

FREDERICK J. THORPE
CURATOR EMERITUS, CANADIAN MUSEUM OF CIVILIZATION
Samuel Johannes Holland: the Dutch grooming of the Canadian land surveyor (1729-1755)

In 1764, the British government appointed Samuel Holland surveyor-general of the Province of Quebec and, for no additional salary, surveyor-general of the northern district of North America. From 1755 to 1763 he had served the British army in North America as an engineer, distinguished himself at the sieges of Louisbourg and of Quebec and risen to the rank of captain. He went on to map a huge area from Prince Edward Island (where he chose the name and the site of Charlottetown) to the Detroit River, including the coast and the hinterland of New England. After fleeing the American Revolution he became the surveyor-general of Quebec again and sat on the province's legislative council till his death in 1801. His career was remarkably long and distinguished.¹

Yet to the British he was a "foreign Protestant" officer, having been born and educated in the United Provinces and, in his youth, served as a junior subaltern in the Dutch artillery during and following the War of the Austrian Succession. What, then, led the British to recruit him as a military engineer and subsequently to name him a director of land surveys in North America?

His life began in the Province of Overijssel, in the town of Deventer². In an improvised structure in the Spinhuissteeg converted into a Lutheran church,³ Johan and Johanna Holland arrived on Thursday, 22 September 1729 with their infant son. Standing with them as sponsor, while they swore to instruct

and raise the child in the Christian faith, was his paternal grandmother, seventy-year-old Maria Elisabeth Holland, née Weemhof. The pastor, his uncle by marriage Dr. Christiaan Elter, baptized him "Samuel Johannes".⁴

Although little is known of the antecedents of Samuel's mother, Johanna, née Buikers (a family name known in Zutphen at the time though not in Deventer), published genealogical information on the Holland family is more extensive.⁵ The name Samuel was traditional in the family. The newly-baptized infant had at least an uncle, two first cousins, a grandfather and a great-grandfather who before him had been named Samuel Holland (or Hollandt). His great-grandfather, baptized at Strasbourg in 1606, had earned a doctorate, been ordained a Lutheran pastor and served as such at three places in Baden (Friesenheim, Hertingen and Ihringen) before returning to Strasbourg, where he ended his days about 1676. The grandfather, the pastor's eldest son, was born at Friesenheim before 1654 and moved as a young man to Utrecht, where he married eighteen-year-old Maria Elisabeth Weemhof in 1677⁶. Between late 1684 and late 1687 the family moved to Deventer.⁷ Altogether they seem to have had as many as fourteen children, of whom Johan, baptized at Deventer in 1701,⁸ was the last-born. Grandfather Samuel, who died in 1710, was a dresser of hides, known as a *vellenploter* in Utrecht and a *velbereider* in Deventer; this was one of the crafts within the trade of *zeemsbereiders* or dressers

of chamois leather. Already mentioned in Utrecht documents as a *burger*, he was registered in 1693 in Deventer as a *klein burger* with a workshop among the leatherworkers; and was apparently an elder of the Lutheran parish.⁹ His daughter Margaretha married Pastor Elter, his daughter Maria Magdalena a certain Johan Diederich Martfeldt, possibly a relative of the Martfeldt brothers Joseph August and Johan Frederik, distinguished lieutenant-colonels of artillery.¹⁰ The former was to become young Samuel's commanding officer.

Samuel Johannes had one sister, Elisabeth (baptized at Deventer on 24 September 1732), and no brothers. Both parents, who appear to have had a clothing shop and to have lived in relatively modest circumstances, evidently died when Samuel was a child. The father, Johan (Jan), died before 7 December 1734¹¹ and the mother Johanna (Janna), after 10 December 1734.¹² It appears likely that Samuel and his sister were raised by relatives, perhaps in Deventer.¹³

Samuel may have attended schools (*petite école*, "French school") where religion, reading, writing, arithmetic, French, geometry, fortification, navigation, etc. were taught. Although it is unlikely that he went to one of the "Latin schools", because they neglected mathematics and science¹⁴, he seems to have acquired a reading knowledge of Latin at some point.¹⁵ In any event, he must have obtained some grounding in mathematics and physics before entering the Dutch artillery as a cadet in 1745.

Since he chose a military career, his social status destined him for commissioned rank, but in the "learned arms", not in the infantry or cavalry

where wealth and position counted for more than ability to absorb and apply scientific knowledge. In order to become a second-lieutenant and *extraordinaris vuurwerker* (supernumerary fireworker or pyrotechnician) in the artillery,¹⁶ Samuel had to pass an examination based on his general knowledge of artillery, a certain level of proficiency in mathematics including geometry, along with drawing and a basic insight into the principles of the construction of fortifications. Although the standards for this examination were not especially high,¹⁷ the evidence suggests that Holland's skill and knowledge exceeded them -- in some areas, such as drafting, by a large margin.

This is evident from the data recorded in his artillery subaltern's manuscript notebook, dated 1750, which has survived.¹⁸ It contains tables, calculations and notes on a wide variety of subjects. The exquisite hand-drawn illustrations reveal experience that could be gained only after many hours at the drafting table -- for example, a drawing that shows a number of touching circles and straight lines running into curves -- that would prove very useful in mapping. And although the only evidence in the notebook of training in trigonometry is a table of the sines of double angles, a scientific frame of mind allowed him to master the spherical trigonometry required for his future work in field astronomy. The document has fourteen pages of notes on the armament of fortresses that may have proved useful when it fell to him to design citadels in Canada. The notebook is, in effect, the kind of document that in another age might have been published for officers of his rank rather than compiled by an individual student from a variety of sources.

Samuel Johannes Holland: the Dutch grooming of the Canadian land surveyor (1729-1755)

Holland was required, as a fireworker, to understand the chemistry of explosives and the various alloys in use in weapon construction. The symbols for various chemicals are given for ready reference in the notebook. The powder and ammunition requirements of each of three types of artillery -- cannon, howitzers and mortars -- are analyzed in turn, as are the various calibres within each type. There are data on the composition and weight of various metal alloys, on the weight of the contents of various containers, on the specific weight of metals compared with water, and on the costs of ammunition and equipment. There are recipes for gunpowder, other explosives and pyrotechnics, a list of laboratory equipment for making fuses, and proportional charges for bombs and grenades. There are tables of powder weight and volume in a cylinder, and of ranges, elevations and charges. And the elevation and powder charge are calculated for various ranges with mortars.

In addition, the notebook contains tables of equivalent units of weight, of the diameter of lead shot according to weight, of volumes of various diameters and weights from 1 to 100, of the multiplication of cubes, of diameters and weights of materials such as stone, iron, lead, gold and silver, and of weights and diameters on a scale of 1000 like units. There are calculations of the calibre and weight of round shot, of the cubic volume of shot determined from the total weight of the shot, of the volume of cylinders such as gun barrels, of the volume of spheres, hollow spheres and tubes, of dimensions of cannon-ball stacks for balls of various calibres, of the number of cannon balls in a regular stack, and of the number of cannon, mortars and howitzers needed for the defence of a large fortress.

There are measurements taken on an 18-lb iron ball and designs of types of projectile. The weights of Dutch artillery pieces and their equipment are noted, as are the elements in estimating the cost of artillery equipment and its repair and maintenance. There are memoirs on mortar, cannon and howitzer, and on the cost of Dutch artillery pieces. There are notes on the trajectory of mortars and howitzers, and a list of the guns and ammunition taken into the field in 1748. And there is a rough drawing of a fortress with casemates.

When Cadet Holland joined Martfeldt's artillery company, the United Provinces were unofficially --- and most reluctantly --- involved in war. The War of the Austrian Succession was ostensibly a dynastic dispute but, in reality, it was about the "balance of power" in Europe and the European colonial empires. France supported Prussia's and Spain's challenge to Austrian power in the centre and on the Italian peninsula. The British government's fear that France and Prussia would dominate the continent and swallow up King George II's beloved fiefdom of Hanover, was accompanied by a clamour among commercial interests to stop a rapid French encroachment on British power overseas. The United Netherlands, established in international banking, had an abiding interest in maintaining neutrality while competing in trade with other nations for its very existence. Had it not been for the Anglo-Dutch alliance in effect since 1688, Dutch neutrality might just as well have become pro-French --- or at least not pro-British.

The first line of the Dutch landward defence against France consisted of the fortified towns of the Austrian Netherlands (present-day Belgium)

which they garrisoned under the terms of the Peace of Utrecht, and a primarily Anglo-Austrian army to which, following the French defeat at Dettingen in June 1743, the British persuaded them to contribute a contingent. Once they had done so, they were committed to war with France, a decision they came to regret.

Fairly confident of military success in the neighbouring Austrian Netherlands, France invaded those provinces in 1744 and held off an Austrian counter-attack until a Prussian offensive in Germany forced the Austrians to leave the defence of their Netherlands to an army under British command that was outnumbered two to one. During 1745, one fortress after another fell to the army of Maurice de Saxe.¹⁹ In May he defeated his adversary, Prince William Augustus, Duke of Cumberland, at Fontenoy. When Cumberland withdrew most of his troops to deal with the rising of Scottish Highland clans in support of Prince Charles Edward Stuart, Saxe continued his advance and by September had taken Tournai, Ghent, Bruges, Oudenarde, Ostend and Brussels. In 1746 it was the turn of Antwerp; and, before the British could return in some strength to the continent, the fortresses of Mons, St. Ghislain and Charleroi had fallen. By the end of the summer of 1746, the capture of Namur²⁰ and a victory on October 11 at Rocoux, near Liège, left the French poised to invade Dutch territory.²¹

The Dutch oligarchy would have preferred to accept a French offer to restore the *status quo ante bellum*, but the British, trusting that the Anglo-American capture of Louisbourg (July, 1745) had strengthened their bargaining power, insisted the war continue. This proved disastrous for the Dutch. French troops

crossed the border in 1747, precipitating a middle-class revolt against the oligarchy²² that made Prince William IV of Orange *stadhouder* of most²³ of the provinces and commander-in-chief of the army and navy. He and Cumberland were unable to stop the French. After another stunning victory at Lauffeldt near Maastricht on July 2, Saxe sent a corps under General Count Ulrich de Löwendahl to take the fortresses on the left bank of the Scheldt. One of them, Hulst, was stoutly defended by Anglo-Dutch artillery, including Cadet Holland.²⁴ The French also besieged Bergen-op-Zoom,²⁵ where again Holland was among the defenders.

Several important events in Samuel Holland's personal life took place during the years 1748-1750. His commission as a supernumerary fireworker²⁶ in Lieutenant-Colonel J.A. Martfeld's company was officially recorded on 5 February 1748, after Maurice de Saxe had taken Maastricht²⁷ and hostilities had ceased in preparation for the peace treaty of Aix-la-Chapelle. That treaty having been signed, on 31 August 1749 Samuel was married at Nijmegen to Geertrui Hasse of Hulst, sister of two artillery officers, one of whom served with him in the same company.²⁸ Ten months later, on 24 June 1750, a baby daughter, Johanna Christina, was baptized in Nijmegen.²⁹ As Geertrui did not mention the daughter in subsequent official appeals for financial support, we may infer that Johanna Christina died in childhood.³⁰

The peace treaty of 1748, which restored to the United Provinces their lost territory, converted Samuel Holland from a busy combatant into a supernumerary garrison artillery officer with an opportunity to develop cartographic skills that, in

Samuel Johannes Holland: the Dutch grooming of the Canadian land surveyor (1729-1755)

the next several years, would change the course of his career.

The military reverses of 1747-1748 helped to accelerate a trend in Dutch cartography that was already under way. Two principal factors influenced the extensive topographic mapping of the United Provinces: military planning for wars of movement and improved civil administration of the water districts, particularly the major flood rivers. The Dutch had learned to appreciate more than seventy-five successful years of French topographic mapping.³¹ Not only had military planning been made much more accurate through the minute recording of topographical detail, but mapping had also provided an unprecedented factual basis for good regional administration within a centralized state. Sieges were still central to military campaigns, and so the plans of fortified towns were vital to defence and attack. But so also were detailed maps of the terrain outside the towns, since campaigns such as those of Maurice de Saxe had demonstrated that armies moved, were it only from siege to siege, and knowledge was a key to success. As for the water districts, mapping was required both for more efficient administration of the country's central resource and as a better factual basis for its traditional means of defence.³² A new generation of surveyors and cartographers, both civil and military, that would dominate the profession in the second half of the 18th century, was beginning to make its presence felt -- men such as the Hattingas and Croquius, who drew maps that would be practical rather than ornamental.

The misfortunes of war induced the commander at 'sHertogenbosch from 1740 to 1750, the talented

engineer Pierlinck, to seek ways of improving for the future the defensive line between Bergen-op-Zoom and Nijmegen. He saw as a first step to this end the preparation of accurate, up-to-date, middle-scale topographical maps of the area and large-scale plans of the fortified towns within it. To accomplish this he borrowed and put to work in teams a number of suitably-educated young officers then serving in the southern part of the country, several of whom distinguished themselves later in the century as senior military engineers in the Dutch and foreign services. Logically, the inexperienced among them learned by bringing existing plans up to date. W.T. Hattinga, a physician who made a name for himself as a talented surveyor and cartographer, had trained his sons David and Anthony in those fields from early childhood. They were commissioned as engineers in 1747 and 1748, while still in their teens, by *Stadhouder* William IV, who was Hattinga's patron. They prepared plans of Nijmegen and 'sHertogenbosch in 1748, of Hulst and Bergen-op-Zoom in 1751 and of Maastricht in 1753.³³ A cadet named De Witte signed a plan of Nijmegen in 1750 as one of several "plans of fortresses",³⁴ in which data of the late 1730s were brought up to 1750. Pierlinck himself is the author of two maps of North Brabant (20 October 1753 and 30 October 1756) showing the flooding between the Scheldt and the Maas of the war years 1747 and 1748.³⁵

It may have been as part of this group that Samuel Holland developed and demonstrated his map-making skills. He signed as second author, with Jacob Hendrik van Suchtelen (municipal architect of Nijmegen)³⁶, a "Map of the Municipality of the

City of Nijmegen, surveyed and drawn in the year 1752.”³⁷ And he was sole author of “The City of ‘sHertogenbosch surveyed from within and drawn by S.J. Hollandt, second lieutenant of artillery, 1755.”³⁸

Obviously Samuel Holland’s status in the Dutch army was not as a military engineer, but as a junior artillery officer with a practical knowledge of surveying and mapping. For a brief period around 1750 there was an entrance examination to the corps of engineers that could be taken by officers of other arms, with or without a practical course at one of several universities in the applied mathematics of the profession; there is no evidence that Holland tried it.³⁹ His knowledge of the science of fortification, both “permanent” and “field”, comprising construction, attack, defence and demolition; and of the drafting and completion of precise plans, profiles and elevations, was not acquired as an officer of the corps of engineers.⁴⁰

Moreover, in October 1752 the Dutch Corps of Artillery promulgated new orders designed to bring under the control and discipline of the commander of the Corps, through the chain of command, all their officers, NCOs and men scattered as detachments among garrisons throughout the country. Garrison commanders could not grant leave to artillerymen under their command without the consent of the Corps. Henceforth, artillery subalterns like Samuel Holland would normally perform only the duties of their rank and position, not being allowed to spend time away from their base learning the skills of other corps.⁴¹

Even if Holland had sought and obtained a

commission at the entry grade in the Netherlands Corps of Engineers, his advancement would have been extremely slow. He would have had to spend some twenty-four years moving through no fewer than thirty-six grades before having the right even to apply for a captaincy. In contrast, an infantry officer could do so after spending a total of two years in three ranks. Moreover, although engineers were selected for their native intelligence and pertinent education, and were extremely valuable to commanders, their pay was much lower than that of the infantry and cavalry. For this reason, after 1748 many young military engineers left the service for other positions both within and outside the Netherlands.⁴² One of their officers, writing in the late 1750s, contrasted this with the armies of other powers who, he said, spared no expense in order to recruit and hold bright, competent engineers.⁴³

Until 1755 Samuel served in Martfeldt’s company as a supernumerary second-lieutenant, for which he was paid 40 florins (ƒ40).⁴⁴ In 1789 he claimed that in 1754 he had presented his plans of Nijmegen and ‘sHertogenbosch⁴⁵ to the third Duke of Richmond, a grandson of one of King Charles II’s natural sons, when that young peer was touring the battlefields of the Low Countries with his military tutor, Guy Carleton.⁴⁶ Perhaps bored and certainly underpaid, and with no great future to look forward to in the Dutch artillery,⁴⁷ Samuel must have been attracted by the prospect of a new career with the British forces when the opportunity arose.⁴⁸ A command of German, French and English in addition to his native Dutch, evidently combined with a reading knowledge of Latin, enhanced his special military skills. And had his marriage turned sour following

Samuel Johannes Holland: the Dutch grooming of the Canadian land surveyor (1729-1755)

the probable death of their baby? Geertrui implied later that during at least part of that time they had been living apart (though perhaps because his unit was moving about) and alleged that he had been having affairs with other women.⁴⁹ In any case, Samuel left his native land and his wife to become one of the Foreign Protestant officers the British military were preparing to hire for a major campaign in North America.⁵⁰ Evidently the Duke of Richmond introduced Samuel to Lord Loudoun, the Duke of Cumberland's nominee as British commander-in-chief in North America, who was to be colonel-in-chief of a newly established regiment being formed in England, the 62nd "Royal Americans".

Both general and personal factors seem to have influenced Samuel's decision to leave the United Provinces in 1755. The country of his birth was no longer the major power it had once been. In the war of 1744-1748 the Anglo-Dutch force had been overrun, despite the surge of patriotism in 1747 and the traditional competence in siege warfare of Dutch military engineers. By 1754, with the outbreak of Anglo-French hostilities in North America, there was little enthusiasm in ruling circles for supporting Great Britain in a war that was fully expected to spread to Europe. In 1755 there was a brisk political debate at The Hague, not over which alliance system the Republic should join, but whether Dutch neutrality should be active or passive. Indeed, by early May of that year, even before the Franco-Austrian alliance removed any French threat to the fortified towns of the Southern Netherlands, the Dutch decided they could no longer afford to garrison them.⁵¹ Already shrinking in size, the army of the neutral Republic

was not destined to expand. If news of the political debate filtered down to Samuel's level, he could anticipate little chance for promotion, not even any for active service. If he remained a subaltern for many more years, his chances of reaching senior rank before he was an old man --- if ever --- were slim. It was, moreover, not at all unusual for officers with special skills to offer their services to foreign states, as witness a member of the Van Suchtelen family of Nijmegen who became Chief Engineer in the Russian army later in the century, and the French engineer Cugnot, who served the Habsburg monarchy with distinction. With the prosperous, powerful British, and especially with patrons like Richmond, there were potentially great career opportunities for foreigners of talent, particularly if those foreigners were incensed at their country's abandonment of a British alliance. Politicians like William Pitt the Elder might well be skeptical of Dutch military prowess,⁵² but in fact even a few skilled Dutch engineers were an asset to a British army confronted once again by officers schooled in the tradition of Vauban. And finally (although Samuel does not admit it in any extant correspondence), he probably thought that joining the British army for service in North America released him from Geertrui, her mother and the rest of her family. One can only surmise...

Whether or not Samuel aspired as a youth to become a military engineer, his level of education would not have gained him entry into the corps of engineers. On the other hand, the society in Deventer in which he was brought up - Lutheran, originally German and a possible connection with artillery officers - combined with a flair for various branches of mathematics and a singular aptitude for learning,

were more than enough to admit him as a candidate for an officer-cadetship in the artillery. As a cadet and junior subaltern defending his homeland he had an opportunity, as military jargon puts it, “to give a good account of himself.” After the War of the Austrian Succession, when senior Dutch military engineers borrowed young officers from other arms for training in the preparation of permanent defences, Samuel based advanced training in designing fortifications and field defensive works, the preparation of urban plans, and the twinned disciplines of land-surveying and cartography, on what he had already learned of measurement and of the elements of accurate map-making. Examples of Samuel’s work came to the attention of the British, who were sufficiently impressed with it to offer him a commission as a foreign Protestant officer in the British army in North America.

NOTES

¹ The account of Samuel Holland’s subsequent career is added by the present editor using information from the article published in this Journal by Janny Lowensteyn (see note 2): “Samuel Holland, Canada’s first Surveyor General,” *CJNS* XIII, ii (Fall 1992) p.1-4.

² The present author’s entry on Samuel Holland in Volume V of *The Dictionary of Canadian Biography (DCB)* (Toronto, 1983) p.425, gave the place of birth as Nijmegen. The assertion to that effect by Willis Chipman, (“The Life and Times of Major Samuel Holland, surveyor-general, 1764-1801” *Ontario History*, 21 [1924], p.12), based, perhaps, on Samuel’s burial record (see LAC, MG 30, D.1, vol. 15, p.655) was credulously

adopted when, unknown to the author and to the editors of the *DCB*, the act of Holland’s baptism at Deventer had been published a few years before in a Dutch genealogical journal. Subsequently, the author learned of that publication through the collaboration of the late Mrs. Janny Lowensteyn of Rosemere, Quebec, whose very apt research in the Netherlands proved to be the key to studies in several fields - not only the history of the Holland family - that became indispensable to this article.

³ Article by Dr. A. Johannes on the Evangelical-Lutheran congregation in Deventer, in *Documentatieblad Lutherse Kerkgeschiedenis* [ISSN: 0921-4690], no. 5 (1989), hereinafter referred to as Johannes, *op. cit.* (Obtained and summarized in English for the author by the late Janny Lowensteyn.) There were originally two houses, one occupied by the pastor, the other used as the entrance to the church, which was in a barn-like building behind it. To this improvised structure two more adjoining houses were added in 1708 and 1710, permitting its expansion to a width of 12 metres. Few of the buildings from the district have survived the heavy bombardment of April 1945, when Canadian artillery dislodged the German occupiers.

⁴ *De Nederlandsche Leeuw*, (genealogical periodical founded 24 January 1883) vol. 94 (1977), nos. 10-11, column 412.

⁵ *De Nederlandsche Leeuw*, vol 94 (1977), nos.10-11, columns 409-412. Genealogists have implied (*ibid.*, column 409) without irrefutable evidence, that the father of Samuel Holland[t] (1606-1676) was the Strasbourg tailor and burgher Georg[es] or Jörg Holet[t], who was born at Ippischburg

Samuel Johannes Holland: the Dutch grooming of the Canadian land surveyor (1729-1755)

or Eppisburg near Dillingen on the Danube [in Swabia], was married at Strasbourg in 1598 to Catharina Bolich or Boley, and died in 1648. The dates are right, and the surname may have been changed for religious or political reasons, but it may never be possible to confirm this.

⁶ Maria Elisabeth died after 24 September 1732.

⁷ The sixth child, Margaretha, was baptized at Utrecht on 16 November 1684 and the seventh, Catharina, at Deventer on 11 December 1687. *Nederlandsche Leeuw* vol.94 (1977), column 410.

⁸ When his mother was 42.

⁹ *Stadsarchief*, Deventer, rep. I, 95a, p.603 and rep. I, nr. 22, request of 5 July 1693 for a small garden; Johannes, *op. cit.*; and *Ned. Leeuw*, vol. 94, *loc. cit.*, columns 409-412.

¹⁰ No actual proof of a relationship has been found, but the fact that Johan Diederich Martfeldt and Maria Magdalena Holland named one of their children Joachim *Frederik* seems to strengthen the possibility of one. [Communication from Dr. P.H. Kamphuis, Head, Military History Section, Royal Netherlands Army, to the author, 14 November 1995, citing the Holland file held by the Central Office of Genealogy, The Hague.]

¹¹ Deventer municipal archives, Voogdijstellingen 1657-1798, nr 109-c/Ov/p.98.

¹² Deventer municipal archives, Boedelinventaris 1518-1811 I nr 143-d/pp.759-767. Inventory of household goods and of stock remaining in Jan Holland's clothing shop, 10 December 1734, transcribed and translated into English for the

author by the late Janny Lowensteyn. The gross assets were valued at fl. 1,317/11/-, the liabilities fl. 934/5/-, leaving net assets of fl. 383/6/-, of which half (fl. 191/13/-) went to the widow and the other half to the children. Two male guardians appointed by the municipal council, Jan Beekman and Gerrit Houwers, were among the twelve creditors.

¹³ There was a family tradition, according to the Ontario Land Surveyor of considerable standing, Willis Chipman, in his monograph "The Life and Times of Major Samuel Holland, Surveyor-General, 1764-1801," *Ontario Historical Society Papers and Records*, XXI (1924), p.13, that Samuel was brought up by two of his aunts, but we do not know whether this was true and, if it was, whether they were paternal or maternal aunts. Certainly one of them could not have been Pastor Elter's wife, Margaretha, who died in 1728.

¹⁴ Letter to the author from Dr.Engelien de Booy, historian of Dutch education, 14 October 1985.

¹⁵ On the *petites écoles* and Latin schools, see M. de Vroede, "Ontwikkeling van de onderwijsstructuur in de Zuidelijke Nederlanden van de 18e naar de 19e eeuw" in *Onderwijs en Opvoeding in de achttiende eeuw*, Werkgroep achttiende eeuw, Textes du Colloque, Doesburg, 1982; (Amsterdam & Maarsen: APA - Holland University Press [1982]) pp.41-71.) For a discussion of the vocational curricula in educational foundations for orphaned boys somewhat later in the century, see E.P. de Booy, "Hoger Beroepsonderwijs op de Fundatie van de Vrijvrouwe van Renswoude, 1756-1811," *ibid.*, pp.93-102. It is interesting that the vocational schools described in Dr. De Booy's article included in their curricula such subjects as hydraulic and

military engineering, drafting, surveying, and the construction trades. In her letter of 14 Oct. 1985 (*loc. cit.*), Dr. de Booy remarked that scarcely anything was known about this kind of training before 1756.

¹⁶ The fireworker was a junior subaltern of an artillery unit who calculated the charges required to fire given weights of projectile in given calibres of gun over given distances. A contemporary British reference work describes fireworkers in these terms: “second-lieutenants supposed to be skilled in every kind of laboratory-work, ...[including] proportions of all ingredients for each composition required in fireworks.” The laboratory was “where all sorts of fireworks are prepared, viz., quick-matches, fuzes, portfires, grape-shot, case-shot, carcasses, hand-grenades, cartridges, shells filled, fuzes fixed, wads, etc.” (Capt. George Smith, *An Universal Military Dictionary*, London, 1779, reprinted Ottawa, 1969, pp.89, 135.)

¹⁷ Communication to the author from Dr. P.H. Kamphuis, Head, Military History Section, Royal Netherlands Army, 24 January 1996, citing J.A.M.M. Janssen, *Op weg naar Breda. De opleiding van officieren voor het Nederlandse leger tot aan de oprichting van de Koninklijke Militaire Academie in 1818*. (The Hague, 1989: Military History Section Series no. 19: University of Nijmegen dissertation.) Dr. E. de Booy suggested that probably Holland was taught in the army itself, (letter *loc. cit.*). If this were the case, it might lend some credence to his wife Gertruij’s later claim that her two brothers, artillery officers, had been responsible for much of his “great progress in mathematics” (letter to Lord Sydney, 13 July 1784, Great Britain, National Archives [formerly PRO], C.O.42/16, f.259 & seq.: typed copy in Library

and Archives Canada [LAC], MG30, D.1, vol.15, pp.555-559)

¹⁸ Dalhousie University Library (Halifax, Nova Scotia), MS2-33. For most of the analysis of the notebook, the author is indebted to the distinguished surveyor, the late Lieutenant-Colonel Louis M. Sebert.

¹⁹ The Maréchal de Saxe later reflected that the commanders of these fortresses of the Low Countries tended to underestimate the length of time their food supplies would last because they based their calculations on the total population (troops and civilians) before people of the surrounding countryside came to take refuge in the towns. They welcomed early breaches in the fortifications just as much as the besiegers, because then they could surrender with the honours of war, i.e. march out with drums beating and flags flying. “Malgré cette bonne volonté mutuelle, j’ai vu plusieurs gouverneurs être obligés de le faire sans avoir eu l’honneur de sortir par la brèche.” Since resistance stopped soon after food ran out, he attributed part of his phenomenal success to these errors. (*Les Rêveries de Maurice, Comte de Saxe.....*(Ed. De Bonneville, The Hague), p.117.

²⁰ Evidently resistance at Namur in 1746 was less fierce than in 1695, when the anti-French allies attempting to hold two forts there had lost 2,000 men. See Rijksarchief, The Hague, OMM Algemeen, Memorien no. 17C (J.F. Schouster, 21 January 1772), p.9.

²¹ For a concise account of that episode of the war, see M.S. Anderson, *The War of the Austrian Succession, 1740-1748* (London, 1995), pp.156-158.

Samuel Johannes Holland: the Dutch grooming of the Canadian land surveyor (1729-1755)

²² The revolt was resisted for a time (Vlekke, Bernhard H.M., *Evolution of the Dutch Nation*. New York, 1945; reprinted in the Netherlands, 1963), p.264.

²³ He had held this position in only some provinces. M.S. Anderson, *op. cit.*, p.172.

²⁴ Chipman, *loc. cit.*; Kuypers, F.H.W., *Geschiedenis der Nederlandsche artillerie van af de vroegste tijden tot op heden*. (4 vols., Nijmegen, 1869-1874), [1872 vol.], p.100. Kuypers identifies Cadet Holland (who escaped injury when an enemy bomb exploded in the Pucelle Bastion killing or severely wounding 29 out of 30 English gunners) as one who distinguished himself later in America as a major.

²⁵ The officer in command of the garrison of the much-vaunted fortress was an eighty-six year-old Swedish-born general, Izaak von Cronström. When the French, who had effected several breaches, entered the town during the night of September 17-18, 1747 and were fighting their way through the streets, he made good his escape and left the town to the mercy of the enemy. See Anderson, *Austrian Succession, op. cit.*, pp.173-174; van der Aa, A.J., *Biographisch Woordenboek der Nederlanden*. (ed. Amsterdam, 1969) Vol. 2, p.268, col.1; *Algemene geschiedenis der Nederlanden*, (12 vols., Utrecht: De Haan, 1949-1958), VIII, p.4; Skrine, Francis Henry, *Fontenoy and the War of the Austrian Succession* (Edinburgh & London, 1906), p.336; Voltaire, *Histoire de la guerre de 1741* (ed. Paris, Garnier Frères, 1971) [originally published 1755-56], p.267; Delmas, Jean (ed.) *Histoire militaire de la France* (4 vols. Paris: PUF, 1992), II, pp.91-92.

²⁶ Raad van State, 1538, f.220: commissieboek, 1735-1748. Holland later claimed that he had been commissioned lieutenant in 1747, and his fireworker's notebook in Dalhousie University Library bears that date. [See LAC, "Q" Series 56/3, p.852.]

²⁷ For weaknesses in the defences of Maastricht, see J.F. Schouster's paper of 21 January 1772 (Memorien no. 17C), *loc. cit.*, *passim*.

²⁸ Nijmegen, Gemeentearchief: Retroactaburgerlijke stand 1179. The sole witness was Johannes Ernestus Hasse, one of the bride's brothers. The couple's registration of their intention to marry (*ondertrouw*) had taken place on 10 August 1749.

²⁹ Letter dated 7 August 1980 from H.G.M. de Heiden, Chef, Externe Dienst, Gemeentearchief, Nijmegen to N.D. Haasbroek. The witnesses at the baptism were Abraham Hasse and Christina Scholte, widow Hasse, brother and mother of Geertruij.

³⁰ (1) Submission of Geertrui Hasse Holland to the States General cited in "Report on trip to the Netherlands in March 1993" by the late Janny Lowensteyn, pp. 2-3. (2) Letter of Geertrui Hasse Holland to Lord Sydney, Secretary of State, London, 13 July 1784: National Archives (U.K.), CO 42/16, 259; copy in LAC, MG 30, D.1, vol. 15, 555-559. In that letter Geertrui listed her previous representations to British authorities: in 1763, 1771 and 1782.

³¹ An appreciation of the French Corps des Ingénieurs-géographes founded by Marshal Vauban is included in Rijksarchief, The Hague,

OMM Algemeen Memorien no. 64: «Réflexions sur la composition d'un corps des ingénieurs-géographes; sur les connaissances qu'ils doivent avoir, et leur utilité et service, tant en temps de guerre qu'en paix.» Internal evidence suggests that this document was written after the American War of Independence.

³² As late as 1772, however, the use of flooding in the defence of Maastricht, in the opinion of the engineer J.F. Schouster (1721-1801) still required a great deal of improvement: Memorien no. 17C, *loc. cit.* For a biographical entry on Schouster, see P.C. Molhuysen, *Nieuw Nederlandsch Biografisch Woordenboek* (10 vols. Leiden, 1911-37; cited hereinafter as *NNBW*), II, p.1297.

³³ The two sons of the elder Hattinga (1700-1764) were born in 1730 and 1731 respectively. For more detail, see Cornelis Koeman, *Geschiedenis van de kartografie van Nederland: zes eeuwen land- en zeekaarten en stadsplattegronden*. [History of Dutch cartography: six centuries of maps, marine charts and town plans] Alphen aan den Rijn: Canaletto, 1983, pp.153-160; and Kees Zandvliet, *De Grootte Waereld in 't klein geschildert* (Large world on the small canvas). Alphen aan den Rijn: Canaletto, 1985, p.153.

³⁴ Algemeen Rijksarchief, The Hague: Collection of Maps and Plans, 18C-8-2. De Witte, cadet, Nijmegen, 1750 (N28), situatie plans, plans van vestingen.

³⁵ *Ibid.*, Situatie Kaarten B40A, Pierlinck, 20 Oct. 1753, *Kaart van het nordelyk gedeelte van staats Brabandt med de inundatien tussen de rivieren de Schelde en de Maase, geformeert in de jaren*

1747 en 1748. M8, Pierlinck, 30 Oct. 1756, *Kaart van de Situatie tussen Maas en Waal omtrent de steden Grave en Nijmegen met een gedeelte van het land van Cuyck*. "Deese kaart is geformeert ter vervolging van de Kosten van Staats Brabandt met de Inundatien soo als deselve gehouden sijn in de Jaeren 1747 en 1748. Waar tegens deselve sluyt."

³⁶ Jacob Hendrik van Suchtelen (1722-1787), a native of Nijmegen, was probably Samuel's mentor. See biographical entry in *NNBW*, VII, pp.1194-1195.

³⁷ *Ibid.*, N27, *Caart van het schependom der Stadt Nijmegen opgemet en gecarturdt door J. H. van Suchtelen en S.J. Hollandt en den jare 1752*. Dictionaries show *schependom* as a collective noun meaning aldermen, sheriffs, etc. I have rendered it as "municipality" which, in modern Dutch, would presumably be *gemeentebestuur*.

³⁸ *Ibid.*, 18C-8-1, *De Stad 'Hertogenbosch van binnen gemeeten en geteeken door S.J. Hollandt, Onderleutnant van artillerie, 1755*.

³⁹ Communication from Kamphuis, *loc. cit.*, 22 January 1996.

⁴⁰ A syllabus, drawn up in 1772 by the engineer Geyler of Maastricht for a number of proposed garrison engineering schools, appears to have incorporated elements that had been part of "on the job" training earlier in the century. See: Rijksarchief, The Hague. OMM Algemeen Memorien #44 (1772): *Hoe en op wat Manier in eenige Vestingen van den Staat der Vereenigde Nederlanden, op de minst-kostbaarste wijze, militaire scholen souden kunnen opgereggt worden, tot instructie van jonge*

Samuel Johannes Holland: the Dutch grooming of the Canadian land surveyor (1729-1755)

lieden in het genie en all de overige daartoe betrekkelijke weetenschappen.

⁴¹ Rijksarchief, The Hague, OMM Algemeen Memorien #62 (1752-54). Du Moulin may also have written Memorie no. 64 (undated) in the same series. See note no.34, above.

⁴²The situation had grown steadily worse throughout succeeding decades, as the senior military engineer Du Moulin recorded in 1776. See Rijksarchief, The Hague, OMM Algemeen Memorien no. 90A: “Memorie over de noodzaakelijkheid om het Corps Ingenieurs, in Dienst van den Staat der Vereenigde Nederlanden, te Verbeteren.”

⁴³Memorial of 1756 or 1757 by a Captain Batenburg, quoted in Rijksarchief, The Hague, OMM Algemeen Memorien no. 63, second document.

⁴⁴ Algemeen Rijksarchief, ‘sGravenhage, Staten-Generaal 8209, 8211, 8213 & 8215: Extra-ordinaris Staat van Oorlog 1750-1753. A surveyor’s porter (of equipment) earned f300 a year. Was Samuel’s pay only f480 a year?

⁴⁵ *Sic*. The plan of ‘sHertogenbosch may have been virtually complete in 1754, though dated 1755; or, Holland’s memory may have been faulty thirty-five years later.

⁴⁶ Holland’s memorial of 14 May 1789 to the Lords of the Treasury: LAC, MG11, Q Series 56-3, p. 852. James Wolfe, in Paris, wrote his parents during the period 4 Dec. 1752-19 Jan. 1753 that, having met the 18-year-old Richmond there, he had occasion to recommend Carleton when the Duke asked for a “skilful man” to travel with him

through the fortified towns of the Low Countries. This was duly approved by the Commander-in-Chief, the Duke of Cumberland, so that Carleton became Richmond’s “preceptor”. Letters quoted in Robert Wright, *The Life of Major-General James Wolfe* (London, 1864), pp.249-253. For a study of Richmond, see Alison G. Olson, *The Radical Duke: the Career and Correspondence of Charles Lennox, Third Duke of Richmond* (Oxford, 1961).

⁴⁷ One of Geertruij’s brothers remained a second-lieutenant fireworker until his retirement about the age of 54; the other eventually reached the rank of lieutenant-colonel. [Letter from Dr. P.H. Kamphuis, 14 November 1995, citing Officers’ booklets, General Public Record Office, Council of State Archives, inventory no.1947.]

⁴⁸ Chipman, p.14, evidently derived from LAC, Q/56-3, *loc. cit.*

⁴⁹ Submission of Geertruij Hasse Holland to the States General cited in “Report on trip to the Netherlands in March 1993” by the late Janny Lowensteyn, pp. 2-3.

⁵⁰ Chipman, *loc. cit.*

⁵¹ Alice Clare Carter, *The Dutch Republic in Europe in the Seven Years’ War*. Coral Gables, Fla. : University of Miami Press; and London: MacMillan, 1971, pp.31-48.

⁵² “What sieges have the Dutch made?” (Debate in the House of Commons, 11 February 1756, in R.C. Simmons and P.D.G. Thomas, eds., *Proceedings and Debates of the British Parliaments Respecting North America, 1754-1783*, I, 1754-1764; Millwood, N.Y., etc., 1982, p.138.)