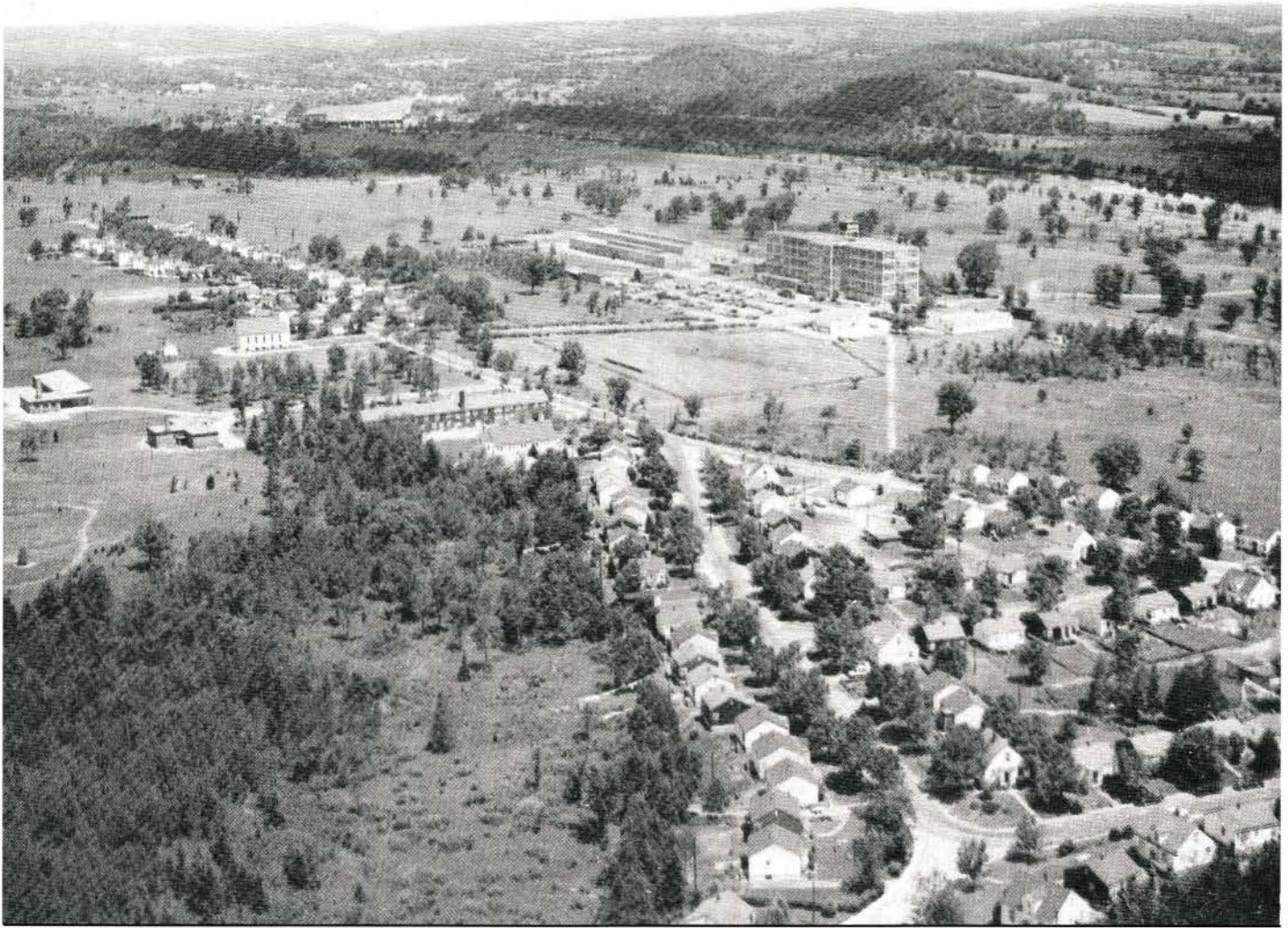


# B A T A W A

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AN EXPERIMENT IN INTERNATIONAL STANDARDIZATION

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The community of Batawa, Ontario, located on the Trent River just north of the city of Trenton, is comprised of a large aluminum-clad factory surrounded by a cluster of smaller buildings, with a pleasant middle-class suburb of typical 1970s bungalows nearby. When Batawa was established by the Bata Shoe Company in 1938-1939, however, it looked very different (**figure 1**). At that time, it represented the Bata company's belief in the transferability of both standardized construction and standardized corporate systems. In this regard, Batawa reflected the shared precepts of modernist architecture and the 20th-century multinational corporation. The development of Batawa illustrates the transfer of architectural ideas back and forth across the Atlantic during the early 20th century, and how the concepts of universal standardization developed at the Bata headquarters in Zlin, Czechoslovakia, were transmuted by time and place in Canada.

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B Y S H A N N O N R I C K E T T S

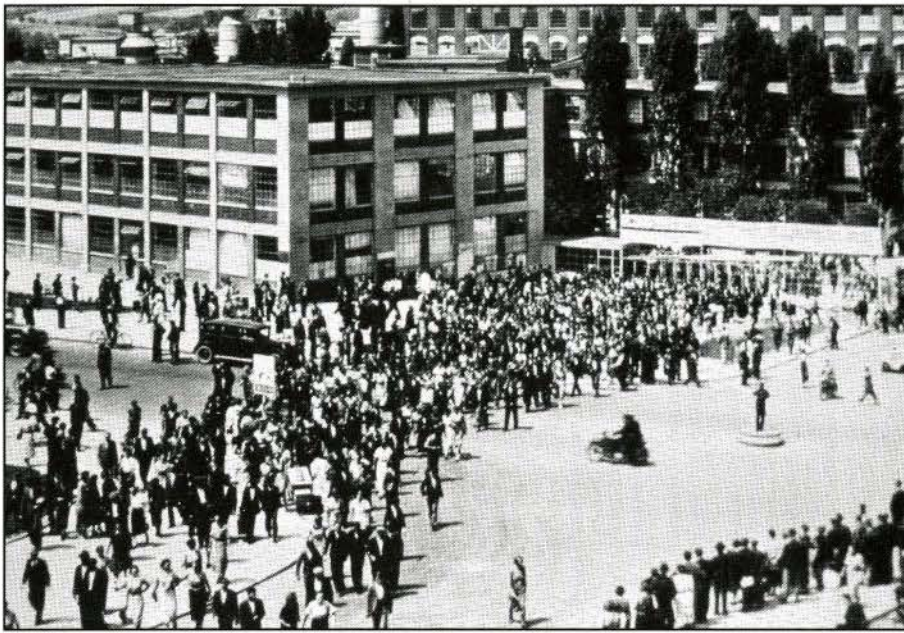


Figure 1 (previous page). Batawa in the 1950s. (Canadian Post Card Co. Ltd.)

Figure 2 (left). The main entrance to the Bata works in Zlin, Czechoslovakia, before World War II. (Bata Canada)

Zlin, as developed by the Bata company, belongs to the long tradition of planned one-industry towns. In Europe, most company towns appeared between 1830 and 1930. Their establishment reflected the changing needs of the industrial age and the great period of urban design which followed World War I.<sup>1</sup> Zlin's development as a one-company town was gradual, beginning in 1894 when Tomas J. Bata, Sr. (1876-1932) opened a small slipper factory there. By the early years of the 20th century, the firm had developed into a major shoe manufacturing company (figure 2). In 1904, Tomas Bata visited the United States to study American industrial practices, many of which he introduced to his own factory on his return to Zlin. His innovations included the construction of a new three-storey factory, where he introduced mass-production methods. But it was in 1922, after the Czechoslovak government increased the national exchange rate, that Bata introduced the most distinctive feature of what eventually became known as the Bata system. In order to remain competitive on the export market, Tomas Bata reduced the price of Bata shoes by 50 percent and his workers' salaries by 40 percent. To keep a committed workforce, he provided staff with all basic needs, including food, clothing and shelter, at a very modest cost.<sup>2</sup> In 1923, the first Bata housing estates were designed.

Tomas Bata had toyed with the idea of a planned community for some time, inspired by the father of British Garden cities, Ebenezer Howard. In Howard's words:

[The garden city's] object is, in short, to raise the standard of health and comfort of all true workers of whatever grade — the means by which these objects are to be achieved being a healthy, natural and economic combination of town and country life, and this on land owned by the municipality.<sup>3</sup>

The land-owning "municipality," in the case of Zlin and subsequent Bata settlements, was the Bata corporation. Like many other one-industry towns, the company controlled virtually all aspects of the workers' lives. Planned communities remained popular on both sides of the Atlantic because, in the words of housing historian Gwendolyn Wright, "To the industrialists, the uniformity of the residential environment was a symbol of modern industrial order: a balance between comfort for the residents and control for the employer."<sup>4</sup>

As well as providing the essentials of survival, the Bata company also offered social amenities and educational opportunities. This sort of paternalism, even when essentially benevolent, was only possible in areas where, as in the case of Zlin, the company controlled the surrounding land and therefore the means of production, or where isolation and/or limited economic development negated the possibility of alternative options. Tomas Bata's objectives for Zlin reflected an astounding financial ambition and a grandly paternal belief in the ability to provide a wholly satisfying life for his employees both inside and outside of work hours.

One of the Bata company's strengths was the ability to recognize and utilize talent. The planners and architects who worked at Zlin were notable. In the early years there was Jan Kotera, a Prague Academy of Fine Arts professor and an admirer of the Austrian *Wagner* school, who prepared the first plan (largely unexecuted) for Zlin's centre in 1911. Kotera

1 John S. Garner, ed., *The Company Town: Architecture and Society in the Early Industrial Age* (New York: Oxford University Press, 1992), 3.

2 Vladimir Slapeta, "Bata — a maecenas of modern architecture," in *Conference Proceedings: First International DOCOMOMO Conference, 12-15 September 1990* (Eindhoven, The Netherlands: Scientific Edition, 1991), 112.

3 Ebenezer Howard, *Garden Cities of To-morrow* (London: Swan, Sonnenschein and Co., 1902), 22.

4 Gwendolyn Wright, *Building the Dream: A Social History of Housing in America* (New York: Pantheon, 1981), 191.

Figure 3. The Bata factories at Hellocourt, France, were built on the same modular plan as that at Batawa, Ontario, and other factories around the world. (Bata Canada, n.d.)



was followed by Professor Josef Gocar, another eminent architect of the avant-garde in Prague. Kotera's pupil Frantisek Lydie Gahura, also a graduate of the dynamic Prague Academy of Fine Arts, followed after 1923. Gahura planned the first Zlin housing complex, which he organized in a checkerboard pattern. Included were detached and semi-detached houses, schools, hostels for single workers, and a grand hotel and cinema, all laid out along a green lateral axis.<sup>5</sup> Throughout the 1920s, the Zlin construction department attracted bright young designers and architects who brought ideas from Europe and North America. In 1929, architect Ludvik Kysela established the model for the Bata retail stores with his curtain-walled design for the Bata shoe store in Prague.<sup>6</sup>

The construction department needed a well-trained staff because of the Bata company's ambitious plans for expansion, and with the economic downturn of the 1930s it was able to attract other experienced Czech-born architects from the United States. One of the most influential was Vladimir Karfik. Karfik had worked in Le Corbusier's studio, helping to draw the Voisin plan for Paris in 1923, and later worked with Frank Lloyd Wright and Holabird and Root in the United States.<sup>7</sup> In 1935, Le Corbusier was invited to consult on plans for Zlin and for the French Bata town of Hellocourt, as well as on plans for department stores and the Bata pavilion for the upcoming World Exhibition in Paris. The Le Corbusier-Bata relationship was fraught with problems. At a working level, the team system set up at Zlin was constantly interrupted by Le Corbusier dashing out every hour to smoke — a practice banned on Bata premises. In the end, Le Corbusier's plans were too idiosyncratic and expensive to be implemented by the Bata company.<sup>8</sup>

Ironically, Le Corbusier had been attracted to Zlin by his admiration of strong leadership and by his search for a generous patron. He was also impressed with what had been accomplished there, saying in 1935:

At Zlin I found some clever original principles, for example, the standardization of all the load-bearing parts of the building ... a uniform skeleton that integrates the interrelated parts into a harmonious unit. The bosses and the workers seem to be really united by one common idea and they display a collective enthusiasm. This is exactly what the world needs. And all this is not due to greed, but to higher intentions: it is due to the family spirit which exists there.<sup>9</sup>

Le Corbusier and other left-leaning professionals saw in the Bata company the blend of democratic socialist organization, modernist architecture, and urban planning which many of Europe's avant-garde intellectuals were promoting: a wholly-integrated, utopian society.

The Bata construction department (numbering some thirty-eight staff members by 1938)<sup>10</sup> rarely generated new ideas, but it was extremely receptive to innovations that could be standardized and reproduced efficiently and inexpensively at its various company sites. These borrowed innovations began with Ebenezer Howard's concept of the mid-sized, self-sufficient community combining the benefits of both town and country, and included the "staggered domino" pattern of urban planning introduced by Raymond Unwin at Letchworth, the team approach to design, which Karfik may have brought from the Holabird and Root offices, and technical advances such as post-and-beam reinforced concrete frames

5 Slapeta, 112.

6 Kenneth Frampton and Yukio Futagawa, *Modern Architecture 1851-1945* (New York: Rizzoli, 1983), n.p.

7 Alan Blanc, "Worker Town," *Building Design*, 13 July 1990, p. 27.

8 Slapeta, 113.

9 Quoted in Blanc, 27.

10 *Ibid.*

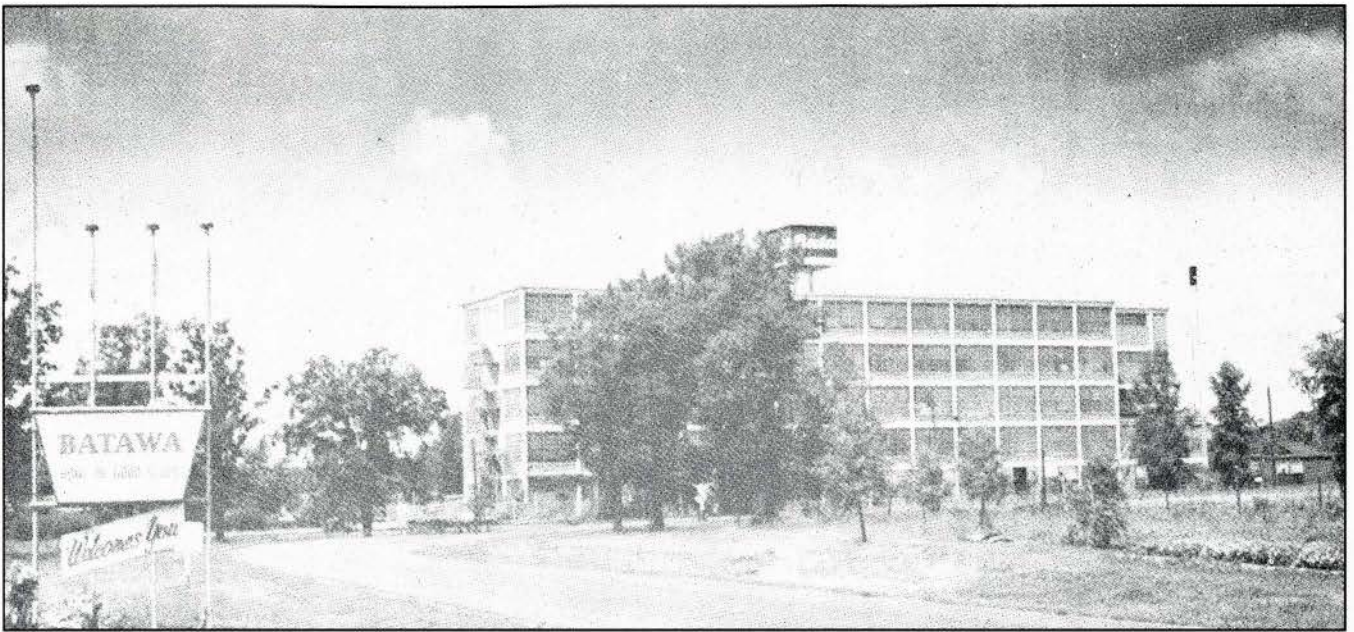


Figure 4. The Bata Shoe plant at Batawa, Ontario, in the 1950s. (Welcome to Batawa: Home of the Bata Shoe Company of Canada Ltd.)

made up of equal-sized members. This construction system, developed in American factory and warehouse construction, was also used by Sir Owen Williams — who was designing standardized mushroom-shaped supporting columns at the Boots factory, Nottingham, England — at almost the same time the major Zlin buildings were rising.<sup>11</sup> While the Zlin architecture was not as sophisticated as some of the work being carried out in Germany and Holland, it had the advantage of showing how the principles apparent in such masterpieces as Walter Gropius' 1910 Fagus factory at Alfeld on the Leine could be translated into a practical and economical architectural system without sacrificing design integrity.

When Germany overran Czechoslovakia in 1938, the Bata empire was fractured. The new regime took over control of the industrial complex at Zlin, but Thomas Bata, Jr., escaped. He took with him the hope of establishing a new headquarters from which to manage the multinational Bata corporation, which by then had established 32 marketing bureaus and manufacturing plants throughout Europe, America, and the Far East. Corporate headquarters were established for the time being in London, but Bata also needed to establish a central manufacturing site to replace Zlin. He settled on Canada, a country which was politically stable, gave entrée to Commonwealth markets, and welcomed the establishment of new industries. Bata scouted central Canada for a location, finally choosing the present site of Batawa as a well-located spot midway between Toronto and Montreal, on a rail line and on a navigable river close to Lake Ontario. But Bata was searching for more than a factory site: he wished to replicate the Bata townsite system which had been developed at Zlin and reproduced in miniature at other Bata company sites as far flung as Batanagar in India, Tillbury in England, and Hellocourt in France (figure 3).

At Batawa, Thomas Bata's problems were very immediate. While he intended to create a large community modelled on Zlin as the major Bata manufacturing site for both shoes and manufacturing equipment, he had to get operations up and rolling as soon as possible. In 1938, he had brought over to Canada from Zlin some one hundred skilled workers and their families. Manufacturing began in an old paper mill in the nearby village of Frankford, with the newly arrived Czech-speaking families boarding with local households. Obviously, it was essential to get the new factory and housing constructed quickly. Thomas began with a team of three specialists: Czech architect Tonda Novotny, concrete construction specialist Foreman Sicha, and Canadian surveyor Jim Whytlock. They laid out the townsite according to the Zlin axial plan, which used Raymond Unwin's model of relatively straight axial roads and smaller curving residential streets. The settlement site was divided by north-south and east-west axes, with the factory at the northern end, nearest the highway. The factory therefore served as its own roadside billboard (figure 4), and as the public gateway to the more private residential area. The entry road was planned to be flanked by stores, offices, and public buildings, with a large hostel and community centre at the opposite end. Only a few of these planned structures were ever built; at the south end of this axis are the hostel, the community schools, and churches. Housing units were laid out along the east-west axis, with managerial and supervisory staff housed toward the east end and workers' housing continuing toward the west.

11 *Ibid.*

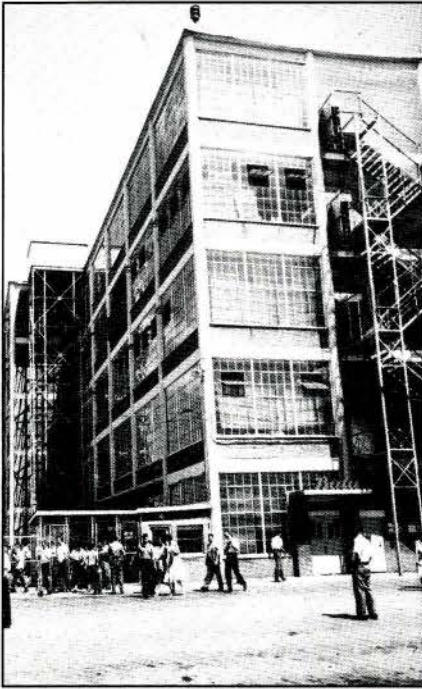


Figure 5 (left). The factory at Batawa, Ontario, in the 1940s. (Bata Canada)



Figure 6 (right). Interior of the Bata Shoe plant at Batawa, Ontario, in the 1950s. (Welcome to Batawa)

The priority of the building program at Batawa was the construction of the Bata factory (figure 5), and a standard five-storey structure was built to plans developed in the early 1930s by the Zlin construction department under the leadership of Frantisek Gahura. These plans had also been used at other Bata company towns, including Batanagar, Tillbury, and Belcamp, Maryland. According to Thomas Bata, Jr., the formwork for the five-storey building was brought to Canada in 1938, along with a specially designed crane and a trained operator who could raise the concrete frame.<sup>12</sup> Construction of the factory was accomplished in the brief period of four months.<sup>13</sup> The facade was a simple grid of concrete support members and steel casement windows. The reinforced concrete skeleton was based on a 6.15-metre module, which was the metric equivalent of the American 20-foot standard adopted by Bata architects during the 1920s. Known as the “Bata Standard,” this concrete skeleton consisted of circular brick-filled interior columns of equal size placed on the 6.15 metre grid (figure 6). On the exterior walls, the interstices were filled with the ubiquitous steel casement factory windows which have become a hallmark of the International Style. Also, like most factories — and, indeed, like many more formal International-Style buildings — the main staircase extends from the rectangular body of the factory, acting both as a formal frontispiece and as an explicator of its function.

While the standardized building system was found to be universally applicable for Bata factory buildings, it soon became apparent to Bata managers everywhere that the smaller subsidiary buildings could not be as easily transposed. The brick housing units so inexpensively constructed in Czechoslovakia depended for their economic viability on the particular conditions of the local building trades — in this case, low wage rates. Nevertheless, the basic concept of single and double family units of modest size was applicable in the Canadian context. The challenge in finding an economical way to build such units was to adapt to the local vernacular, the wood-framed cottage. But where was this Czech community to find its prototype?

Fortunately, the government contacts made by Thomas Bata in the course of obtaining the necessary permits to locate in Canada led him to a source in Ottawa, the federal Department of Finance’s Housing Administration. Growing out of the 1935 Dominion Housing Act, the Housing Administration had become the repository for house plans developed to meet the requirements for mortgages under the Act.<sup>14</sup> By 1939, spurred by wartime requirements for cheap and speedy construction of large numbers of modest houses located near new industrial sites, the Housing Administration had developed plans for small wood-framed one or one-and-one-half storey cottages.<sup>15</sup> In the words of planning historian Jill Wade, “through the efficient provision of accommodation, [the Dominion government] intended to facilitate industrial expansion and production to meet the challenge of war.”<sup>16</sup>

These designs were originally inspired by the American Housing Administration’s Cape Cod-derived cottages of the 1930s, which were filtered through a series of federally-

12 Thomas J. Bata and Sonja Sinclair, *Bata, Shoemaker to the World* (Toronto: Stoddart, 1990), 12.

13 Antony Cekota, *The Stormy Years of an Extraordinary Enterprise: Bata 1832-1945* (New Jersey: Universum Sokol, 1985), 158.

14 See “Awards in Dominion Housing Act, Small House Competition,” *RAIC Journal* 13, no. 5 (May 1936): 89-96; and A.S. Mathers, “Dominion Housing Competition,” *RAIC Journal* 15, no. 1 (January 1938): 81-91.

15 “The Modern Home,” *Canadian Home Journal* 38 (February 1942): 27.

16 Wartime Housing Ltd. was tasked with overseeing the construction of housing units for wartime purposes. See Jill Wade, “Wartime Housing Ltd., 1941-1947: An Overview and Evaluation of Canada’s First National Housing Corporation,” University of British Columbia Planning Papers No. 13, November 1984, p. 4.

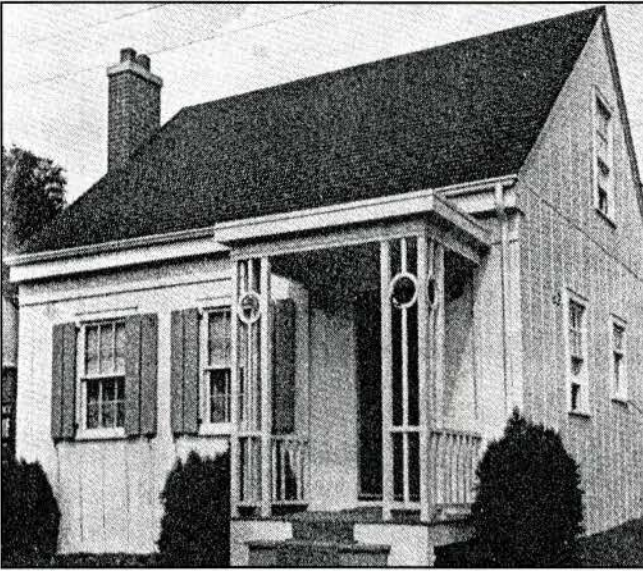


Figure 7 (top left). Typical Canadian wartime housing, in Toronto. (F.W. Nicholls, "Wartime Housing in Canada," *The Architectural Forum* 73, no. 6 [Dec. 1940]: 495)

Figure 8 (top right). The housing at Batawa as it appeared in the 1950s. (*Welcome to Batawa*)

Figure 9 (left). A manager's house at Batawa, Ontario, in the 1950s. (*Bata Canada*)

sponsored competitions for minimum-cost housing. An article in *The Architectural Forum* of 1940 cites a one-and-one-half storey frame house measuring 24 x 24 feet as very popular in Canada — a model which bears a strong resemblance both to its American precursors and to Batawa housing units (figure 7).<sup>17</sup> In order to reduce costs and speed construction, wartime housing was designed to be built of standardized components which could be partially prefabricated, mounted quickly, and, if necessary, taken down without wholesale demolition.

Bata employees reported that government housing plans were used at Batawa, first for the group now known as "the pioneers," and later for the expansion of the housing complex, which became necessary when numbers of machinists were brought to Batawa to produce munitions for the war effort.<sup>18</sup> These plans provided much the same kind of space as had the housing units at Zlin — a kitchen, a living room, a bathroom, and two or three bedrooms). Interspersed among these small single-family units were two-storey doubles, which were similar to the type of dwelling constructed as married quarters a little later by the Department of National Defence on their bases across the country. Seventy-five family homes were constructed at Batawa, with general workers' housing placed in a staggered grid arrangement at the west end of the residential area (figure 8) and houses of the supervisory employees to the east, along gently curving streets (figure 9).

Batawa never became the large centre initially envisioned, and many of the planned buildings, including a large hotel which was to be the focus of the community, were never built. For the duration of the war, the Batawa plant turned its efforts to the production of

17 F.W. Nicholls, "Wartime Housing in Canada," *The Architectural Forum* 73, no. 6 (December 1940): 494.

18 Interview with Garret DeBruyn, Property Manager, Norimco Division of Bata Industries, Batawa, Ontario, 9 March 1993.



Figure 10 (left). The Bata factory at Batawa in the 1960s, before recladding. (Bata Canada)

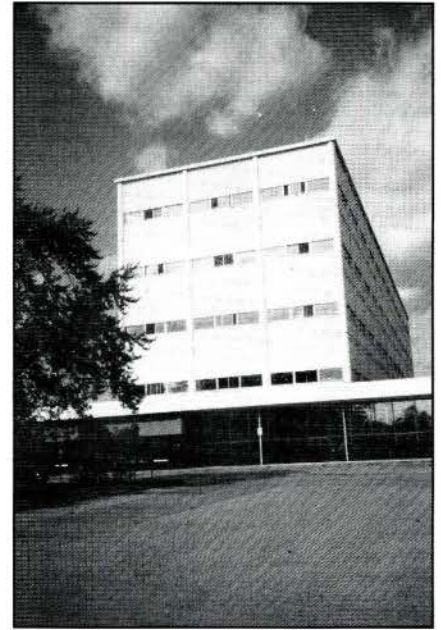


Figure 11 (right). The factory at Batawa, Ontario, after being reclad in aluminum. (S. Ricketts, 1992)

war materiel. Finally, with the war's end, it returned to shoe production. During the postwar era, however, cheaper materials and labour in developing countries made it difficult for a Canadian-based manufacturer to compete. Shoe manufacturing has continued at Batawa, although it has been reduced dramatically in recent years. Meanwhile, by the 1960s, the need for subsidized housing such as that provided by the Bata company had diminished. Batawa, along with many other one-industry communities, was finding that the more ambitious of its employees were investing in their own housing outside the company town. The modest wartime dwellings were falling short of the heightened expectations of a more affluent workforce and the community was becoming viewed in a negative light. (The same phenomenon was happening at Tillbury, the Bata community in England.) The company decided, therefore, to demolish the houses and sell the lots individually so that buyers could erect their own dwellings, subject to a few design guidelines. Throughout the 1970s, the residential section of Batawa was transformed into a more contemporary housing suburb whose residents were not necessarily Bata employees.

The welfare planning which had worked successfully in pre-war Europe, offering Bata employees not only cheap food, clothing, and shelter, but also social and educational opportunities, ultimately had not translated well to Canada, particularly during the booming postwar years when educational and employment options were plentiful. Gradually, the once-total reliance of the workers at Batawa on the Bata company lessened, until the residential community reached its present condition of existing for its own purposes, largely independent of the nearby Bata factory. Nor did the factory escape unscathed. In 1978, it was reclad in aluminum in order to improve the curtain wall's insulating qualities (figures 10, 11). The large expanses of single-pane glass had proven to be inadequate for the extremes of the Canadian climate. Even in England, the Tillbury plant had been similarly reclad after the war.

Thomas Bata and his wife Sonja have continued to be involved in architectural design. When Sonja Bata was put in charge of the design of the standardized Bata shoe store in the 1950s (figure 12), she implemented the original Bata concept of modular construction in the design of interior fittings.<sup>19</sup> The Batas went on to hire some of Canada's best-known architects: John Parkin designed their Toronto headquarters building in the 1960s, as well their own house on a hilltop overlooking Batawa; Raymond Moriyama created a new Bata community in Mareka, Pakistan, in the 1970s. At Batawa, the Bata presence persists in the still-recognizable standard factory, in the axial plan, and in the hilltop mansion of Thomas Bata, Jr.

FOR THE HISTORIAN, THIS APPARENTLY BANAL COMMUNITY represents a fascinating nexus in the generation and development of ideas which have been critical in the evolution of mass-produced buildings and 20th-century planning. In terms of a single-industry community, it is one of the few established in Canada during the 20th century which was dependent on manufacturing rather than on the retrieval or processing of raw materials. It is also one of the few to have successfully adapted to a changing economic base, and to be likely to survive,

<sup>19</sup> Bata and Sinclair, 133.

regardless of the fate of the original company. Batawa also reflects how novel ideas about town planning, concrete factory construction, and the organization of large design departments were spread around the world. It shows how a large multinational corporation could take individual concepts, standardize them, and apply them internationally, independent of regional conditions. And, in this regard, Batawa reflects how housing tends to resist such internationalization: despite the desire to control quality and maximize output through standardization, the Bata company's housing remained tied to regional roots. While standard house plans were used at Batawa, these plans were specific to the Canadian context. Ironically, the housing at Batawa reached a higher level of mass production than had that at Zlin. Ultimately, however, it has been through the return of housing to individual control, and even to individual design, that the community has ensured its survival.

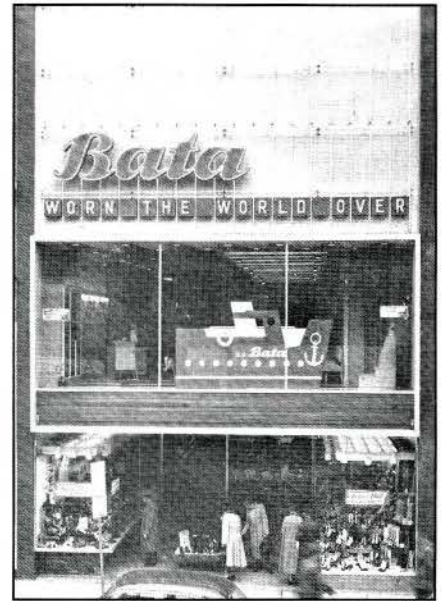


Figure 12. The Bata Shoe Store, Toronto, 1950s.  
(Welcome to Batawa)

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