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### Christina Cameron, *Charles Baillargé: Architect and Engineer, Montreal and Kingston*, McGill-Queen's University Press, 1989. Pp xxiv + 201, notes, bibliography, index, illustrated.

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Christina Cameron, *Charles Baillairgé: Architect and Engineer*, Montreal and Kingston, McGill-Queen's University Press, 1989. Pp xxiv + 201, notes, bibliography, index, illustrated.

*Charles Baillairgé: Architect and Engineer* is one of those rare books in which the dedication and commitment of both author and publisher have transcended the bounds of normal scholarly works. It is based on a doctoral dissertation which in turn grew out of a love and fascination with Canadian buildings and their creators, particularly those in Québec.

Dr Christina Cameron and McGill-Queen's University Press have done justice to their subject, no mean feat given the extraordinary achievements of Baillairgé and his great significance as a transitional figure at a time when the world of ar-

chitecture, building materials and systems were changing rapidly and significantly. The book is as beautifully laid-out, illustrated and printed as it is carefully researched, written and documented.

Charles Baillairgé, 1826-1906, is known primarily as a Québec City architect. Trained also as land surveyor and civil engineer, he was, in addition, inventor, mathematician and a most prolific author with at least 253 books, articles and pamphlets to his credit. His great outpouring as an author is attributed in large part to the need to 'compensate for the boredom...experienced during a period of over thirty years as city engineer' of Quebec City (xvii). He did some work outside of the province and sought unsuccessfully to become chief architect of the Department of Public Works. In common with other great nineteenth century technical figures such as Thomas Coltrin Keefer or Samuel Keefer, Baillairgé ran afoul of government bureaucracy as well as the sometimes incestuous and not overly honest contracting system. Three fascinating chapters (pp 75-109) on his adventures with the Department of Public Works bring out his 'crusader's distaste for dishonesty' and 'natural predilection for honesty and...outrage at corruption.'(103) Hence, one reason for his failure to achieve the coveted goal in Ottawa and his decades of productive and dedicated work as Québec City engineer where, in Baillairgé family tradition, he defined the normal work day as dawn to around midnight. Workaholics are nothing new, nor the desire to escape. 'This mania for work seems to me a disease which I would that I could master. It runs in the family as the saying is, and yet I know, I am told it every day, I shall never get any thanks for it. I have a brother now 20 years in the government service in Ottawa...he too has the execrable habit of working out of office hours, t'is in the nature of the animal.'(113)

Canada is probably far richer for his failure to achieve the coveted goal in Ottawa even though it certainly made Cameron's task of evaluating his career far more difficult. His architectural output was immensely varied but frustration, boredom, and an active imagination drove him to many other areas of activity. Chapter 11, 'Baillairgé the Educator,' begins: 'During the years that Baillairgé worked as city engineer, he actively promoted the dissemination of scientific and technical knowledge through his own lectures, publications and inventions. It was his significant contributions in this sphere, rather than his productions as city engineer, that won him local, national, and even international recognition in the form of medals, diplomas, titles, and enhanced social standing.'(130) Cameron concludes that 'more than anything he had done in the field of architecture or engineering, Baillairgé's initiatives in the field of education and the dissemination of technical subject matter--in particular the Stereometrical Tableau and to a lesser extent the dictionaries--guaranteed him a secure place in Canadian biographical literature.' (138)

Baillairgé's educational activities and concerns underscore one aspect of the best nineteenth century technical professionals, namely their ardent belief that narrowness was not the road to progress and betterment of society. In the predominantly architectural chapters, the titles alone suggest the breadth of both Baillairgé and his biographer: *First Commissions: Experiments in Neoclassicism and the Gothic Revival*; *Discovering Greek Revival: Quebec Music Hall*; *Innovations in Construction Technology: Laval University Buildings*; *Religious Commissions: Sainte-Marie de Beauce*. However, with a life so creative and varied as Baillairgé's, readers should not simply dip into the chapters corresponding to their interests and ignore the rest for there is simply too much to miss. In Chapter 10, *Quebec City Engineer*, there is, for example, the Baillairgé who, 'always quick to spot an opportunity for some new venture...used public festivals and carnivals as pretexts to create imaginative arches, towers, fountains and other monuments that required modern materials and technology.'(124) These designs, some of which were built, range from somewhat traditional to breathtakingly modern. They showcase the range of his remarkable imagination and an awareness of new materials and styles which was tempered by the engineer's concern for buildability.

His unceasing quest for new areas of work and transfer of knowledge from one field to another led, for example, to his designing the *Indestructible*, an unbuilt polar vessel based on principles and 'experience in constructing shock-resistant wharves for the city' of Québec where ice loading was a major problem.(128) Baillairgé's inventiveness is possibly more than a release from boredom and frustration. Surely it also stems from the imagination and openness so loved by children and it is perhaps unfortunate that while his workaholic ways left time for fathering 20 children, they undoubtedly left little time for nurturing.

*Charles Baillairgé: Architect and Engineer* also merits attention as a document in the growth of government-encouraged historical studies in Canada. The post-1960s growth of Canadian architectural history as a discipline is a wonderful field for intellectual historians concerned with the interplay of factors such as scholarship in other countries, cultural values, individuals, government and funding agencies as well as various educational and cultural institutions. In that story Phyllis Lambert and the Canadian Centre for Architecture will loom large, so too Christina Cameron and the Canadian Inventory of Historic Building.

In her preface Cameron writes, 'my interest in Charles Baillairgé began in 1970 when, as a new resident in Québec City, I was hired by the Canadian Inventory of Historic Building, at that time part of the National Historic Sites Service of Parks Canada, to work as a research assistant for A.J.H. Richardson, an authority on Québec City architecture.'(xiii) The Canadian Inventory of Historic Building (CIHB) has done much to gather and preserve fundamental documentary information regarding Canadian architecture. Moreover, it has done more

than any other single organization or group in the combined work of legitimizing and promoting Canadian architectural history, training scholars and giving them the opportunity to blossom. It is a curious, and ultimately sad, comment on Canadian values, personalities, and perhaps even lack of nerve and imagination, that in the Canadian Inventory of Historic Building the word 'Building' was interpreted to mean primarily buildings of architectural rather than engineering significance. Consequently, CIHB research has been primarily narrowly architectural and stylistic rather than broader so as to encompass engineering, structural, materials and systems approaches. During the crucial and potentially flexible early years of CIHB, engineering was not interpreted to be part of building and a government initiative which might have promoted and integrated architectural and engineering history to the mutual enrichment of both was directed primarily to the former. What is sometimes seen as the equivalent engineering initiative--but was not in fact--namely the Canadian Engineering Heritage Record with which Parks Canada was involved was as ill-conceived as it was ill-fated.

In some circles it is fashionable, but the reviewer thinks foolish, to deride the idea of government institutions playing major roles in the direction of historical research. The role of CIHB and the work of Dr Cameron are laudable examples of the benefits. For a nation to have fruitful scholarship, it must have places of inspiration and growth in addition to centres for basic training. So fine a book as *Charles Baillairgé: Architect and Engineer*, so fine an author as Christina Cameron, were inspired and grew together in the institution that in the 1970s was undoubtedly the most important single factor in legitimizing Canadian architectural history as an independent discipline and a defensible cause. As an historian whose primary interest is engineering, I am thankful that Baillairgé was both architect and engineer for were he solely the latter, it is most likely there would be no biographical study of such stature. The discipline of Canadian engineering history is finding a few sheltering nooks and crannies but still seeks the inspiration, stamp of legitimacy and opportunities for growth similar to those which the Canadian Inventory of Historic Building gave to Canadian architectural history and to Dr Cameron who is now Director General for the National Historic Parks and Sites Directorate in Ottawa.

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