industry, has been badly ignored by historians of technology. The type of transmission system used certainly influenced the size, construction and layout of equipment and factories. Newell is to be congratulated for starting to look at this neglected topic in Canada.

The overall concentration on large, spectacular structures and systems has created a bias in favour of masonry, steel and concrete structures, such as Gooderham & Worts, the Whirlpool Rapids Bridge and the Peterborough Lift Lock. As many of these structures are "monumental," they do not reflect the common practice or usual forms used in Ontario. Few ordinary structures or industries are discussed in the book. For instance woodworking only appears as part of the chapter on belt and line shafting.

The selection of large masonry structures at the beginning of the book also emphasizes the British tradition of permanence. The American influence is not detectable in the early period perhaps because American structures were wooden and very susceptible to fire and change. The American influence is more apparent later on as engineering became more of a science.

The Canadian contribution in the early days, according to the authors, is in bringing together various technological elements and adapting them to Canadian conditions. Even when structures were almost entirely imported, Canadian superintending engineers, contractors and workers were crucial to the success of the project. This fact has not been appreciated often enough for structures such as the Victoria Bridge. It was the turn of the century before Canadian engineers began to design and build their own significant structures such as the St. Clair Tunnel and the Peterborough Lift Locks.

One of the strengths of the book is the use of visual images. Photographs show what a structure looked like at a given time, its evolution, its relationship to the surrounding environment and important details of its construction. The historical photos have been selected with great care and Greenhill's own photos bring the story of each structure up to date.

By using only text and photos, the industrial archaeology in Survivals becomes quite "soft". There is only one recent map and diagram in the book. Missing are diagrams of structures and machinery, tables giving dimensions or capacities, and lists of equipment or processes employed. Information of this type would have given this book a harder edge and made it more valuable as a source of engineering and technical history. It would have also made it useful for comparisons with similar structures in Canada or elsewhere in the world. Within the chosen format, however, the authors have produced a beautiful and useful introduction to industrial archaeology in southern Ontario.

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Brandon: Geographical Perspectives on the Wheat City was created by members of Brandon University's Geography Department to commemorate the twenty-fifth anniversary of their department and is dedicated to its founder, Dr. John Tyman. This collection of eleven essays by present and former members of the department and a provincial urban planner attempts to describe and explain the development of this prairie urban centre from geographical points of view. The underlying theme of the book is that the fortunes of Brandon cannot be considered in isolation from the region in which it is located. This emphasis on the relationship between this particular urban centre and its immediate hinterland reflects the geographers' traditional interest in the region, a perspective recently advocated by urban historians such as Chad Gaffield and Gilbert A. Stelter, who argue for a regional approach to the study of urbanization.

The first three chapters provide a standard geographic description of the setting. John Welsted describes the site and situation of Brandon and lists the themes discussed in the subsequent essays. In the next chapter, Welsted outlines how the shape and form of the Assiniboine Valley and the flow characteristics of the Assiniboine River have influenced the development of the city. This introduction is followed by a description of the climatology of Brandon and its surroundings by Rod McGinn.

In chapter four, John Everitt and Christoph Stadel outline the spatial growth of Brandon within a context of historical evolution. The authors explore the impacts of the C.P.R. and land speculation on the initial settlement of the city and then document the main stages
of Brandon's development right up to the present. A spatial model of Brandon's social areas according to class is developed for the period 1881 to 1914 using a combination of individual housing unit data and social area data for 1883, 1907 and 1914. Social areas were found to conform largely to zonal, sectoral and nucleated patterns, but factors peculiar to the city - the railways, the river, early land developers, and the streetcar system - accounted for some variation from the norm. The essay concludes with a conceptual model showing the factors affecting suburban development in Brandon. The uneven spread of the city's suburbs is related to a variety of environmental, social and political forces.

Alison Gill applies factorial ecology techniques to discern the social character of Brandon in chapter five. This analysis is based on 1971 census data for enumeration areas and examines the spatial correspondence of seven components with concentric, nucleated and sectoral patterns. The results show that the four major components of family status, economic status, household status, and ethnic status account for much of the variance in social areas, a result similar to that found in other Canadian cities, leading Gill to support the theory that there is a common underlying dimension of community structure in North American cities.

In chapter six, Paul Curtis examines the development of Brandon's manufacturing sector. Once again, the geographical perspective is evident in the use of such fundamental concepts as factors of location, basic and non-basic functions, and location quotients to explain Brandon's failure to break its dependence on its agricultural market function and to industrialize. The essay concludes that Brandon has no inherent advantages for large scale manufacturing and is disadvantaged by its position relative to Winnipeg and Regina, both capturing the break-in-bulk role for the eastern and central prairie regions respectively. The manufacturing that has developed is tied almost exclusively to the region's agricultural base and has fluctuated with the fortunes of that base.

The next essay on Brandon's downtown, by Stadel and Everitt, focuses on the gradual deterioration of the city's central business district and reviews suggested plans for redevelopment. The concept of the Peak Land Value Intersection and the Central Business Index are used to delimit sub-areas and functional clusters within the central business district and the residential densities within the CBDs of large urban centres and Brandon are compared. While residential densities tend to be lowest around the peak land value intersection in many large centres, the opposite is the case for Brandon. The problems of downtown Brandon and the resultant negative consequences for the community as a whole are examined and the recommendations of the city's development and redevelopment strategy are outlined.

The regional focus of the book is again evident in Everitt and Stadel's chapter on the urban fringe. The authors find that the problems encountered in Brandon's fringe are the same as those identified as being common throughout Canada. Ron Tompkins, a planner with the Municipal Planning Branch of the Province of Manitoba, relates the history of planning in Brandon to the development of urban planning in general and provides a brief overview of the current planning program in the city in chapter nine. Of particular importance to those with an historical interest is Tompkins' identification and discussion of those factors that have contributed to the present pattern of urban development in Brandon. A critical analysis is made of Brandon's current development plan and some speculations are made about the city's future.

The geographer's concerns with the region and the principle of centrality are evident in Stadel and Everitt's essay on Brandon's role as a service centre in southwestern Manitoba. This standard central place study of the service centre hierarchy emphasizes those factors that account for Brandon's primacy in the region and identifies the spatial extent of the city's service areas. The concluding chapter by the editors projects some trends to the year 2000 based upon the major findings presented in each of the interpretative essays. They foresee little change in Brandon's primary role as a service centre for the agricultural region.

Brandon: Geographical Perspectives on the Wheat City is very much a typical geographical interpretation. What makes this book of special interest to urban historians is its emphasis on the interaction between the city and region and the fact that it examines the development of a second order centre that nonetheless carries out an important role in the prairie urban hierarchy. The essays in this volume reflect the geography department's strong commitment to its local region and its encouragement of student research. The authors refer to twenty student papers and theses, eighteen from Brandon, in
their analyses. While the essays are place-oriented, they do attempt to place Brandon within theories and models pertaining to urban development. At times, the reference to such concepts and models make it difficult for the non-geographer to understand what processes are at work, but the book is generally well written and readable and the figures add much to the discussion.

However, there are some criticisms to be made. McGinn, in his essay on Brandon's climate, makes the amazing statement that because it gets a lot of sun the city is "a great place to live, there being only a few major urban centres which can provide a comparable psychological climate." This is clearly an environmentally deterministic view as there are many other factors that are part of the psychological climate. While Everitt and Stadel provide a competent overview of the growth of Brandon, there is little discussion of the role of nonspatial factors in the development process.

Gill's chapter on Brandon's social areas is lacking in many respects. The discussion would have benefitted from a table comparing the factor loadings of Brandon with those of the larger Canadian cities chosen for study and a calculation of the coefficients of congruence between Brandon and these centres to verify the apparent similarity between the components. There is no discussion at all of the serious criticisms directed toward the factorial ecology approach to understanding residential differentiation and there is little examination of the housing market and the roles of real estate agents and financial institutions in the development of social areas. Gill bases most of her discussion of social areas on the factorial ecology analysis completed by an undergraduate student and neglects dimensions of class, culture and politics in the residential makeup of Brandon.

In the final analysis, it is the book's failure to define a central argument that is the greatest disappointment. What is missing is a provocative interpretation of Brandon's role as a second order centre in the Canadian system of cities. The regional approach to the study of the urbanization process is reflected in the book's emphasis on the relationship between Brandon and its hinterland. But to fully appreciate the development of places like Brandon - second order centres with their own regional hinterlands and yet dependent in many ways on the fortunes of the larger region and its metropolitan centre(s) to which they are subordinate we must, as Fred Dahms states, in "'Regional' Urban History: Small Towns and their Hinterlands, 1820-1985," in Urban History Review xiv, appreciate their places and functions in systems of settlement that have evolved over time and space." The concluding chapter fails to place Brandon within a larger discussion of second order centres in Canada and comment on those features that make this city representative of this level of the Canadian urban system. While the book does provide geographical insight into the growth and development of this important prairie centre, its idiographic focus does not enhance our understanding of Brandon's role and position in the larger region and in the country as a whole.