

*"All that is solid melts in to air, all that is holy profaned, and man is compelled at last compelled to face with sober senses, his real conditions of life, and his relations with his kind."*  
(Marx and Engles: The Communist Manifesto, p. 476)

In one of the most important characterizations of modernity, Marx and Engels wrote that "all old established industries have been destroyed or are being destroyed" with the expansion and exploitation of the world market. This destruction, they claimed, sends social and spatial relations into flux, sweeping away once fixed, fast-frozen relations. (Marx and Engels, [1848] 1978, p.476) This assessment of modernity has been quoted extensively and applied by Marxist geographers, including David Harvey, to conditions of postmodernity. These geographers have theorized the built environment of the postmodern city, similarly to Marx and Engels' characterization of the modern, as "friction, fragmentation, collage, and eclecticism, all suffused with a sense of ephemerality and chaos" (Harvey 1990, p. 98). While compelling, these depictions of the contemporary landscape fail to account for the 'solidity of structures refusing to melt'.

In November 1904, Henry Ford and the burgeoning Ford Motor Company moved production of its Model A from a rented space on Mack Avenue to the newly constructed Piquette Avenue Plant on Detroit's Northeast Side. Ford occupied this new plant for only seven years. In 1911 the Ford Motor Company moved its operations into the larger and more technologically sophisticated plant in Highland Park, designed by industrial architect Albert Kahn. Today, the factories on Mack and Piquette Avenues—as well as Kahn's so-called "glass palace" in Highland Park—lay dormant. Pressures to globalize operations in the 1960s and '70s ended the period of urban industrial production and a commitment to the

urban working class. In this current moment of hyper-mobility, manufacturing can pick up and move across the globe to shave a few dollars off production costs and as a result, Detroit's factories lay dormant. While abandoned factories are sprinkled across the rust belt, those in Detroit hold special significance. Remarkable for their solid construction, Detroit's abandoned automobile factories symbolize the modernist investment in the urban landscape. Their emptiness symbolizes its postmodern desertion.

These structures have been adopted today by urban archivists and historic preservationists who celebrate their architectural and cultural significance, documenting this modern urban history. In this essay, I relay a brief chapter of it. Focusing primarily on the

factories Albert Kahn built for Ford, I present the factory landscape as the product of an unequal partnership of economy and geography. I focus on the partnership in two historical moments—that of factory construction and of factory abandonment—examining the physical and symbolic landscape it



produced. In the transition from the first to the second moment, a transition Harvey and others have referred to as the rise of Post-Fordism, I illustrate a significant retrenchment of the automobile industry from urban space, and subsequently from the urban population. This history warns of the unequal partnership between the city and its export industry—highlighting Detroit's fidelity and vulnerability, left only with a gutted economy and abandoned landscape. This relationship is told here through this history of the factory spaces.

## **Constructing Detroit's Factory Landscape**

In 1929, the automobile factories of Detroit produced 5.3 million cars and employed over half of the city's labor force. Lured by the promise of work in the dozens of factories sprinkled across its flat metropolitan landscape, Detroit experienced a population explosion in the first three decades of the 20<sup>th</sup> century—from 300,000 in 1900 to more than 1.5 million in 1929 (Bergeron and Maiullari-Pontois, 2000, p.100). From its early growth, we can see that Detroit's fate and that of its local industry were so closely intertwined that they can hardly be distinguished.

No history of the Fordist landscape or of Detroit's built environment can be told without mention of its principal architect, Albert Kahn. Together, Kahn and Henry Ford built Detroit's industrial landscape—Ford providing the industry, Kahn the landscape. This partnership seems an unlikely one, as Ford was an ardent anti-Semite and Kahn a Jewish-German immigrant. But beginning in 1908 and over the next twenty years, the two men, with notably similar personalities and working styles, produced the most innovative factories ever built, transforming both modern industry and Detroit's built environment. (Hildebrand, 1974, p.43-4)

Kahn completed his first factory in Detroit for the Packard Motor Company in 1905, Packard Shop No. 10. The construction of the Packard shop gave Kahn his first experience using reinforced concrete, which enabled him to build solid, non-combustible structures in very short periods of time, which would later be very important in his work with Ford. (Bergeron and Maiullari-Pontois, 2000, p.101). In the Packard shop, Kahn also innovated in creating open, flexible spaces that could be used for multiple purposes.



In the same year that Packard moved into its innovative Kahn shop, Ford moved into a three-story New England mill-style factory on the corner of Piquette Avenue and Beaubien, designed by the Detroit architecture firm of Field, Hinchman & Smith. (Bogges) The Piquette Avenue Plant, however, was poorly suited to the construction of the Ford's Model T, which Ford recognized after occupying the Piquette Avenue Plant for less than two years. In January 1907, his board of directors began looking for a new factory site, which they found in Highland Park, at the site of an old racetrack. Only five years after moving into the Piquette Avenue Plant, the Ford Motor Company transferred all of its operations to Highland Park.<sup>1</sup>

The Highland Park Plant was Ford and Kahn's first joint endeavor. Ford had decided to concentrate all of the factory's activities under one roof and needed an innovative structure to achieve this objective. "No buildings such as he talked of had been known to me," Kahn once remarked. "But I designed them according to his ideas. Ford's big contribution to industrial building is the covering of many activities with one roof and thus saving expense in building, heating, and upkeep." (Hildebrand, 1973, p.51) The multistory factory in Highland Park initially utilized the building's levels in the manufacturing process: hoisting raw materials up to the top levels, sending them down to the various stages of the production process through gravity shoots and finally dropping the body down on to the chassis. But this method was soon replaced by the powered moving assembly line Ford adopted from Chicago's meatpacking plants. The introduction of the assembly line and the

increasing popularity of the Model T, whose production roughly doubled each year from 1908 through 1913, sent Ford in search of land for a new factory space as soon as 1915 (Boggess; Hildebrand, 1973, p. 45).

Construction of the single-story River Rouge Complex near his home in Dearborn began soon after and by 1927 it contained all production facilities of the Model T. It was here that Ford achieved self-sufficient vertical integration in automobile production, a continuous workflow from iron ore and other raw materials to finished automobiles. The complex included dock facilities, blast furnaces, open-hearth steel mills, foundries, a rolling mill, metal stamping facilities, an engine plant, a glass manufacturing building, a tire plant, and its own power house supplying steam and electricity, all designed by Albert Kahn.<sup>2</sup>

As Ford refined his production technology in the early part of the twentieth century, he left a landscape littered with factories. "There's too much tradition in all human activity, too much respect for mere precedent," he was quoted as saying. "If it stands in the way of real progress it must be broken down" (Kaempffert, 1928). But while abandoned, neither the Highland Park Plant or the Piquette and Mack Avenue Plants have been



broken down. Thinking of buildings for a moment as organisms with their own life-expectancies, it appears that the advancements in mass production and factory technologies in this period endowed these factory structures with remarkably short lives<sup>3</sup>. While it is difficult to know if Ford recognized as these factories were being constructed that they would

so soon be obsolete, this realization was soon apparent. Had this knowledge prevented him from investing in structures of such high quality, however, he, with the help of Kahn, would never have made the advancements in industrial production that enabled him to continue his progress.

Kahn's ingenuity and the innovation of reinforced concrete and steel made it possible to build remarkably durable structures in even more remarkably short periods of time. Meanwhile, Ford's needs for large tracts of land to contain each of the stages of automobile manufacture fueled his land acquisitions across the entire Detroit metropolitan area, from Highland Park on the east side to Dearborn on the west. This produced a landscape of sprawling complexes, containing soon-obsolete single-storied structures. This landscape became an icon of modernity. Its functional, yet aesthetic designs, well documented by artists Diego Rivera and Charles Sheeler, attracted marveling visitors. "Crowded into the observation areas at auto plants," historian Thomas Sugrue writes of their fascination, "they stood rapt as the twentieth century's premier consumer object, the automobile rolled off the assembly lines by the dozens an hour" (Sugrue, 1996, p.17)

But more than tourists, this landscape attracted hundreds of thousands of workers in the 1920s and '30s, initially from Europe but also from the rural Midwest and the Black Belt in the Deep South. The residential landscape built for these workers mirrored that of the factories, as single-story bungalows sprawled across a wide metropolitan area. With few geographical features to define the development, the factories located along the arteries of rivers, rail lines, and wide boulevards provided Detroit with its spatial definition. The city was never built around a central business district, like most American cities, and its downtown appears as an afterthought. The city's dozen or so skyscrapers, many of which were commissioned by automobile manufacturers like General Motors and Fisher and built by

Kahn, never produced downtown concentration, as most of Detroit's workers traveled to the factories sprinkled across the city's perimeter. This modern landscape was the product of Midwestern geography and an industrial economy. The partnership was a successful formula for urban growth through the mid-twentieth century, especially as the factories converted their assembly lines to the mass production of military vehicles and hardware in the early years of World War II. Detroit's rapid expansion of wartime production helped pull the country out of Depression, as the city's unemployment rate fell from 135,000 to 4,000 between 1940 and 1943 (Sugrue, 1996, p. 19). But while the city benefited greatly from this partnership, its complete dependence upon it proved disastrous only a few decades later when the industry abandoned not just another factory space, but the entire city.



### **Abandoning the Factory Landscape**

While historians claim to see the seeds of Detroit's decline sown as early as the mid-'40s, the abandonment of the factory landscape most clearly began in 1970, the year the Highland Park Plant finally shut its doors. Between the time of the factory's construction and its desertion sixty years later, the dominance of the U.S. automobile industry had been challenged, but its relationship to Detroit remained unchanged. The city's industrial landscape was still a product of its dependence upon the automobile industry, but rather than a landscape of modernity and innovation, it had become one of desertion and decay.



By the early seventies it had become apparent to those sitting in Detroit's corporate headquarters (if not yet on its factory floors) that the economic model perfected by Ford and Kahn was failing. While the race riots in July of 1967 had accelerated an already perceptible movement of the city's white and middleclass black residents to the suburbs, its economic violence was a more significant force shaping its contemporary landscape. The post-riot flight of the central city's population was dramatic, but Detroit had long been a sprawling metropolis with a deemphasized downtown. More significant than the residential abandonment was the industrial. The hardship of the seventies felt more severe because of the boom and prosperity the city and industry together had experienced in the preceding decades. Between 1950 and 1970, American ownership of passenger cars had doubled from 40 million to more than 80 million. And in this period the percent of licensed drivers grew from less than 40 percent to more than 50 percent (Kannan, et al. 1982, p. 17). Americans had become car-dependent and Detroit stood to benefit.

Meanwhile, Americans had also become gas dependent. But because gas prices had declined in real dollars between 1950 and 1970, the dependence was hardly felt. Furthermore, relatively cheap fuel contributed to Americans' infatuation with big cars, in contrast to Europe and Japan where fuel prices were higher and compact cars the norm. But the average fuel efficiency of new cars coming out of Detroit had actually declined in the sixties from 16 miles to 14 miles to around 12 miles per gallon in 1972 (Kannan, et al. 1982, p. 21). So in 1973, when the availability and price of gasoline became subject to shocks from the Organization of Petroleum Exporting Countries (OPEC) and the U.S. government, Detroit bore the brunt of changing tastes away from its high-consumption cars.



In order to remain competitive with Japanese and European exports, Detroit tried to sever its ties with the self-contained factory design it had initiated in Highland Park and perfected in Dearborn. Fixed capital investments in mass production systems and a



unionized workforce were now seen as liabilities. Attempts to overcome what it construed as inflated labor costs and unnecessary rigidities between 1968 and 1972 resulted in layoffs and pay cuts, producing a wave of

strikes and labor disruptions (Harvey, 1990, p. 142). But these disruptions only accelerated the industry's retrenchments from the city's workforce following the OPEC oil crisis, initiating a strategy Harvey refers to as flexible accumulation. "*Flexible accumulation*, as I shall tentatively call it," he writes, "is marked by a direct confrontation with the rigidities of Fordism. It rests upon flexibility with respect to labor process, labor markets, products, and patterns of consumption" (Harvey, 1990, p. 147, emphasis Harvey's). The replacement of fixed capital with flexible accumulation, paired with advancements in communication and transportation technologies, made it not only possible, but prudent for the automobile industry to take mass production systems abroad, extending commodity chains across the globe. Flexibility has made it feasible for the U.S. automobile industry to subcontract automobile parts from smaller international exporters and to build its own factories abroad.

"Ford is an evolutionist" Waldemar Kaempffert wrote in a 1928 New York Times article. "There must be change if there is to be progress. Stagnation he detests. It is inertia, sloth, a sign of impending or actual decay" (Kaempffert, 1928). For the industrial

landscape of Detroit, however, progress has produced actual decay, flexibility stagnation. In an era of flexible accumulation, the city's relationship to the automobile industry has produced a landscape containing scores of empty, decaying, though remarkably well-built structures. The empty structures are unlikely to see new inhabitants, as the factories blend into a landscape littered with tens of thousands of empty structures and vacant lots. The current mayor has his sites set on demolishing the abandoned houses first and ran on a campaign promise to raze at least 5000 empty houses. He has hinted that at least two of the dozen once-magnificent skyscrapers, including Kahn's Fisher Building will soon follow. The mere emptiness of these vacant buildings signals danger to the city's politicians and residents. "This is where drug dealers stash their drugs," the mayor remarked, "this is where people stash guns, this is where girls get abused." (Wilgoren, 2002).

Though clearly undesirable, these buildings' unintended uses are emblematic of Harvey's characterization of the post-modern city. "Whereas modernists see space as something to be shaped for social purposes and therefore always subservient to the construction of a social project," Harvey writes, "the



postmodernists see space as something independent and autonomous, to be shaped according to aesthetic aims and principles which have nothing necessarily to do with any overarching social objective" (Harvey, 1990, p. 66). These personalized appropriations are the contemporary functions of these abandoned spaces, providing squatters with homes and historic preservationists and urban archeologist with dig sites. As the modernist social

project abandoned Detroit's industrial landscape, the postmodernists fill the spaces, injecting into them their own meaning and functionality.

Discarded by their original occupants, Detroit's abandoned factories have become the property of preservationists and archivists seeking to preserve what these structures once meant and infuse them with their own contemporary interpretations. In 1978, the Highland Park Plant was declared a national historic landmark, the River Rouge Complex followed in 19XX., and in 2000, a private organization, calling itself the Model T Automotive Heritage Complex Inc. bought the Piquette Avenue with the intent of turning it into a museum. So, while the deserted structures around them may be demolished, these factories will remain atop an ever-more vacant landscape as visual reminders of the city's subservience to its industrial partner. Anticipating the eventual demolition of the remaining factories and abandoned structures, archivists have begun to document this landscape with photographs and words, paying homage to the city's "fabulous ruins."<sup>4</sup> On his website entitled XXX, one such archivist Michael Roser writes:

Once the industrial center of America, the city now exists in various states of decay. Ruins scatter the roadways as nature reclaims the urban landscape. Standing in front of abandoned skyscrapers, theaters, hotels and mansions is a humbling yet awe inspiring experience. It excites me to explore, dig through the rubble of these structures as a modern day urban archeologist. Exploring a city which is in transition allows one to feel somewhat connected with history because it allows one to interact with history on a very personal level. A level which is free from the formality of the museum or art gallery. With this interaction, buildings and landscapes continually pose questions about the past, present and future<sup>5</sup>

While some of the buildings are ensured preservation, the only interaction many may soon have with such structures is in the photographs collected by archivists like Roser and Lowell Boileau. But meanwhile, the durability of the factories produces a postmodern landscape "and man is compelled at last, compelled to face with sober sense, his real conditions of life" (Marx and Engels, p.476).

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## **End Notes**

- <sup>1</sup> Trent E. Boggess "The Birth Place of the Model T: The Piquette Avenue Plant" at <http://tplex.org/piquettestory.htm>.
- <sup>2</sup> National Historic Landmarks in Michigan at <http://www.michiganhistory.org/preserve/phissite/nhlsnich.html#marks>.
- <sup>3</sup> This concept is borrowed from Neil Harris' (1999) analysis of buildings' lifecycles and life expectancies.
- <sup>4</sup> This is a reference to the website "The Fabulous Ruins of Detroit" created by one of the most prolific archivist, Lowell Boileau.
- <sup>5</sup> <http://snow.prohosting.com/~uncover>

**Photo Credits** (I have written permission from Lowell Boileau to use his photographs for the purpose of this essay. The other photos are used without permission.)

1. Cover Page: **Packard Shop No. 10**. Photo by Lowell Boileau, "The Fabulous Ruins of Detroit." [www.detroityes.com](http://www.detroityes.com).
2. Page 2: **Packard Shop No. 10**. Photo by Lowell Boileau, "The Fabulous Ruins of Detroit." [www.detroityes.com](http://www.detroityes.com)
3. Page 4: **Piquette Avenue Model T Plant**. "The Model T Automotive Heritage Complex." [www.tplex.org](http://www.tplex.org)
4. Page 5: Charles Sheeler, Criss-Crossed Conveyors (**River Rouge Complex**), 1927. gelatin silver print, 10 x 8 in. The Lane Collection. [www.mfa.org](http://www.mfa.org).
5. Page 7: Interior of the **Fisher Factory**. Photo by Lowell Boileau, "The Fabulous Ruins of Detroit." [www.detroityes.com](http://www.detroityes.com).
6. Page 9: **Fisher Factory** on Piquette Ave. Photo by Lowell Boileau, "The Fabulous Ruins of Detroit." [www.detroityes.com](http://www.detroityes.com).
7. Page 11: **Piquette Avenue Model T Plant**. Photo by Lowell Boileau, "The Fabulous Ruins of Detroit." [www.detroityes.com](http://www.detroityes.com).

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