army), Volume XVIII, Renseignements *Statistiques sur les Principales Artilleries de l'Europe* (*Statistic Information on the Main Artillery in Europe*), 1860, p. 130.

58) The dolman is a sort of spencer for light mounted troops, with laces across the chest, on the cuffs, and in the back.

59) *Nederland en het Leger, Wat het Is en Wat het Zijn kan, of Beschouwingen, kunnende Dienen bij de Behandeling door onze Kamers van eene Wet op de Legerorganisatie* (*The Netherlands and the Army, What it Is and What it can Be, or Considerations, which can Serve the Examination by our Chambers of a Law on Army Organization*), Campagne, 1859, pp. 84-104.

60) *Rikugun Rekishi* (*History of the Army*), Katsu Kaishū Zenshū (Collected Works of Kaishū Katsu), Volume III, Roll 20, Chapter 8, Kōdansha, Tōkyō, 1974, p. 337.

After the Belgian secession, the Dutch military strength was dramaticaly reduced, and overwelhmed by the armies of the major powers. Moreover, on peace footing, a majority of the troops were in semi-permanent service. The army also lacked in cavalry and field artillery. But, this poor strength was compensated by the densest fortified defensive lines in Europe, planned in order to repel larger invading forces. In the field, the Dutch army expected to mobilize the militia and to be reinforced with Prussian allied troops to combine enough strength against a major enemy like France. From the 1840s, the uniforms and equipments were simplified and standardized to reduce the costs. The Dutch military organization and discipline were largely influenced by those of the Prussian army, while the equipment and tactics were comparable to those of the armies of the major European powers.

Consequently, in spite of this lack of power, the Dutch military system and science were certainly competitive with the standards of most Western armies, and were a correct basis for developing a modern model for the new army of the bakufu. But the post-Belgian secesssion decline of the Dutch power, further accelerated by the recent expansion of the British and French colonial empires in the Far East, prevented the Royal Dutch Army from stationing instructors in Edo. The only exception was a cavalry instructor, quartermaster-sergeant Pieter Senteur, former lancer and horse-jager, who was integrated in the Kattendijke naval detachment at the Nagasaki Naval Training Center between 1856 and 1859. After the Chōshū wars, this lack of direct Dutch support to the modernisation of the bakufu army, together with the strong survival of Japanese feudal military traditions, the increasing colonial presences of Britain and France in the Far East, and to the loss of the Netherlands' ability to challenge these rivals, led to the failure of the Dutch model. Nevertheless, the Dutch military influence established the foundations for Japanese military modernization, formed a generation of strong military leaders and scholars, and continued to contribute to military science in Japan during the following decades. It is with the Dutch model that the Japanese troops started to learn how to move and fight as modern armies.