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The Memoirs of Guillaume Tell Poussin: the “French Connection” in the Construction of American Roads, Canals, and Railroads

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Abstract: Guillaume Tell Poussin (1794-1876), indirectly related to the great French painter Nicolas Poussin (1594-1665), was born in France, received an excellent technical education at the Lycée of Rouen and the School of Fine Arts in Paris, but fled to America after the collapse of Napoléon Bonaparte’s empire. He became a supervisor of the rebuilding of the United States Capitol, damaged in the War of 1812, and he was commissioned a captain of the US Army Corps of Engineers with the personal support of President James Madison. In partnership with his fellow Frenchman General Simon Bernard, he surveyed the waterways and roads of the United States and drafted plans for canals, roads, inter-coastal waterways and fortresses over the entire country. He returned to France in the mid-1830s and published several books in French on America as well as on European public works. He was briefly the chief diplomatic representative of the French Second Republic in Washington, DC, but was recalled for vehemently protesting the seizure of a French ship. He continued to publish as an expert on American and European matters, and he is buried in Père Lachaise Cemetery in Paris.

The economic and technological boom of the North American economy in the nineteenth century was on a scale that caught the entire world by surprise. Immediately following on the generally disastrous war with Great Britain from 1812 to 1815, the American republic experienced a period of sudden expansion in size and power that came to shock the whole world. Before the middle years of the century, the physical conquest of a vast swath of North America and the increasing coherence of transportation and settlement aroused the amazement of observers in Europe. From the outside the sudden rise of American navigation and transportation added an utterly unexpected new great power to the community of nations, forcing Europe to view the New World increasingly as a major force, even a threat, in the world. By the end of the century, the United States would be one of the world’s major economic powers, whose intervention would contribute to the Allied victory in the First World War.

There were many European observers who tried to understand this process, and now a figure hitherto little regarded or even noticed will be introduced here. The life of William Tell Poussin (in French, Guillaume Tell De la Vallée Poussin) links together the French Revolution, the Napoleonic Wars, and the economic emergence of the United States, all in a unique personal story.

Born into a bourgeois provincial artistic family with a tendentious claim to the heritage of the great seventeenth-century painter Nicolas Poussin (1594-1665), William Tell Poussin (1794-1876) would be both a witness and a major participant to the economic boom of the central nineteenth century. Until recently, however, his many publications have only been made coherent by a newly-understood memoir of his lifelong involvement in the storms of two nations, France and the United States.

William Tell Poussin was born in the midst of the revolutionary First French Republic in 1794; he was briefly an ambassador of the upstart Second French Republic to the United States, would live into old age and die in 1876 during the bourgeois Third French Republic, and would be a major propagandist for a “fourth republic,” the United States of America. He arrived in America as a partisan refugee from the collapse of Napoléon Bonaparte’s Empire and would maneuver himself into a strategic role in the canal- and fortress-building boom of America’s postwar period after 1814, then survey the transition from canals to railroads. His memoirs provide a largely-ignored source for the adventurous birth of the United States Corps of Engineers. He would die one of the last of his generation in 1876, and his remains rests today in Père Lachaise Cemetery in eastern Paris.

Under a deeply misleading title, which partially repeats the title he had used in a series of books in the 1840s *On the Power and Progress of the United States*, Poussin started by arguing that his own strange life demonstrated the significance of drive and character in overcoming tremendous odds.

...This could give this explanation the character of *Memoirs of My Life*. I myself do not hesitate to consider it so.¹

My birth took place in the midst of revolutionary torment, in 1794. My father, a painter ... was also mayor of the community of Poissy (département Seine-et-Oise), where he fulfilled his functions with all the devotion of a true patriot ... a man of excellent heart, yet very ardent and enthusiastic, he caused my birth to be written in the registers of the civil state with the first names of *Guillaume Tell*.

The De la Vallée family originated from Normandy. His father, a painter of religious images, Étienne de la Vallée Poussin, was born in 1735, his mother Elisabeth Gillet about 1750, and he had two older brothers, Pierre de la Vallée Poussin (born c. 1780) and Étienne-Pierre de la Vallée Poussin (Born 1789). After both parents died in 1802, their upbringing fell to his aunt, Madame Jublin, who had lived for many years in St. Petersburg, Russia, where she had been an independent merchant before returning to France. Étienne-Pierre would join the Belgian Army in 1832 and establish a distinguished family of his own, ennobled by the king of Belgium, that has produced a series of scientists and scholars.

Madame Jublin campaigned ardently on behalf of G.T. Poussin to win him a place in the elite Lycée of Rouen in Normandy, and in 1805 the First Consul of the French Republic, General Napoléon Bonaparte, named him a student there, specifically mentioning his relationship to the great artist, Nicolas Poussin. G. T. Poussin completed the seven-year Lycée course in 1812 intended to prepare him to enter the elite *École Polytechnique*, “Which, unfortunately, I never had the chance to achieve!”² At Rouen he had already excelled in drawing and creating prints, and former fellow-students of that school would provide him with professional contacts for the rest of his life.

¹ *Les États-Unis d’Amérique ... 1815-1873* (Paris: *Veuves Renou, Maulde et Cock*, 1874), p. 13. Google Books.

² *Ibid.*, p. 33. The *École polytechnique* of Paris would be the chief model for Sylvanus Thayer’s foundation of West Point.

After leaving Rouen, G. T. Poussin became a student of Charles Percier, architect to Napoléon Bonaparte, now Emperor of France, and a member of the Institute de France, working in the School of Fine Arts (“*Beaux-Arts*”) in Paris. These studies were cut short by the sudden collapse of the Empire and Napoléon’s first abdication to Elba. Poussin served as a sergeant in a partisan artillery unit and was wounded defending Paris in 1814 against the international coalition seeking to restore Bourbons to power. He clearly had no future in France.

He was preparing to depart for Russia in keeping with Madame Jublin’s desires, when Thomas Bolling Robertson, a member of the US Congress from Louisiana,³ persuaded him to emigrate to the United States, arguing that a Frenchman could do well in Louisiana. In November 1814, Poussin arrived in New York with a small amount of money, intending to proceed at once to Louisiana. Chance, and his pursuit to find a place in America, led him to Philadelphia, where he contacted leading French industrialists, including the Du Pont de Nemours family, which had found success manufacturing gunpowder and cloth for the American military in Pennsylvania and Delaware. Many wealthy French families were attracted to the young man, who produced art engravings to order.

His professional salvation, however, came when he arrived in the ravaged federal capital of Washington and was introduced by Congressman Robertson to the architect of the Capitol:

Mr. B[enjamin] Latrobe, architect, engineer in charge of the reconstruction of the Capitol, received me with great pleasure on the presentation of my friend Mr. Robertson of Louisiana; he installed me at once in my new occupation and presented me with a little vaulted chamber resembling a casemate [=an artillery emplacement], perfectly supplied with a hearth, and which the fire of the English had respected in 1812.

My title was that of an inspector of works, charged specifically with directing art operations, constructions, sculptures, décor of all types, ornaments, columns, and designs for stone-cutting; I was thus to speak daily on all matters with the workers of every level: masons, Italian sculptors, French and German carpenters, silk-workers, etc. As a result, in this new practical school, I obtained precious knowledge in all sorts of construction.⁴

Poussin quickly turned his “casemate,” into a small exhibit-space for his engravings and drawings:

My occupations grew more important from day to day, and more serious, becoming at the same time more attractive and, consequently, made me more satisfied with my destiny and situation; I took a certain interest to arrange my little cell and to decorate it with my designs, covering the walls; I also ranged my books and particularly my folios of engravings; this completely changed the aspect of my lodging and attracted a greater number of visitors, members of the two houses of Congress, who came and spoke with me of my work, in which they appeared to show a certain interest, particularly in the designs I had brought from Monsieur Percier of the *École des Beaux-Arts*. These messieurs ended up contracting the habit of visiting the “French artist” charged with

³ Thomas B. Robertson represented Louisiana in the House of Representatives from the 12th to the 15th Congress, 1812-1819, was then Governor of Louisiana, 1820-24. See also *Appleton’s Cyclopedia of American Biography*, vol. 5 (1898), p. 280. He published a memoir of his time in Paris based on his letters home.

⁴ *Ibid.*, p. 60. Latrobe’s restoration of the US Capitol as one of the premier examples of Masonic architecture and embellishment would reinforce the suspicion that Freemasonry played a large role in Poussin’s advancement and career. Most of Poussin’s supporters, from Henry Clay on down, are known to have been Freemasons.

the decoration of the Capitol. Among the most intense visitors was a Mr. Middleton of South Carolina,⁵ a man of great wealth and a very pronounced artistic taste; one day he asked if I would be disposed to accompany him on a voyage he intended to Italy; I responded that since I had come to America to create a career for myself, I thought it would be more advantageous for me to continue to persevere looking for an occupation in keeping with my desires.⁶

So, it is that by a concourse of increasingly favorable circumstances, my residence in the Capitol, which I have called my *casemate*, where I had passed such sad days, suddenly lost its depressing character and become, somehow, the point of departure, the origin of a new career that completely changed my destiny in the New World!

Beginning at this moment, my new friends in both houses of Congress occupied themselves more directly to create for me an official position in the United States Army: they addressed to the President a petition signed by Messieurs [John] Gaillard, vice president of the Senate⁷; H[enry] Clay, Speaker of the House⁸; H. Middleton of South Carolina; W.-B. Robertson of Louisiana; James Brown, senator of Louisiana⁹; [Eligius] Fromentin, senator of Louisiana,¹⁰ and Mr. [Daniel] Webster, senator of Massachusetts,¹¹ sending to the President my nomination to the United States Army as an assistant engineer, with the rank of captain.

Sometime later, President James Madison came to visit the works at the Capitol. Mr. Latrobe did the honors and presented him with the principal operations of the restoration of this national monument in detail.

They conducted him, as a great curiosity, to the casemate which I had used since my arrival, and which served after that as my workplace and study: as a result, I had the honor of being presented as a Frenchman, a descendent of the celebrated painter Poussin, and a student of Monsieur Percier, architect of the Emperor. [The President] said little, but nevertheless remarked that I bore a great name; he addressed some words to me in English, to which I responded with an assurance that appeared to surprise him. He also remarked by observing that, for a Frenchman, I spoke with a pure English accent.¹²

Some days after the President's visit to the Capitol, I was officially informed that the petition of my protectors had been favorably received by the President, who, by a

⁵ Henry Middleton (1771-1846), governor of South Carolina (1815-19), representative in Congress, (1820-1819), minister to Russia (1820-30), noted for his artistic culture. *Appleton's Cyclopaedia*, vol. 4, p. 317.

⁶ Poussin, *Les États-unis d'Amérique* (1874) pp. 63-64.

⁷ John Gaillard (1765-1826), of Huguenot descent, US Senator for South Carolina 1805-1826. *Appleton's Cyclopaedia*, vol. 3, p. 571.

⁸ Henry Clay (1777-1852), dominant figure in the Whig Party, three times US Senator for Kentucky, US Secretary of State 1825-29; three times Speaker of the House, long-term member of the House of Representatives for Kentucky, five times Whig candidate for US President. *Appleton's Cyclopaedia*, vol. 1, pp. 640-645.

⁹ James Brown (1766-1835), born in Virginia, was US Senator of Louisiana and later minister to France (1823-1829). *Appleton's Cyclopaedia*, vol.1, pp. 402-3.

¹⁰ Eligius Fromentin, of French birth, once a Catholic priest, was a Louisiana Senator, 1813-19. *Appleton's Cyclopaedia*, vol. 3, p. 553.

¹¹ Daniel Webster (1782-1852), was representative for New Hampshire (1813-18) then Massachusetts (1823-27), senator for Massachusetts (1827-41, 1845-50) and three times Secretary of State, was Whig candidate for President in 1836, 1840, and 1852. *Appleton's Cyclopaedia*, vol. 6, pp. 406-15.

¹² Poussin, *Les États-unis d'Amérique* (1874), pp. 73-74. Poussin apparently picked up a British accent from the superintendent of construction of the Capitol, Mr. G. Blagden, who often had him as an evening guest with his pious family. Generally, on the formation of the Corps of Engineers, see Todd Shallat, *Structures in the Stream: Water, Science, and the Rise of the U.S. Army Corps of Engineers* (Austin: University of Texas Press, 1994), stressing the polyglot origins of the institution.

declaration of 6 March 1817, decided on my promotion as an assistant engineer with the rank of captain, besides that of a fellow Frenchman, a former officer of artillery in the Russian campaign, Monsieur Claude Crozet, as professor of engineering at the Military School of West Point (New York).¹³ Adjutant General Parker communicated my nomination to the Corps of Engineers to me officially, and required me to present myself to General J. Swift, then superior commandant of the Engineers,¹⁴ to receive my instructions.

At about the same time, in April 1816, President Madison was empowered by the Congress to summon a highly-qualified engineer to assist the new Corps of Engineers in planning the defensive system of the United States. After consultation with General Lafayette in France, the position was offered to General Simon Bernard, formerly Emperor Bonaparte's chief military engineer.¹⁵ In the course of his own investigations, Bernard learned of young G. T. Poussin, who had gone to America, but was thought to have died of despair.

At once on hearing of the arrival of General Bernard in Washington at the Grand Hotel on Pennsylvania Avenue, I went and was announced, and found the General speaking with our respected compatriot Monsieur Parmentier.¹⁶ No sooner was my name announced to the General than he took my hand, in some surprise, thanking me that the bad news he had been given by the American Secretary of the Navy in New York after his arrival had not been exact. This official had told him that I had lived in Washington for a year, but that I had died of depression!

This report did not surprise me, I told him, because I had passed a great portion of my time in such isolation that I could have been considered dead! But since, thank God! I had recovered my powers and energy, my activities had re-established equilibrium physically and morally, particularly since my nomination as an officer in the American army.

I told the General in detail all the circumstances of my recent nomination, with the title of Assistant Engineer assigned to the southern part of the United States, and that General Swift, from whom I was ordered to receive instructions, had assigned me to commence operations in Louisiana. — "In this case," the General said to me, with that ease and simplicity of language that constituted the ordinary character of this excellent man, causing inequalities that might at first exist with persons to vanish at once, "I am pleased at this happy circumstance, which joins us together in the same operations, because I also am to go to Louisiana, where we will work together on the high mission that has been bestowed on me. Very well, I will join you in New Orleans, where I am going at once as soon as arrangements are made. Farewell, my dear Monsieur Poussin! I am pleased to have as a companion a man of whom I have heard so much in Paris; farewell until then!"

Over the fifteen years I was associated in the work of General Bernard on daily terms, whether in explorations on the terrain, or studying in office for the publication of final projects, I always found the General the same man, simple, modest, patient and

¹³ Claude "Claudius" Crozet (1789-1864), graduate of the *École polytechnique*, resigned his commission at West Point in 1823 to work for the state of Virginia building public works. He co-founded the Virginia Military Institute.

¹⁴ Joseph Gardner Swift (1783-1865), the first graduate of West Point, was chief of Engineers of the US Army, 1812-1818. *Appleton's Cyclopaedia*, vol. 6, pp. 10-11.

¹⁵ Baron Simon Bernard, 1779-1839, of Dôle, Franche Comté, served the United States from 1816 to 1830 after distinguished service in the French army under Emperor Napoléon I. *Appleton's Cyclopaedia*, vol. 1, pp. 248-9.

¹⁶ Auguste Henry Parmentier (1752- unknown), French historian, born in Sancerre, emigrated in 1791, settled in Philadelphia, wrote a *Histoire des pionniers français dans l'Amérique du Nord* (3 vols., Philadelphia, 1812), and *Histoire de la colonie française en Louisiane* (2 vols., 1815), *Appleton's Cyclopaedia*, vol. 4, p. 658.

always affable whatever happened, relative to his important functions. Of a high intelligence and a talent tested in the science of an engineer, he was always a patient and indefatigable worker. With these very rare qualities, he was able to fulfill the complex duties of his high mission in the ardent society of the New World without raising the slightest hint of jealousy of his new colleagues.¹⁷

Although described in his memoirs in detail, a summary of his activity with General Bernard is also found in the first of two books G. T. Poussin published in France after his return to his homeland in the 1830s.

In July 1830, the Bourbon monarchy of Charles X had been replaced by the more-moderate rule of King Louis-Philippe I of the House of Orléans. General Bernard departed for Paris soon after this, but Poussin remained in America for a couple years more.

The first French-language book by Poussin, published in 1834 after his return to France, is entitled *Works of Internal Improvements projected or built by the federal government of the United States of America from 1824 to 1831*.¹⁸ It describes the works of two special commissions, the first for the planning of defensive fortifications combined with canals and harbor works, and a second commission for internal improvements in the continental waterways and roads of the United States. The *Atlas* to the book on internal improvements, published in 1834, would be fronted by his most complex general map of the United States as Plate I, even including details of probes across the state of Missouri reaching toward the border of Kansas. The additional plates were a map of the Chesapeake and Ohio Canal (Plate II), the Canal from the Mississippi to Lake Pontchartrain (Plate III), the Erie and Champlain Canals, the Morris Canal (Plate IV), the Cape Cod Canal (Plate V), the Delaware Breakwater (Plate VI), the General Map of Florida and the Delta of the Mississippi, Bays (Plate VII), Florida Canal, Gulf of Mexico (Plate VIII), Muscle Shoals Canal and locks (Plate IX), Presqu'Île (= Erie) Port, with an illustration of M. J. Towne's pattern for wooden bridges (Plate X).

The 1834 book has an image of Latrobe's rebuilt US Capitol on the title page, along with an emblematic citation from Virgil's *Aeneid*, book 2, lines 5-6:

“All of these things I saw, and of some of them, I was a great part ...”

Poussin's second book, published in 1836, dealt with the following phase in which the stress moved from canals to railroads, and from the federal government to the states, with a main

¹⁷ Poussin, *Les États-unis d'Amérique* (1874), pp. 80-81.

¹⁸ *Travaux d'améliorations intérieures projetés ou exécutés par de gouvernemnt general des États-Unis d'Amérique de 1824 à 1831*; par Gme Tell Poussin ... (Paris: Anselin; Cerilian-Goeury, 1834). French Text in Google books. Dr. Rowan has translated this text into English, and it is available through the UMSL Library. See the Online Books Page: Online books by Guillaume Tell Poussin, [http://online.books.upenn.edu/webbing/book/lookup name?key=Poussin%2C%20Guillaume%20Tell%2CGuillaume%20Guillaume%20Tell%2C%201794%2D1794%2D1876](http://online.books.upenn.edu/webbing/book/lookup%20name?key=Poussin%2C%20Guillaume%20Tell%2CGuillaume%20Guillaume%20Tell%2C%201794%2D1794%2D1876).

title of *American Railroads*.¹⁹ It reflected the transition from the Federalist to the Jacksonian era, when federal authorities lost much of their direct authority, and the stress shifted from military to economic thinking. The motto for that book is utterly American in spirit:

“Time is money ...”²⁰

The 1834 book begins with an effort to define the United States as an accomplished whole, stretching from the Atlantic to the Pacific. Poussin shifts the discussion at once to a consideration of the strategic problems of the country in the aftermath of the War of 1812.

... The frontier of the United States is divided into the maritime frontier and that of the land frontier, or the interior.

The maritime frontier of the Union is located between 25° and 46° north latitude and extends to the 27° of longitude [Paris Meridian]. Without paying attention to the sinuosity of this coast and the large interior bays that make part of it, it represents a development of 3,300 miles (about 1,200 leagues or 5,358 kilometers). This frontier is subdivided in the following manner: northeast frontier, from Nova Scotia to Cape Cod; central frontier, from Cape Cod to Cape Hatteras; southern frontier, from Cape Hatteras to Cape Sable; frontier of the Gulf of Mexico, from Cape Sable to the opening of the Sabine to the west of the Mississippi.

The land frontier is in two divisions: the line of the North or the Lakes, separates the United States from the English possessions; the line of the West separates them from the Mexican confederation, and extends to the shores of the Pacific Ocean.

The American Union has regular troops, national militias, and a navy. Fortifications and the interior communications extended (by land and by water) became the necessary complement of its military system.

It was necessary to coordinate these communications, and these well-extended fortifications are continuations of European aggressions, of the states of the old continent. In the military system of Europe, the defense of frontiers was the first problem to resolve. Interior communications did not have importance until after the fall of the feudal system.

It is necessary to coordinate these communications and these works of fortifications in a way to cause them to contribute at once to the defense and to the prosperity of the country.

In America up to that time, there was no general plan for the armament and security of the frontiers: it was the same for interior communications. Thus, instead of having to coordinate two systems that already existed, the problem was to create a single one that responded to the double purpose of the defense of territory and the development of works of public utility.

To arrive at this end, a commission of engineers was instituted, and they were granted the important concern to create all the projects of permanent defense and combine them with a

¹⁹ Guillaume Tell Poussin, *Chemins de fer américains: historique de leur construction, prix de revient et produit; mode d'administration adopté; résumé de la législation qui les régit* (Paris: Carilian-Goëury, 1836), text in Google books; German translation by H. F. Lehritter, *Amerikanische Eisenbahnen: Geschichtliches ihrer Ausführung, Baukosten, Verwaltung und Gesetzgebung derselben* (Regensburg: F. Pustet, 1837), text at Hathitrust.

²⁰ *Chemins de fer américains ... faisant suite aux Travaux d'améliorations intérieures ...* par G[uillau]me. Tell Poussin (Paris: Carilian-Goëury, 1836). French text at Google books.

system of internal works. This commission was formed in 1816 by an act of Congress, immediately after the arrival of General Bernard. This celebrated engineer, to whom the political circumstances of 1815 [Napoléon's defeat at Waterloo] caused him to quit his homeland, sought to ask asylum in the classic land of liberty. He took with himself his reputation, well-earned as a great engineer and economist, and at once he found on this vast continent which he crossed, the occasion to develop resources of his profound spirit and rare knowledge.

If I speak of myself, after naming General Bernard, it is only to make it known with what title I write. Coming from France in the same unhappy epoch, I came to the United States, where, after having fought adversity, I entered the American Army as an officer. It was with this first title, and to apply discoveries and sketches topographically, that I accompanied General Bernard in the first investigation he made on the maritime frontier of the Gulf of Mexico. Immediately afterward, by permission of the War Secretary, I was called to fulfill the functions of aide-de-camp of the General, and without delay to become a member of the Commission of Public Works. After that we were inseparable, and I have the honor and joy of contributing to the accomplishment with him of the great work, of which I will present here the part that relates to civil works.²¹

In military terms, everything had to be created at the time of our arrival; the United States was entirely denuded of the means of defense; until then, everything that had been permanently built had no relation to any general system. They continued to guard the positions previously occupied by the Mother Country in colonial times. The difference of situations made most of these fortifications completely absurd; since if they protected the anchorages and approaches to towns, they were also destined to restrain their populations.

It was also necessary to supply the navy with yards for construction, repair, with stations, anchorages, gathering places and points of refuge protected by fortifications, defended by the regular army, by citizen militia, and capable of being supplied with men and war matériel by interior lines of communication

Fortifications must have as their objects covering and defending all the ports, to assure the military and merchant marine, to deprive the enemy of every position where, under the protection of a superior naval force, it could establish itself in the interior, maintain itself during war and hold the entire frontier in alarm; further, they must protect large centers of population whose activity naturally influences in a vital manner the destiny of the country, halting as much as possible that the great avenues of interior navigation not be closed to their entry to the ocean; they must protect interior navigation by covering and defending the various harbors and accessible points that the coast offers; finally, they must assure large maritime centers.

Interior communications must permit provisioning in security of all types gathered in stations, marshaling anchorages and construction yards; they must facilitate and accelerate the concentration of forces, so that troops may be transported from one point to another; they must also assure the means for obtaining provisions of all varieties, and maintain interior commerce intact, even during the most active wartime.

Finally, the regular army and militia constitute, along with the navy, the vital principle of the defense of the country. Following this rapid view of the means concurring to the defense of the territory, it is obvious that the system adopted by the American Union is composed of elements whose numerous relations form a whole that, alone, constitutes excellence: each part renders to the other an indispensable aid. finally, to that from the Chesapeake and the Delaware. In other circumstances, lands of the state domain were alienated to subsidize similar communications across other areas of this vast republic.

But the men who succeeded in the democratic hierarchy of the government did not interpret the Constitution in a manner as large and as liberal, suspended, at least for a time, the

²¹ Guillaume Tell Poussin, *Travaux d'améliorations projetés ou exécutés par le gouvernement générale des États-Unis d'Amérique de 1824 à 1831* (Paris: Anselin Libraire; Carilian-Goeury, 1834), introduction, pp. xx-xxii.

action of this national munificence, which had allowed to give a more decided character in harmony with their object in constructing works of internal communications. In any case, the same spirit of enterprise having grown rather than declined, the federal government was constrained to continue to intervene in improvements that were possible to render some rivers of the Union to become navigable. They were considered as great natural roads of water, and as a consequence made useful for the entire nation, the perfecting of which was possible, were executed at the cost of the federal government, which, every year, voted the necessary allocations for each particular object on the demand of district representatives who were most directly interested in these works. It is the same with works necessary to the protection of commerce on the seashore: these were planned and executed whole by the government of the Union, as in the case of an artificial port, or jetty constructed at the mouth of the Delaware. Millions were dispensed for different varieties of public works.

Like the studies for projected canals made by the companies, the same is true for the many railroads that appear every day in reports and exchanges; they are conducted, in most cases, by Army officers, who often are called upon by the companies to direct construction with a special salary that is allotted by the same companies.

Many states of the Union have adopted a pace perhaps better suited to the state they improve, for their public works; they have created a fund, called a *fund for interior improvements*, administered by a committee chosen from their legislature; this committee confers with the state engineer, and, on the plans and reports, administers the distribution of funds in the manner most favorable to the construction of the system of interior improvements submitted to the same legislature and adopted by it.

Thus, for example, the single state of Pennsylvania, which today has a population of 1,348,233 souls, an area of nearly 35,796 square miles (9,348,233 hectares), that is, 38 inhabitants per square mile or 256 per hectare, has expended in the space of 40 years, to 1833,192 million francs in works improving navigation, the construction of bridges, of Mac-Adamized roads, of canals and railroads. This state will soon have nearly 702 miles (1,129 1/2 kilometers) of completed canals and railroads crossing its territory in every direction, not including the many works built in each district at the cost of residents of the same district.

Perhaps it would not be out of place here to call the engineer's attention to the means placed at the disposal of the Commission charged to establish a *system of internal improvements*. These means are very weak relative to the purpose it must serve. There are never more than three brigades composed of officers of artillery or of engineering, numbering 15 to 20 officers, employed to carry out, under the orders of the Commission, drafting plans, making studies of levels, soundings, and generally the operations necessary to the external control of the projects proposed by this Commission. If you compare this small number of men to the immense development of constructed works, undertaken or reclaimed by the interests of different parts of the Union, you would perhaps better explain how, in this country, you can achieve such great results: the scale and the number of projects do not absorb the means of execution. In a word, the form does not devour the fund.

I believe I am fulfilling a debt of honor in presenting to my fellow Frenchmen the results of these works on which I have worked in the New World. I doubtless would have preferred to consecrate to my homeland the long years and works that I have employed with such ardor, so conscientiously, and with investigation on a land generously hospitable, it is true, but still foreign; although my weak memory prevents me. In returning to my sacred land, I am reporting at least the fruits of my long pilgrimage, the simple but precise recitation of the works, immense in extent, in their wholeness, and remarkable for their fruitful utility.

I would be satisfied if, in fulfilling my duty in a manner purely relating to and in reports with the arts if an engineer, I could offer my French colleagues some interesting documents on

these works of art, and to France a new proof that its sons, in whatever land fate has thrown them, always respond as a sacred duty to honor the French name.²²

In an inspection of the southern portion of the “maritime frontier,” which took a full year to accomplish, Bernard and Poussin traveled on the USS *Hornet* throughout the lower Mississippi and the Gulf Coast.²³

This work occupied nearly a year, and we were unable to return to Washington before the spring of the following year.

On our arrival in Washington, the Minister of War recommended that we place ourselves at the disposal of the members of the Committee of Public Works to explain our operations in Louisiana for the defense of this state. They gave us, for this purpose, the actual chamber of the committee, where I put all my charts and plans in order, in a way that they could be judged and appreciated by simple inspection. All my designs had been completed and colored. On the charts, it was possible to distinguish at first view the nature of the soil, the watercourses, the marshes, lands under cultivation, and forests. It was, I believe, the first time that such works had been placed in view of the members of Congress in these conditions of execution: Also, I could permit myself to add that our designs found a great number of admirers; further, some of the better proofs of appreciation in favor of our labors by the representatives of the land was that, after the request for funding by the executive to the House of Representatives to undertake our defense projects, the vote was unanimous.

The President of the Republic was the first to extend compliments to General Bernard, to whom the entire nation understood the exceptional military merit and utility of his presence in these circumstances.

After our return to Louisiana, I set about making the plan studies for the building of the works, which was conferred on the most experienced members of the Corps.

A map of the whole of Louisiana indicated the places designated to be occupied by forts, whose importance varied with the nature of the places: some were casemate forts, the others were simple coastal batteries with shelters enclosed and calculated nevertheless to repel each active attack from outside.

Finally, I can confirm here that these various works were built within the limits and provisions of the specifications that we had prepared in advance.

The new system of national defense adopted for the maritime frontiers of the Union rested on the erection of permanent fortifications in exceptional positions on the coast, as well as the collection of floating steam batteries, protected and located on coastal inlets of difficult access, and as a consequence nearly unassailable.

After a visit of some weeks at Washington, the Commission, composed of Captain Elliot of the Navy, of General Swift, of Colonel Totten and General Bernard, of Major Kearney, of the topographical engineers, and of its brigade of officers to take the plans, and myself, attached to the Commission as assistant, descended the Potomac aboard a steamboat that facilitated the rigorous examination of this magnificent river, which went to enter Chesapeake Bay, an immense reservoir or interior sea where gathers equally the *Susquehanna*, the *Rappahanoc*, the *York* and the *James*, and on which is found *Richmond*, the metropolis of Virginia.

So, Chesapeake Bay occupies, as a consequence, perhaps the most important rank in the hydrography of the United States; it is open to the sea over a width of nine miles.

²² *Ibid.*, introduction, pp. xxii-xxx.

²³ The *Hornet*, a brig-rigged sloop of war, was the third of eight ships of that name in US service, launched in 1805 and lost at sea in 1829. The seventh *Hornet*, CV-8, was used to launch the Doolittle attack on Japan in 1942, and the last *Hornet* picked up the first astronauts returning from the moon and is preserved as a memorial.

As a result, the Commission was particularly occupied in researching and studying a system of defense, to cover this bay's entry to the sea, at least one that offered the most serious as well as the most effective guarantee to arrive indirectly at the same result: to block a foreign fleet attempting to penetrate the interior of this immense bay, a natural reservoir of the grandest rivers that regaled this region of the American continent.

To this effect, the Commission particularly studied the whole range of the watercourses constituting Hampton Bay, at the mouth of the James River, and the rivers composing the basin of the ports of *Norfolk* and *Gosport*, on which is found the *maritime establishment of the United States*.²⁴

Further expeditions laid the groundwork for the creation of the intra-coastal waterway along the eastern coast of the United States. In 1817 almost fifty days on horseback were expended searching out the proper path of a *National Road* from Washington to New Orleans. Three possible paths were developed for the final choice of the Commission.²⁵

After the organization of a *Commission of interior improvements*, I was named adjunct engineer, a situation which I continued to fill until the end of my mission; it is to this special circumstance that I gave to the public in 1834 on my return to France my first work on the United States ...

A permanent and entirely special order was given to this Commission that each time its operations of reconnaissance was required to cross certain valleys or watercourses, it would immediately study projects of improvement whose localities could be susceptible. It was in this epoch that the Commission concerned itself with the celebrated canal from the Chesapeake to the Ohio, of which my first publication contains all the statistical and scientific details, plans, cross-sections, tracings and estimates, and to which I refer to know all the important works. In 1827, the Commission was equally charged to do a reconnaissance of the territory of the Floridas, with the purpose of determining the most advantageous path for a grand navigation canal between the *Atlantic Ocean* and the *Gulf of Mexico*. In this same year, the Commission was equally occupied to determine the path of a national postal road between *Baltimore* and *Philadelphia*, and later the canal joining the *Mississippi* to *Lake Pontchartrain* near New Orleans.

In the eastern states, the Commission had to examine the path of a canal that was to open direct communication of the *head of Chesapeake Bay* to *Delaware Bay*, an object of great importance.²⁶

It was at the point in time when he was just beginning to encounter the true American prairies, in which he could still see the paths left by migrating Indian tribes, that Poussin's American reverie was interrupted by the call of his homeland. General Bernard departed almost as soon as he learned of the overthrow of the reactionary King Charles X in July 1830. He would be elevated to a peer of France and became a Lieutenant General of Engineers under the new King Louis-Philippe. Guillaume Tell Poussin would postpone his return until 1831, still retaining his rank as an American Army officer on his passport.²⁷

On returning to France, Guillaume Tell Poussin undertook a survey of the railroads of Great Britain and of the progressive state of Belgium, newly independent in 1830 after rebellion from the

²⁴ Ibid., pp. 95-96.

²⁵ Ibid., p. 105.

²⁶ Ibid., 106-9.

²⁷ Ibid., p. 135.

Kingdom of the Netherlands created by the Congress of Vienna. As already noted, members of a branch of his own family would pass to Belgian service, and the new “liberal” kingdom would promote an entrepreneurial style that reminded Poussin of the United States. Poussin became a regular contributor to *Le National*, a bourgeois liberal Paris journal in the hyperactive political stew of Orleanist France. He would also begin publishing books on American themes, including three subsequent editions on the power and progress of the United States (translated into English in 1851), which helped make him the resident expert on the North American republic.²⁸ In 1836, he would add a volume on American railroads that picked up the story of Internal Improvements from the end of the canal age into the railroad age.²⁹

This 1836 survey of American railroads would attract considerable attention, including an immediate, thorough translation into German, which also reproduced his technical illustrations.³⁰

The survey of America railroads Poussin produced was the first of several grand treatments of an American railroad system in French that would surpass anything existing in English. The 1836 book set out to give a review of the “double system of communication” (by train and by water) that was followed in the United States. He began by defining the axis of the system as the “Atlantic Line,” running from New England in the north to the American south. From this axis, lines would be extended to the West at advantageous points.

Like many other foreign visitors to the United States in the era, New England stood out as the proper starting point of the American adventure. Poussin saw the greatest motor of expansion to be the spirit of speculation intended to increase the value of property:

Along the Atlantic shore, where the population is more concentrated, properties are more divided and have a much higher value. But there, considerations of a moral and political nature work their salutary influence in favor of great, fine enterprises. There we attach high importance to them because we consider them as the chief cause of this state of prosperity to which this nation has arrived today, marching constantly toward a progress of which no other people can present an example. It is in America that they appreciate the value of time; they employ it; here it is used.

This real value given at the time among this people, where the spirit of speculation lies beneath almost all social relations, becomes, so to speak, an element represented by each member of this large community; someone who is not attached to the society by a useful occupation seems not to belong and is almost considered to be a *pariah*. There, generally, each is occupied by his personal well-being, but since the society is organized in that well with this well-being cannot find a place except in association, the result is this extraordinary activity that causes such a rapid progress toward civilization in this young and entrepreneurial people.

This explanation of the dominant character among any inhabitant of North America makes it easier to comprehend the narrative we will present of the prodigious development that has seized this land in applying the railroads and the general disposition to favor all industrial enterprises.

²⁸ Guillaume Tell Poussin, *De la puissance américaine: Origine, institutions, esprit politique, ressources militaires, agricoles, commerciales et industrielles des États-Unis* (Paris: W. Coquebert, 1843), text on Hathitrust; two further French editions (1845, 1848); English translation by Dr. Edmund L. Du Barry, USN, *The United States; its power and progress* (Philadelphia: Lippincott, Grambo & Co., 1851; London: Thomas Delf, 1851), text on Hathitrust; the first American edition also available, derived from the 3rd Paris edition.

²⁹ French text, literally a sequel to the publication of 1834, is available in the Hathitrust Digital Library, *Chemins de fer américains; historique de leur construction, prix de revient et produit; mode d'administration adopté; résumé de la législation qui les régit. Par G[uillau]me-Tell Poussin* Paris: Carilian-Goeury, 1836 [“American Railroads: History of their construction, original costs and profit; mode of administration adopted, review of the legislation that controls them, by William Tell Poussin, Paris: Carilian-Goeury, 1836].

³⁰ *Amerikanische Eisenbahnen*, ed. H. F. Lehritter (Regensburg: F. Pustet, 1837).

Since the introduction of this mode of transport in 1826, North America has become literally covered by a network of new routes between the furthest points of the republic, permitting to all the products of industry to find advantageous markets and to expand to all surrounding points.

It is to describe the whole of all these routes of iron, the various modes of transportation that are being applied, the works of art made necessary, and the mode of administration that rules these enterprises, that we dedicate the following pages, persuaded that it will not be without interest for men of the art thus to follow the details, the circumstances, that have determined the adoption of this or that path, of this mode of construction.

We have divided this work into four parts: in the first we will describe all the railroads executed or in the course of execution on the coast of the Atlantic; in the second part, all the railroads constructed to unite this first line with the interior or the West. These two parts will make known the double system of communication followed. Having described the most significant paths to the present day, the different modes of construction adopted according to the localities or destination; their price of purchase for each example cited, and finally their profit.

The third part contains the details of the administrative economy of American railroads, the calculation of costs of repair, maintenance of routes, the locomotive machines and the material transported, finally everything involved in the administration of these enterprises.

In the fourth part, we have united all the legislative documents of the material of the railroad, their control, the administration of works, in a word, everything that is associated with this industry in American legislation.

To make the whole more understandable, we have attached a physical map of the United States, on which is traced the chief navigable rivers, the canals and all the railroads built, in course of completion, or projected. At the end will be found some plates to give an idea of the various modes of construction cited in the course of this work.³¹

In 1839, he would compose a comparison of the system of French railroads, then just barely getting underway, with those in other countries, and an appended review of a British Parliamentary investigation of the English railroad system.³²

On 8 November 1839, Poussin mourned the death of his greatest sponsor, General Simon Bernard, who received a funeral mass at Église St. Roch in Paris and burial in Montmartre Cemetery. Poussin had nervously watched General Bernard deteriorate under the weight of his duties as Royal War Minister.³³

In 1841, he published a book-length review of the first half of Alexis de Tocqueville's *Democracy in America* with Tocqueville's own publisher.³⁴ He would continue to be deeply involved in

³¹ Ibid., pp. 8-9.

³² Guillaume Tell Poussin, *Examen comparatif des questions des Chemins de fer en France et dans l'étranger* (Paris: L. Mathias (Augustan), Quai malaquais, 15, 1839). Google books.

³³ *Chemins de fer américains*, 158-9.

³⁴ Poussin, *Considérations sur le principe démocratique qui régit l'Union américaine, et de la possibilité de son application à d'autres états* (Paris: C. Gosselin, 1841), Google books.

the fate of the United States, composing a book on the “Oregon Question” in 1846, largely derived from contemporary newspapers and sources in French libraries.³⁵

When the regime of Louis-Philippe was abruptly ended by street-riots in early 1848, Poussin would personally press the American representative in Paris to recognize the newly-proclaimed Second Republic, and Poussin was quickly chosen by the head of the provisional government to be minister of the Second Republic to the United States. His return to America, however, was to be brief, since a dispute over the seizure of a French merchant vessel as prize of war forced his recall by President Prince Louis Napoléon, on the advice of Alexis de Tocqueville, now foreign minister, after the American Secretary of State took offense at Poussin’s written protests.³⁶

It is only at the end of his memoirs that Poussin bothered to mention that he had a wife, although he had occasionally mentioned the existence of a “family,” which in French terminology, could also mean servants in a household establishment. His wife, Louise Roux, was the mother of his only known offspring, his daughter Camille Emma Aline (1853-1919). She was a sculptress known professionally as “Anna Nallet-Poussin.”³⁷ He would live in the 76th Paris district, “*Quartier du Combat*,” in the east of the city between the old toll barriers of the *Ancien Régime* and the newer defensive walls associated with Adolphe Thiers and the Third Republic. The latter part of his life remains unwritten and awaits its historian in Paris. His death would come on 7 November 1876.

Anna sculpted a plaster image of her father, bearded in his old age, which is placed on his headstone at Père Lachaise cemetery in Paris and reproduced in at least one online description of the grave.³⁸

Although his newly-appreciated memoirs are just a start, Guillaume Tell Poussin himself has provided the essential framing narrative to enable us to interpret and render coherent the materials presented in abundance in his many other publications to provide a narrative of the founding years of the US Army Corps of Engineers.³⁹

³⁵ Poussin, *Question de l’Orégon* (Paris: W. Coquebert, 1846), Google books.

³⁶ Poussin, *Les États-Unis d’Amérique*, pp. 174-190; for documentation in English see Aurelian Criautu, Jeremy Jennings, eds., *Alexis de Tocqueville after 1840: Letters and other writings* (Cambridge University Press, 2009), pp. 409-451, “The Poussin Affair.”

³⁷ The only recent notice of her is in sensational French press reports of what was thought to be the mummified head of King Henri IV, which had been in her possession at her death in 1919. See https://fr.wikipedia.org/wiki/Controverse_autour_de_la_tête_d%27Henri_IV.

³⁸ Guillaume Tell de la Vallée Poussin, Père Lachaise Cemetery, (section 20, 1st line, U, 22), www.appl-lachaise.net/appl/article.php3?id_article=2109.

³⁹For a general description of American railroads at the time, see Michel Chevalier, *History and Description of Routes of Communication in the United States, and the Works of Art that depend upon them*, English from French by Steven Rowan:

Vol 1: <https://dl.mospace.umssystem.edu/umsl/islandora/object/umsl%3A247900>;

Vol 2: <https://dl.mospace.umssystem.edu/umsl/islandora/object/umsl%3A248039>;

Plates: <https://dl.mospace.umssystem.edu/umsl/islandora/object/umsl%3A225148>.