

Gzowski legacy withstands test of time

Casimir Gzowski has come to occupy a prominent rank among Canada's 19th century engineering pioneers. Combining talents as an organizer, project manager, entrepreneur and builder, Gzowski's accomplishments and personality brought new prestige to the profession.



BY MICHAEL MASTROMATTEO

Debate continues today, more than 100 years after his death, as to Sir Casimir Gzowski's overall significance to the engineering profession in Canada.

Some historians regard Gzowski as a master engineer whose work with trans-

portation infrastructure ushered in the economic expansion and growth of the 20th century. Other observers suggest his significance comes primarily from his gifts for organization, supervision and building on the talents of others. Whether it is as a civil engineer, contractor, business opportunist, or

would-be aristocrat, there is little doubt Gzowski's achievements played some role in bringing prestige to a fledgling engineering profession.

Perhaps his life and work may help to inform today's engineers, as the profession seeks to highlight its importance to public safety and to developing more effective public policy.

Early years

Born in St. Petersburg to a Polish noble family in 1813, Gzowski received the extensive, rigorous, military-focused education expected of a certain social class and distinction. After graduation at age 17, Gzowski joined the Imperial Corps of Military Engineers, where he gained rudimentary experience in land surveying that would pay dividends later in his life in North America.

Coming to maturity in Europe's Age of Rebellion, Gzowski was caught up in Poland's struggle for greater independence against combined Russian and Austrian forces. He joined up with a Polish brigade and, despite some initial success, by 1832 was one of about 4000 captives languishing under Austrian military detention. But bowing to public opinion sympathetic to the Polish freedom fighters, Austrian authorities resisted pressure to subject the detainees to 19th century Russian justice, exiling scores of them instead to New York City. Gzowski was among two boatloads of émigrés to arrive in New York harbour in March 1834.

In fact, it was a watershed moment in his fortunes. After offering his services as a languages and fencing tutor, Gzowski found work as a legal assistant in Pittsfield, MA. He later traveled to western Pennsylvania, where he abandoned legal practice to become a railroad engineer with an Erie, PA-based railway company.

Historian H.V. Nelles notes that the boom in railway, bridge and canal building in the Great Lakes basin provided real opportunities for someone of Gzowski's unique skill set. "He [Gzowski] closely

observed Yankee ways, especially the manner by which successful businessmen conducted their affairs through the careful drafting and enforcement of binding contracts,” Nelles observed. “A secret of his later success was his bringing the skills of a Yankee lawyer to the rough-and-tumble world of Canadian railway contracting.” Gzowski’s reputation as an engineer with keen legal-business acumen emerges at this time and would become more pronounced with subsequent chapters in his dynamic life story.

Public works projects

Business opportunities eventually led Gzowski to Ontario (Upper Canada), where his skill and experience in railway construction brought him to the attention of Canada’s governor general, Sir Charles

sound technological practice and his work was both excellent and widespread, embracing roads, bridges, surveys, harbours, canals and lighthouses.”

As his entrepreneurial instincts took hold, Gzowski left government service to develop his own companies to build railways and mill iron. One of his chief accomplishments in the mid-1850s was the extension of the Grand Trunk Railway from Toronto to Guelph. The new line was part of a railroad building boom seeking to capitalize on moving goods back and forth between the eastern seaboard to Detroit, Chicago and points farther west.

As his reputation as a successful project manager grew throughout the new Dominion of Canada, Gzowski was frequently called on to head up government commissions, most often dealing with

wealth, an estate, a dignified bearing, and a full mane of white whiskers took the edges off his driving ambition. The Gzowskis, now staunch Anglicans and splendid hosts, had entered the highest ranks of Toronto society. The assessment rolls record this ascent as Gzowski’s stated occupation changes from engineer to contractor to gentleman.”

Gzowski’s rise in social fortunes allowed for at least one more engineering triumph. In 1870, his firm won the contract to build the International Railway Bridge over the Niagara River between Buffalo, NY and Fort Erie, ON. Despite difficulties imposed by the swift current, uneven water depth and hazardous ice floes, by 1873 Gzowski’s team had completed the bridge project to the satisfaction of all parties. The bridge is considered by many to be Gzowski’s crowning civil engineering accomplishment.

There would be additional appointments and honours coming his way between the completion of the International Railway Bridge and his death at age 85 in 1898. But for the engineering profession, one of the most significant must be his role in the founding of the Canadian Society for Civil Engineering (CSCE) in 1887. Gzowski served as the CSCE’s second president, from 1889 to 1892, and remained fully committed to an organization dedicated to advancing the interests of practitioners and extolling the “usefulness” of engineering to the public. Today, the Gzowski Medal is awarded annually by the CSCE to recognize the best paper on a civil engineering subject in the area of surveying, structural engineering and heavy construction.

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Bagot, who prevailed on him to take up permanent residence in Upper Canada. Accordingly, in the early 1840s, Gzowski accepted the position of superintendent of roads and waterways in the London (Ontario) district.

As a government employee, Gzowski devoted his energies to improving roads, highways and smaller bridges in southwestern Ontario. He was also involved in improving and extending Yonge Street from Toronto north to the Lake Simcoe area.

In a May 1967 article in *The Professional Engineer and Engineering Digest*, L.E. (Ted) Jones, P.Eng., discusses the growing sophistication of Gzowski and of engineering practice. “He [Gzowski] represented the emergence of engineering from its rule-of-thumb beginnings to

transportation. His study of the Great Lakes canals and the St. Lawrence River, for example, anticipated the future development of the St. Lawrence Seaway.

Personal gain

Yet despite a reputation for integrity and thrift, there is no doubt Gzowski combined his engineering skills with his ease with business leaders and politicians for significant personal gain. His aspirations to greater rank and social status culminated in 1890 with a knighthood bestowed by Queen Victoria, and his being named an official aide-de-camp to the British monarch.

As historian Nelles observes, “By the end of the 1860s, Gzowski had managed to shed the buccaneering image...Age,

Code of ethics interest

In their 1959 biography *Sir Casimir Stanislaus Gzowski*, authors Ludwik Kos-Rabcewicz-Zubkowski and William Edward Greening reveal that after his official retirement from the CSCE, Gzowski devoted himself to developing a code of ethics for engineers.

They also raise the issue of Gzowski’s legacy as a historical figure and as an inspiration to engineering practitioners. “Because of his sterling personal integrity and his very high standards, his career must remain an inspiration to others of

his profession,” they note. “His many sidedness and keen interest in matters far removed from the engineering field show well that an engineer does not need to be a narrow specialist, confining his interests solely to his own sphere, but that he can exert an important and vital influence in many facets of national life.”

Other commentators have noted other facets of Gzowski’s influence. Norman Sheffe, in his 1975 work, *The*

Canada’s first prime minister, John A. Macdonald. Yet his ambivalence toward elected political office seems pertinent today as PEO engages in a government liaison program designed to highlight the value to the public of the engineering licence and to remind legislators of the public interest benefits of professional self-regulation.

Undoubtedly, Gzowski’s celebrity proved of lasting value to a profession anxious to flex its technological muscle as the rel-

dom Brunel in the UK,” Wallace says. “Although he lent his support to engineering institutions such as the CSCE, the record indicates that he tended to be more of an organizer than an agent of innovation and change. Some would describe him as an opportunist, but he would not have been such a successful entrepreneur if he had not taken advantage of an opportunity when it appeared.”

Wallace’s colleague, Alistair MacKenzie, P.Eng., past president of the CSCE, sees Gzowski as an early example of the team leader and project manager common to today’s front-line engineering practitioner. “Because of his engineering and contracting expertise, he was able to manage his projects in a manner very similar to that used by present day managers leading the multi-disciplinary teams that are necessary to carry out today’s mega-projects,” MacKenzie observes. “It was Gzowski’s expertise in all aspects of what we now call project management that enabled him to work effectively with government bodies, financiers and business entrepreneurs and to carry out his projects generally in a timely and cost effective manner.”



Canadians—Casimir

Gzowski, observes that Gzowski was more likely to complete major projects by relying on business leaders than on government officials. Similarly, H.V. Nelles reports that despite his rapport with politicians, Gzowski eschewed an elected political role for himself.

“As he rose in society, Gzowski firmly resisted the blandishments of politics. Unlike his former partners, all of whom had tried their hand with varying degrees of success, and even some of his erstwhile engineering colleagues, such as Walter and Francis Shanly, Gzowski stood resolutely on the sidelines.”

Gzowski nevertheless must have enjoyed some influence among legislators, given his many appointments and his years of friendship and service to

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actively young Canada moved to embrace the 20th century. Reginald Wallace, P.Eng., chair of the CSCE’s history committee, believes this “prestige” factor is Gzowski’s greatest claim to engineering fame. “There is little evidence that he was an innovator, such as Isambard King-

And while MacKenzie believes Gzowski ultimately advanced the “business” side of engineering more than the profession’s technical or professional aspects, he also believes Gzowski deserves his place in the heroic era of Canadian civil engineers who developed the country. ◆