Title:

Autopia’s End: The decline and fall of Detroit’s automotive manufacturing landscape

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Abstract:

Since the 1980s, Detroit’s once-monumental building stock of historic automotive manufacturing facilities has mostly disappeared. Demolition, redevelopment, and abandonment have left little to mark the city’s twentieth-century history as the world capital of the automobile industry. Planning and policymaking have been complicit through publicly subsidizing destructive redevelopment and by failing to argue for retention or preservation. Even today the city calls for the demolition of one of its last remaining historic auto factories. This paper surveys the disappearance of Detroit’s auto factories, and documents the histories of three of the largest complexes: the Chrysler-Chalmers Plant, cleared for a redeveloped factory; the Cadillac Plant, cleared for a failed economic development project; and the Packard Plant, slowly abandoned over 60 years. The paper calls for a revised theory and practice of preservation that accommodates the weak markets, imperfect condition, and informal uses that characterize abandoned industrial buildings in shrinking cities.

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Introduction: An industry and city in crisis

The post-2007 distress of the American automobile industry resulted in dozens of factory closings across the nation. Many of these losses occurred in the Detroit area, historic locus of automobile manufacturing in the United States. In this hard-hit region, job losses and production cutbacks garnered front-page headlines, nightly news reports and blog posts. The overwhelming conclusion was that Detroit and Michigan were deeply troubled. Especially after 2007, the problems of Michigan’s “Big Three”—General Motors, Ford, and Chrysler—destabilized formerly solid working- and middle-class communities and cursed many households to perpetual underemployment.

Oddly enough, absent from the public debate over Detroit’s and Michigan’s economic and social crisis were the closed—or soon to be closed—factory buildings and sites themselves. Where factories were mentioned at all, the tacit consensus of political leaders and developers was that reuse or preservation of such structures was difficult if not impossible due to safety concerns, economic viability, and a lack of public interest in the issue. As a result, auto plants were often demolished soon after their closure. Yet these post-2007 closures comprised only the most recent part of a much larger and longer trend of manufacturing decline in Detroit, together with the decline and loss of the city’s manufacturing landscape itself. This paper examines this loss, which we argue is also a loss to the city’s urban fabric and built heritage.

City, Factory, Decay

Detroit’s well-known moniker of “Motor City” symbolizes the defining impact—economic, social, cultural, and physical—that the automobile industry had on the city’s psyche during the 20th century. For much of this period, Detroit’s built environment reflected this relationship. This was a factory city, and its numerous industrial

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1 e.g. De Bono 2007; Martindale 2009; Schmidt 2009
2 Ryan 2012a
3 Karoub and Runk 2010
buildings embodied the “hard work... conviction, and knowhow that runs generations
depth” in Detroiter. More than almost any other industrial city in the United States,
automobile factories defined both the landscape of Detroit and Detroiter themselves
(Figure 1).

Figure 1 about here

In the twenty-first century, this traditional relationship between Detroit, automobile
production, and the industrial landscape is much changed. To put it mildly, recent
decades have not been kind to the Motor City’s built fabric. Since the 1960s, insensitive
infrastructure and economic decline have physically fragmented the city, transforming
it into a patchwork of freeways, superblocks, and suburban-type housing enclaves
t. All of these changes removed swathes of Detroit’s mainly early-20th-century housing
and building stock. Today, as many observers have noted, the city’s landscape is
contradictory and often distressing. Juxtaposed with vacant lots and abandoned
structures are commercial strip malls, monstrous casinos, stadiums, and office parks, all
surrounded by parking, as well as occasional rehabilitated historic buildings
functioning as lofts for the middle class (Figures 2, 3, 4, 5).

Figures 2, 3, 4, 5 about here

Finding traces of the automobile industry that formed and shaped Detroit’s twentieth-
century economy is somewhat harder. As late as the 1980s, Detroit’s plants, constructed
during Detroit’s production peak from 1910 to 1960, were impressive brick, steel,
concrete, and glass industrial structures occupying strategic urban locations within a
sprawling constellation of lower-density areas of housing whose inhabitants were
economically dependent upon the factories for survival. But as the Big Three
experienced progressive economic distress in 1970s and afterward, their troubles played
out across the city’s largest automotive sites with disastrous effect.

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4 Chrysler ad. Exact Reference Needed: KM
5 Ryan 2006, 2008, 2012b
6 e.g. Chafetz 1990; Vergara 1997, 1999; Marchand and Meffre 2011
Detroit once possessed what was probably the most significant collection of 20th-century industrial structures in the United States. Today [2012] most of these former automotive manufacturing sites are vacant lots, surrounded by half-empty, impoverished neighborhoods. Hard as it may be to believe, the automobile plants that once knit the physical, economic, and social fabric of Detroit together are mostly gone, along with the thousands of jobs they provided and, in many cases, the thousands of homes that once surrounded them. As this paper documents, the great majority of Detroit’s auto plants were demolished either by neglect, by the automobile industry, or by public officials hoping to reuse plant sites. A few plants were abandoned and left to decay, and only a few remained active. The cumulative effect of these changes, we argue, was the relentless erasure of the city’s industrial heritage and an overall de-urbanization of the Detroit landscape.

Our study method is straightforward. During visits to Detroit between 2006 and 2010, the authors explored, photographed, and reviewed both the historic and current states of the fifteen most significant automotive industrial sites, as established by Hyde\(^7\) within the city limits of Detroit. The authors subsequently selected three of the largest sites— the Cadillac, Chrysler-Chalmers, and Packard plants— and documented their post-1980 transformations. Collectively, the post-1980 experiences of these three plants embodied the three disparate fates of all of the fifteen sites: demolition (Cadillac); redevelopment for a new automobile plant (Chrysler-Chalmers), or abandonment (Packard).

Based on this research, this paper argues that not only has the city of Detroit lost most of its automotive manufacturing heritage, but that redevelopment, either for new auto plants or for contemporary office parks, has been one of the primary forces causing this loss. In fact, compared to redevelopment, abandonment has been a relatively benign force. Of Detroit’s largest plants, some of the best preserved are ironically those that have been longest abandoned and that have thus far avoided redevelopment. We argue that this state of affairs is more than simply a testament to difficult economic circumstances; it is the result of myopic redevelopment processes that ignore the built

\(^{7}\) Hyde 1980
environment and manufacturing heritage, as well as a relatively impotent preservation process that is mostly unable to halt demolition in Detroit. We conclude by calling for historic preservationists to develop new approaches to preservation that can confront the shocking and difficult circumstances that confront Detroit today, before the remainder of the city’s auto manufacturing heritage is lost.

*Automotive Factories in Detroit: Assessing 30 years of change, 1980-2010*

By the late 1970s the U.S. auto industry was in serious trouble and so was Detroit. The past decade had brought the loss of market share to stiff foreign competition, a pair of oil crises, and deep recessions, culminating in the dramatic near bankruptcy of the Chrysler Corporation in 1979-80. Meanwhile, in the wake of 1967’s riots, Detroit suffered accelerated population loss, business closures, property abandonment, and the erosion of its industrial employment base. During the 1970s the city lost more than 300,000 people, and its 1980 population of 1.2 million was 35 percent lower than its 1950 peak of 1.85 million (by 2010, the city had lost another 450,000 people). Detroit’s population decline was strongly linked to its decline in manufacturing employment. Between 1958 and 1982 the city lost 48 percent (98,700) of its manufacturing jobs; almost half of these losses occurred after 1977. Manufacturing was the core of the city’s economy, and Detroit’s wholesale, transportation, and retail sectors also showed significant declines. But in the wake of the 1970s’ population and employment losses, the city’s automotive plants largely remained. A 1980 survey inventoried many of the city’s automobile factories and found that most of the vast complexes were intact, though some had been idled, consolidated, converted to new uses, or altered as part of plant enlargement or renovation.

These plants were powerfully urban complexes. Most factories fit neatly within underlying city block patterns. Such structures were built to the street line with few setbacks or security buffers. Almost all had a strong visual presence, lending their neighborhoods a dramatic, almost Piranesian contrast of modest homes and looming

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8 Sugrue 1996
9 Darden et al. 1987, 23
10 Hyde 1980
industrial plants. This visually striking quality of Detroit was noted early by Modernist architect Erich Mendelsohn, who photographed the city extensively in the 1920s\textsuperscript{11} (Figure 6). Detroit’s automotive complexes were the economic lifeblood of the city, but just as importantly to Detroit’s urban fabric, they provided dense and dramatic visual focal points of concrete and steel amidst the city’s otherwise low and rather monotonous wooden landscape of houses. The dramatic urban nature of Detroit’s auto plants meant that the sites were not just a collection of architecturally distinctive individual buildings, but urban assemblages that both individually and in sum, as a constellation of plants scattered across the city, gave the Detroit city scale its most unique and defining characteristic. This condition is regrettably almost completely lost today.

Figure 6 about here from Mendelsohn’s AMERIKA

Detroit’s automotive plants, together with nearby complexes in Highland Park and Dearborn, were not single buildings but rather small cities of industry. Physically diverse, the complexes were conglomerations of a dozen or more densely packed buildings of varying configurations and eras. Many had been built up over a half-century or more, spreading across multiple city blocks. Some sites possessed the largest structures ever built for automotive manufacturing purposes, with buildings measuring more than 1,000 feet in length, and a few even more than 2,000 feet. The individual buildings were themselves usually straightforward: rectilinear structures, between one and six stories, taking advantage of new building technologies like reinforced concrete, steel, and plate-glass. The bold geometric forms and new structural systems of many plants, in particular some of those designed by Detroit architect Albert Kahn, have made them long noted for their contributions to 20th-century industrial architecture\textsuperscript{12}.

Our survey (Table 1) shows that events during the three decades following 1980 shrank the auto industry’s physical footprint in Detroit significantly (Figure 7). In 1980, 11 of the 15 sites surveyed\textsuperscript{13} were still active. Today, only two, the Chrysler-Dodge Half-Ton

\textsuperscript{11} Young 2011
\textsuperscript{12} Ferry 1970
\textsuperscript{13} Hyde 1980
Truck Plant and the Chrysler Jefferson North plant, continue to produce finished vehicles. Together with two other plants not documented in 1980, these four plants constitute Detroit’s remaining active automotive manufacturing.\footnote{The two other plants, both of which contain mostly post-1980 structures, are Chrysler’s Conner Avenue plant and General Motors’ “Poletown” plant, site of a struggle over property condemnation that went all the way to the Michigan Supreme Court in 1981 (Thomas 1997, 161-166).

Figure 7 about here

Table 1 about here

Eight of the fifteen plants documented in 1980 have been entirely demolished, while historic elements survive on the remaining seven documented sites (Table 1). Of these seven plants, five retain, more or less, their historic form and appearance. Perhaps best preserved is the Ford Piquette plant, now the “T-Plex” automotive museum. Three vacant plants are deteriorated, but more or less visually intact: the Studebaker Plant adjacent to the Piquette Plant, the Fisher Body Plant, and the largest of all, the former Packard factory. A fifth plant, the former Plymouth Lynch Road Assembly Plant, is visually unprepossessing but survives intact as storage and warehousing.

On the other two of the seven sites, surviving historic elements have been subsumed into modern plants and are consequently invisible from the street today. A particularly regrettable loss is that of the Chrysler-Dodge Half-Ton Truck Plant near the city’s northern border on 8 Mile Road. At this structure, designed by Albert Kahn and endlessly reproduced in surveys of architectural history, as well as at the recently demolished (2011) Chrysler McGraw Avenue Glass Plant\footnote{Davis 2011}, historic buildings were either subsumed into modern facilities or renovated so as to remove historic detail. As a result, Kahn’s iconic forms lost their recognizable form and were absorbed into large, fortress-like buildings clad in pale aluminum. Set back from the street and buffered by multiple fences, gates, and land berms, the rebuilt Half-Ton Truck plant seems secretive and unaware of its historic significance.
Demolition, abandonment, redevelopment: singly or together, these fates describe the totality of Detroit’s historic automotive heritage. Below, we briefly explore the histories of three of the most significant sites—the Chrysler-Chalmers (Jefferson North) plant, the Cadillac plant, and the Packard plant—to better understand how Detroit arrived at Autopia’s End.

_Evolution and devolution: The story of three automotive plants_

To understand in greater detail the processes that have demolished much of Detroit’s automotive heritage, we examined the histories of the Chrysler-Chalmers plant (today Chrysler’s Jefferson North plant), the Cadillac Clark Street plant, and the Packard plant. Each was constructed and operated by a different automobile company and located in a different area of the city (Figure 7). Composed of multiple buildings of varying eras, each plant was also an order of magnitude larger than early factories like Ford’s Piquette plant. In the 1990s, two of the three plants met a fate common to many other former automobile plants. Between 1988 and 1992 the Chrysler-Chalmers complex was mostly demolished and remaining historic elements subsumed into a redeveloped plant, and the Cadillac plant was cleared and demolished in 1998 for a very low-density “technology park” that has been only partially built out. Only the Packard Plant, closed in 1956 and fitfully reused in the decades afterward, survived the 1990s, continuing as it does to the present day (2012) to deteriorate into a burned-out, trash-strewn ruin.

None of these three plants were industrial architectural landmarks on the order of Ford’s River Rouge plant\textsuperscript{16} or the Ten-Ton Truck plant. But each plant was a collection of monumental structures that physically defined and economically supported their neighborhoods while collectively playing an important role in defining Detroit’s cultural fabric and collective memory. And though none of the three feature prominently in architectural history, two (Chrysler-Chalmers and Packard) contained worthy buildings by the prolific Detroit-area architect Albert Kahn, whose better-known work was found elsewhere.

\textsuperscript{16} Bodurow Rea 1991
As previously noted, these plants were not single buildings but rather complexes of industrial structures. Each plan developed incrementally, responding to changing demand and production technologies during the first half of the 20th century. During this time, automobiles became increasingly complex, with sophisticated components requiring new skills, innovations, organizations, machinery, and facilities. As plant volume increased and automation took greater hold, Chrysler-Chalmers, Cadillac, and Packard added new buildings to their plants, incorporating each into a vertically and horizontally-integrated web of production logistics with new parts and products made on site. In multi-story factories, these processes could assume great complexity, and ultimately the multistory format was deemed inefficient.¹⁷

The concentrated growth of each plant on a single site over a half-century generated a rich complex of different scales and forms on each site. Sanborn maps from 1951, when all three plants were still functioning (Figures 8, 9, 10), show a wide variety of building types, shapes, and sizes. Examination of older Sanborn maps showing different stages of plant construction demonstrate that each plant developed in an accretive manner taking full advantage of its urban site. The Cadillac plant was a particular exemplar of incremental, well-planned factory growth that made the most of its relatively modest site. This development history is still visible today (2012) at the Packard Plant, where individual buildings dating from the 1910s to the 1950s connect seamlessly to each other while contrasting dramatically in scale with the mostly residential (and severely deteriorated) streets around the plant. In contrast with this incremental history, the demolition histories of the sites are short. Both the Chrysler-Chalmers and Cadillac plants were the result of fifty-plus years of industrial evolution, but each was demolished in the space of less than two years.

The Chrysler-Chalmers plant: demolition by redevelopment

¹⁷ Dodgemotorcar.com 2011
Between 1908 and 1918, on the far east side of Detroit, the Chalmers Automobile Company commissioned Albert Kahn to design a new plant adjacent to the Detroit River. Kahn designed a series of relatively unornamented three- and four-story concrete-framed pavilions with open courtyards facing the street and broad front lawns, shrubbery, and flowerbeds virtually park-like in appearance. The initially semi-suburban design of the Jefferson Avenue South plant was in keeping with its generous site located along the wide boulevard. Early photographs show the plant standing in open country; the surrounding area was just beginning to be subdivided and developed with Detroit’s characteristic freestanding houses on sizeable plots of land (Figure 11). As Chalmers plant grew during the first half of the 20th century, the originally open site would become crowded with industrial structures.

Only two years later, in 1910, the Hudson Motor Car Company also commissioned Kahn to build its plant on a site directly adjacent to Chalmers. Founded in 1909, Hudson, along with Chalmers, was one of the many early automobile companies that would be absorbed into the Big Three by mid-century. Hudson’s plant displayed many of the same features as Jefferson South, including a series of concrete pavilions with courtyards that provided needed natural light and air circulation in the days before fluorescent lighting and air conditioning (Figure 12). Kahn also designed a two-story office building at the front of the plant, facing Jefferson Avenue. This building was clad in stucco and ornamented with green tiles, giving it a somewhat peculiar Spanish-revival appearance amidst its industrial setting. The stucco headquarters masked the industrial buildings, providing Hudson with a formal front that perhaps served as a sort of public relations showpiece for the company.

The Chalmers Automobile Company was purchased by the growing Chrysler Corporation in 1925. Two years later, Chrysler added the American Motor Body Company, whose plant lay across Jefferson Avenue, to its portfolio, creating a "Chrysler-Chalmers" campus that spanned Jefferson Avenue and would eventually provide the basis for the 1990s-era Jefferson North plant. Between 1924 and ’28, Chrysler spent $1.3 million to add four large buildings and a dozen “in-fill” structures

18 Ferry 1970, 12
19 Ibid, 13
designed by local architects Smith, Hinchman and Grylls to its amalgamated site\textsuperscript{20}. In 1934, Chrysler added a striking Art Deco Office and Display Building, again designed by Kahn and featuring reinforced concrete with steel sash plate-glass windows\textsuperscript{21}. Like the nearby Hudson front office, Chrysler’s display building provided a visually accessible ‘storefront’ for the plant, providing passersby with a view of the company’s products and masking what had become a decidedly gritty industrial site (Figure 13).

By 1940, the Chrysler-Chalmers plant had been expanded to almost 2 million square feet of floor area in more than 2 dozen buildings spread across 47 acres. During the early years of that decade, Chrysler retooled the plant to produce a number of products for the war effort\textsuperscript{22}. Following that period, Chrysler manufactured a number of different lines at the Chalmers plant, including its well-known 300 Series in the 1950s and ‘60s. Major construction on the campus wound down in the mid-1950s with a bridge over Jefferson Avenue connecting the Chalmers site to a body plant along Kercheval Avenue, where car bodies were transported on a covered conveyor belt (Figure 14).

The consolidation and elimination of smaller automobile companies in the first half of the twentieth century presaged the troubles that would afflict the Big Three in the century’s second half. In 1954, production of Hudson cars in Detroit ceased when the company was sold to the Nash Motors in 1954, forming the amalgamated corporation known as American Motors (AMC)\textsuperscript{23}. The Hudson plant did not long survive the sale; it was demolished in 1961, the site used for storage. And as Chrysler itself began to experience financial problems that would culminate in the company’s bailout and reorganization between 1979 and 1983, the company laid off one-third of its work force and closed 12 factories. In the late 1970s, the Chrysler-Chalmers plant suffered massive employment cuts, stilling much of the factory and devastating the lives of nearby workers in the Jefferson-Chalmers neighborhood, many of whom were African-American\textsuperscript{24}. In 1990, the historic Chrysler-Chalmers plant closed\textsuperscript{25}.

\textsuperscript{20} Ferry 1970, 38-39
\textsuperscript{21} Federal Writers Project 1941, 265
\textsuperscript{22} Hyde 2003, 133
\textsuperscript{23} Long and Hyde 2004, xvii
\textsuperscript{24} Bolger 1979
\textsuperscript{25} Hyde 2003, 38-39
Chrysler-Chalmers’ present-day Jefferson North campus, constructed between 1990 and ’92, was intended by the city of Detroit to be a significant economic development initiative that would preserve an operating automobile assembly line within the city. According to one account, the city spent $264 million to “acquire and clear more land for the new plant. That required tearing down buildings, small factories, and houses for blocks around, then cleaning the land of toxic industrial waste”\(^26\). The new, expanded campus north of Jefferson Avenue incorporated the vacant Hudson site, as well as many formerly residential blocks.

In 1992, Chrysler’s Jefferson North Assembly Plant opened at a total cost of $1 billion\(^27\). The plant was intended primarily to produce Jeeps and minivans\(^28\), and its new technologies required the rehiring of less than half of the workers of the old Jefferson South plant. Maynard noted that the city calculated the total cost of the plant to be $436 million, or “more than $200,000 for each of the 2,100 hourly jobs” at the new plant. By 2003 the campus spanned 2.7 million square feet and employed some 2,800 employees\(^29\). The original Chalmers plant site, south of Jefferson, is now used for vehicle and equipment storage.

Today, a traveler on East Jefferson Avenue would find it difficult to uncover any trace of the early twentieth-century Hudson or Chrysler-Chalmers industrial fabric, or to even to recognize that he or she was in an industrial area at all. The entire Jefferson Avenue frontage of the Jefferson North Assembly Facility is lined with grassy berms lightly planted with hardwood trees and protected by a security fence. No structures are visible from the street, lending the complex a forbidding, distinctly military appearance (Figure 15). The near-complete erasure of the surrounding city fabric is even more apparent on the blocks north of Jefferson Avenue, where two large east-west

\(^{26}\) Maynard 1992  
\(^{27}\) Hyde 2003, 282-283  
\(^{28}\) Maynard 1992  
\(^{29}\) Hyde 2003, XX
streets end abruptly at security gates. Nearby blocks, now absent of housing, provide ornamental planted areas, security buffers, and landscaped berms both within and beyond the plant boundaries (Figure 16). These visual and functional barriers mask the plant from all of its surrounding streets. Nothing remains of the former Chrysler-Chalmers or Hudson plants (Figure 17).

Comparing present-day aerial photographs with historic Sanborn maps (Figures 8, 18) reveals the wasteful scale and use of space associated with modern automobile production. No less than 23 residential blocks to the west of the original Chrysler-Chalmers plant were condemned and annexed to the site in the 1982 redevelopment. Several blocks of deteriorated, partially abandoned housing were replaced by open space that can only be described as ornamental. The complex’s “front yard” contains a company sign, a large expanse of grass, and a fan-shaped parking area, most of which is behind a security fence. Beyond the gates that control entry to this single, well-fortified superblock is one of three functioning automobile production lines in the city. To the east, the vacant Hudson site is occupied by parking. Outside the plant boundaries, empty lawns and gently meandering sidewalks leading nowhere indicate that the demolished neighborhoods were needed simply to provide a landscape ornament and security buffer for the plant.

In a certain sense, today’s Jefferson North plant is clearly just another faceless part of the “logistics landscape”\textsuperscript{30} that characterizes today’s global production and consumption industries. By eliminating and neutralizing its site, Chrysler was able to emulate and impose the global standards that define modern automobile and manufacturing production. Similar standards required the demolition of 15,000 houses at General Motors’ “Poletown” plant in nearby Hamtramck for a similarly faceless plant. But in another sense, the spacious, inhuman landscape of Jefferson-North reflects a city whose historic landscape was so deteriorated and devalued that its erasure for the new plant scarcely raised an eyebrow in the early 1990s. Perhaps Detroiter were so

\textsuperscript{30} Waldheim and Berger 2008
distracted by larger concerns that the plant and nearby neighborhood’s removal escaped notice. Or perhaps no one thought the urbane but technologically obsolete complex mattered any more. In any event, the Chrysler-Chalmers site has been altered nearly beyond recognition, a transformation that one might add has failed to reverse the deterioration of surrounding neighborhoods.

*The Clark Street Cadillac plant: demolition by economic development*

In 1921, the Cadillac Motor Car Company, a division of General Motors since 1909, decided to consolidate its different Detroit plants onto two large blocks in the middle of west Detroit adjacent to and facing Michigan Avenue, a wide boulevard leading into downtown. Michigan was a busy artery packed with foot, trolley, and automobile traffic; the city’s main railroad terminal for the New York Central Railroad was nearby, as was the Detroit Tigers baseball stadium. Locating a factory along Michigan both optimized General Motors’ access to railroad transportation and provided a highly visible symbol of corporate power, an industrial reflection of the company’s New Center headquarters located along Woodward Avenue north of downtown.

Cadillac’s new facility, designed by the DuPont Engineering Company of Delaware, was denser than the low-scaled, pavilion-like plants designed by Albert Kahn for Chalmers and Hudson31. Cadillac’s plant was a neatly organized grouping of four-to-five-story concrete structures interwoven with light wells and open courtyards (Figure 19). This design in part reflected the spatial limitations of Cadillac’s triangular site. Nestled between rail lines that provided access to shipping, street access to the Cadillac plant occurred along narrow Clark Street, which bisected the plant before passing underneath the railroad line to the south. Cadillac’s collection of consistently designed, street-facing buildings (Figure 20) captured the spirit of Beaux-Arts urbanism and lent a nondescript sector of Detroit an almost European splendor similar to that provided downtown and at General Motors’ New Center northwest of downtown.

*Figures 19, 20 about here*

31 Hyde and Abbott 1976, 51
In the late 1930s, the 60-acre Cadillac plant contained 3 million square feet of space in 17 buildings. It produced almost 50,000 cars a year\textsuperscript{32}, employing more than 10,000 workers\textsuperscript{33}. Nevertheless, as early as 1983, executives at General Motors discussed closing the Cadillac plant as part of the company’s efforts to improve quality and compete with the growing market share of foreign luxury automobiles like Mercedes\textsuperscript{34}. In its last decades of operation, the Clark Street plant produced Cadillac’s Eldorado and Seville lines, but in 1986, the company formally announced the plant’s closing, together with the Fisher Body Fleetwood plant on Fort Street a few blocks away. One citizen wrote,

> The closing of Clark Street is sad because, despite [the plant’s] inefficiencies, it was a symbol of tradition, of roots, of commitment to excellence and of the effort to maintain the ‘Standard of the World’ unadulterated, spared from having to rub shoulders with its lesser brethren.\textsuperscript{35}

The closure of Cadillac’s two plants in 1987 put 3,000 General Motors employees out of work. After ten years of abandonment, the site was “cleared and remediated” in 1998 for the “Clark Street Technology Park” (Figure 21). All historic buildings on the plans site were demolished and “replaced with several customized tenant structures.” Construction of the Park was funded by a consortium of a local economic development agency, a local bank, and “Clark Street LLC”, a company whose investors included General Motors\textsuperscript{36}. The Park’s first tenant, auto parts manufacturer Vitec Corporation, invested $50 million in a new plant, receiving almost $18 million in city and state funding. With 5-year contracts from GM and Chrysler totaling $680 million, the company built a 10-acre, 150,000-square-foot plant on the site that Vitec initially estimated would employ 100 people, with the potential to expand to 350\textsuperscript{37}.

\textsuperscript{32} Federal Writers Project 1941, XX  
\textsuperscript{33} Schneider (1995)  
\textsuperscript{34} Citation needed  
\textsuperscript{35} Automotive News; citation needed  
\textsuperscript{36} PR Newswire 1997  
\textsuperscript{37} Pryweller 1997
In 1998, Federal Express also moved to the Technology Park, agreeing to build a $5-million, 77,000-square-foot sorting plant that FedEx forecast would employ 150 people\textsuperscript{38}. By this time, five other smaller ventures had also built or signed on for space at Clark Street. By the early 2000s, additional incentives had slightly increased employment at the park. In 2003 Vitec received an additional $11.5 million in property tax exemptions to create 10 new jobs and retain 20 existing ones\textsuperscript{39}. But our field study indicated that the Technology Park was more than half vacant in mid-2009, and that employment at the site totaled no more than 500 people. This is well short of the 1,000 jobs initially projected by the State of Michigan and a fraction of the thousands once employed by Cadillac on the site.

Just as at Chrysler-Chalmers, nothing remains of the once-urbane and attractive Cadillac plant today (Figures 22, 23). The site east of Clark Street, once home to Cadillac’s office headquarters, is fenced off and contains only a thin successional landscape and scattered rubble, perhaps from the historic plant. The western half of the site is occupied by a single-story industrial shed (Vitec) and a one-story office structure (FedEx) that, if not for their location on Clark Street, would not look out of place in a technology park anywhere in the United States. The limited, low-density, architecturally negligible redevelopment of Cadillac’s Clark Street plant has at least avoided the wholesale destruction of nearby city blocks that characterized Chrysler’s Jefferson North redevelopment. In 2006, city blocks near Clark Street still contained vacant, multistory industrial structures (Figure 24) as well as many dilapidated wooden homes. But the Cadillac plant itself is lost.

Figures 21, 22, 23, 24 about here

Packard: demolition by neglect?

The late 19\textsuperscript{th} and early 20\textsuperscript{th} centuries were fertile ground for the formation of dozens of new automobile corporations like the Packard Motor Car Company, established in 1902. Founded in Warren, Ohio, Packard quickly relocated to rapidly expanding Detroit to be

\textsuperscript{38} Associated Press 1998
\textsuperscript{39} LeRoy et al 2006
closer to its competitors, and like its competitors at Chalmers and Hudson it too commissioned Albert Kahn to design its manufacturing complex in the city. Located along East Grand Boulevard, Detroit’s early version of a ring road, the plant would eventually total nearly 100 buildings, of which at least 10 were designed by Kahn. Although the early structures of the Packard plant were “standard mill construction” with heavy walls and floors supported by bearing walls of iron and steel, Packard’s Building Number 10, added in 1905, was heralded for its innovative use of reinforced concrete. Number 10 was uniquely characterized by larger windows, almost no ornamentation, and reduced interior columns. Its floors were concrete instead of wood, and it was effectively fireproof. The building cemented Kahn’s reputation as a technologically proficient and innovative designer.

An aerial photograph of the Packard plant from 1939 (Figure 25) shows a scalar drama similar to that which drew Erich Mendelsohn to Detroit. Even today this contrast remains a visual hallmark of the Packard facility. In 1939 a continuous wall of buildings two-to-five stories high and nearly one kilometer long directly faced a modest neighborhood of single-family houses across an ordinary city street. As the Packard complex grew and diversified over the next 40 years, the striking contrast between its national scale of automotive production and the adjacent local scale of worker housing increased as well. Just like Cadillac, Chrysler-Chalmers, and many other Detroit plants, the Packard plant was a diverse archipelago of concrete and brick amidst a sea of modest wooden dwellings.

Figures 25, 26, 27, 28 about here

The decline of the Packard Corporation in the 1950s was fast and dramatic. Saddled with cars that were expensively-priced and inefficient to construct, the company could no longer compete with the increasingly nimble production and lower-priced automobiles of the Big Three. Even Packard’s merger with Studebaker, forming the short-lived Studebaker-Packard company, was not enough to keep the company in good health. The new corporation’s Detroit plant was an unsustainable liability and the

40 Hyde 1980, XX
41 Citation needed
plant closed in 1956. Studebaker-Packard Executive Roy Hurley, perhaps foreseeing the troubles of the future, did his best to have the complex demolished. He “expressed the view that the whole Packard complex on the Boulevard was a slum. He tried to have the city tear it down to save the estimated $5 million that it would cost to raze a property valued at only $1 million”. Ultimately, the Studebaker-Packard corporation wrote off their losses by selling the entire complex to “a rug merchant for $750,000.”

Since 1957, the Packard site has been privately-owned and operated as a small-scale industrial park. Gradually, however, its tenancy declined. In the mid-1990s, up to 85 manufacturing tenants occupied parts of the plant, but by 2006, only one building remained partially occupied, and the rest of the facility was essentially vacant and thereby open to a range of illegal, illicit, and unauthorized activities, including vandalism, dumping, homeless occupations, parties, and even, recently, a guerrilla garden. In late 2010, the site’s single remaining tenant—a chemical company employing nine workers—one one-thousandth of the nine thousand plant employees working on the site fifty-four years earlier—announced that it would relocate to the suburbs. At the same time, the city declared its intention to “eventually” demolish the plant and “present the owner with the bill.” Thus far, the city has failed to carry out its threat, but the plant’s owner has also recently (2012) pledged to demolish the structure should funds become available. Certainly in Detroit’s current woeful economic climate there is no prospect of viable proposals that might renovate the building to market standards.

The unlikely survival of the Packard plant, against the wishes of both the public and private sectors, has made the collection of structures a highly visible symbol of Detroit’s decline and redevelopment failure (Figure 26). In recent years the plant has become a regular subject of ruin photography, particularly the crumbling bridge connecting factory buildings across Grand Boulevard (Figures 27 and 28). Self-promoting vandals...

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42 Ward 1997
43 Ryzick 2010
44 Chapman 2010
45 Chapman 2012
46 e.g. Marchand and Meffre 2010 22-23
47 Mahler 2009
have also had their day: in 2009 the *Wall Street Journal* fawningly documented the successful effort of some to push a truck out a fourth-floor window in one building. Packard’s state is not only an embarrassment to Detroit officials, but a literal hazard to Detroit emergency workers: Firefighters let suspicious fires in 2009, 2010, and 2011 simply burn themselves out, as the complex is too overgrown and unstable for equipment to access. And in 2012, the site’s threatened demolition made the Packard plant a full-scale tourist attraction, with dozens if not more tourists visiting the site daily to capture the spectacle of Autopia’s End before its greatest surviving landmark vanished forever.

*Preservation in crisis: A possible future for Detroit’s automotive industrial sites*

Since 1980, Detroit has lost almost its entire stock of historic automotive manufacturing plants. These plants, as we have documented, were urban and architectural spectacles of industry, Detroit’s equivalent of Buffalo’s grain elevators or New England’s textile mills. Beyond that, the plants were significant elements of Michigan’s rich automobile manufacturing history, and keystones of local industrial culture as well as of Detroit’s neighborhood social fabrics. While the plant closures were in many ways unavoidable, the result of seemingly inexorable global forces of competition, consolidation, and consumption, their almost ubiquitous demolitions were not. The plant losses are both regrettable and poignant, for without them, Detroit today lacks not only visible markers of the defining force in its history, but the very structures that in many other cities have proved to be catalysts for cultural activity and symbols of pride in the twenty-first century. Instead Detroit has nearly succeeded, within the short space of thirty-plus years, to remove almost every significant automotive manufacturing complex constructed in the previous seventy.

Despite the diminution of the city’s industrial stock, industrial preservation constituents have had little voice in hindering factory demolitions, or even in providing a public voice against their destruction. The recent history of Detroit has provided abundant evidence of precisely the contrary: “planning” and other

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48 Kellogg 2009
49 Huffington Post 2012
neighborhood concerns have little or no role when retention of automotive manufacturing is at stake. Similarly, though history has shown that the fewer buildings remaining of a particular type, the more they are valued, this has not proven the case in Detroit. Even as today the Packard and Fisher Auto Body plants are popular spectacles of ruin, there is little discussion of preservation. As a result we have every reason to expect, given the post-1980 histories of Detroit’s historic auto plants, that even the few remaining plants will not be standing in 10 years.

Preservation has been conspicuously absent from the dialogue over the future of Detroit’s automotive sites. Instead, economic development has dominated these dialogues. While the economic benefits of plant retention and technology park redevelopment in Detroit certainly remain open for debate, from a historical and design perspective the effects of economic development have been reliably ruinous there. Particularly ironic, given the evident struggles for economic success that have afflicted the Cadillac plant, is the shortage of critical dialogue about the meaning and efficacy of such initiatives in Detroit today. The reality is that most of Detroit’s demolished automotive sites simply remain vacant; demolishing them did not accomplish anything in terms of economic development, and cost much in terms of built heritage. By viewing ‘success’ as the clearance of automotive plants for potential new activity regardless of the quality, success, or even existence of these ventures, Detroit’s economic development actors—public, private, and nonprofit—collaborated at the Cadillac and Chrysler-Chalmers sites, and likely many others, in erasing the industrial fabric of the city as effectively as any enemy bomber.

What if even a small fraction of the hundreds of millions of public dollars that went into “economic development” at Chrysler-Chalmers and Cadillac alone had gone into the simple stabilization or securing of some of the historic plant buildings? What if some of these plants still stood today, sealed, intact, and awaiting future use? Certainly securing these plants would have required only a small portion of the funds spent to condemn,

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50 Barkholz 1986
51 Ironically, though preservation is not discussed for the plant itself, graffiti from the plant has been preserved for public display. See Wetherby 2012.
52 The sole exception is the small-scaled Ford Piquette Plant, whose nonprofit owners seem to be excellent stewards.
demolish, and (unsuccessfully) redevelop their sites—with the added benefit of preserving some of the buildings themselves.

Historic preservation’s impotence in stopping or even critiquing the demolition of Detroit’s historic automotive heritage can easily be seen as the inevitable shortcoming of nonprofit advocacy in the face of a relentless and opaque “growth machine”\textsuperscript{53} of public and private agencies obsessed with retaining and favoring powerful business interests. This much is incontrovertible, and preservationists should not shoulder blame for failing to halt in Detroit what many preservationists have failed to halt elsewhere.

But we think that preservation in Detroit, and in deindustrializing cities in general, has another shortcoming- a conceptual one. In these places, the field lacks a robust theoretical framework with which to imagine a future for buildings with no conceivable reuse in contemporary markets. Historic preservation is, in fact, a creature of conventional market action. One American preservation textbook on “preservation economics” views these economics as only those cases where a willing and able (private) developer exists to preserve and restore a building\textsuperscript{54}. But what if there is no conceivable developer-driven reuse for a building or complex? In Detroit, at least, this is the dilemma facing closed automotive complexes, but preservationists have as yet had no answer.

We believe that if the few remaining historic automotive plants in Detroit are to survive, and by extension if similar such hard-to-reuse structures are to survive elsewhere, that new models of historic preservation must be conceived. Otherwise, the survival of even a remnant of one of the world’s great industrial heritages is at serious risk of extinction. Detroit’s condition is extreme, but it is far from unique. In the American Rust Belt and in similar deindustrialized areas in Europe and the former Soviet Union, preservation and planning challenges for technologically obsolete buildings are immense\textsuperscript{55}. As urban designers and planners ponder the possibilities for “design after decline”\textsuperscript{56},

\begin{flushright}
\textsuperscript{53} Logan and Molotch 1987  \\
\textsuperscript{54} Tyler 2000, 184-207, Feilden 2003  \\
\textsuperscript{55} Oswalt 2005, Chaubin 2011, Schonle 2011  \\
\textsuperscript{56} Ryan 2012b
\end{flushright}
preservationists would do well to do the same: to imagine a future for monumental industrial structures in cities or regions where economic problems are significant and ongoing, where state funding and preservation capacity is limited, and where conventional preservation strategies have thus far more or less failed.

Three Preservation Alternatives

Three industrial preservation mechanisms already in practice at a small scale in Detroit offer a window into what an alternative industrial preservation paradigm might look like. The first is that of nonprofit stewardship: ownership and operation of a structure or complex of structures by nonprofit advocates committed, above all, to their preservation and reuse. The second, operating at a small scale in Detroit but at a much larger scale in economically healthier cities such as Boston, is the reuse of industrial structures for new economy-based startup industries in bio- and information technology. The third, least formal in nature, least conventionally acceptable, and most unexplored at present, is “Do-It-Yourself” or DIY use: unstructured or semi-structured inhabitation and activity in buildings by artists and other creative economy members. While no one of these mechanisms alone is ideal, we propose that some combination of the above provides the most productive lens with which to view the possible partial preservation of structures such as the Packard plant.

The T-Plex

The low-cost, privately-directed restoration of the 1904 Ford Piquette plant has occurred under the auspices of local auto enthusiasts who are the owners and stewards of Henry Ford’s first factory. As the T-Plex, the 1904 building operates as a not-for-profit museum, housing an extensive collection of Model Ts and As and other automobiles, equipment, documents, and ephemera (Figure 29). Its principal assets, like those of many transit museums around the country, are the sweat equity and enthusiasm of its volunteers. The T-Plex raises money from donors, rents the plant for events, and pursues government and foundation grants, but its budget is small and the organization has no full-time employees. Nevertheless, it has succeeded in preserving, in excellent working order, a foundational industrial site—the place where Henry Ford
conceptualized his idea for the assembly line and where the first Model Ts were produced. Similarly low-budget enthusiast organizations have succeeded in stabilizing and reusing important industrial-era structures in St. Louis at the former Lemp Brewery and in Buffalo at the former New York Central Railroad Station. (A subsequent study will document these “market-less” preservation practices in more detail.)

Figure 29 about here

The T-plex is a single, relatively small industrial building, but the three plants that we examined in this paper were much larger, sprawling complexes varying in age, configuration, and function. Of the 15 such plants surveyed in 1980, only the Packard plant retains a critical mass of historic structures today—an impossible prospect for conventional preservation. The complex is severely deteriorated, with a variety of structures that no single user or owner could ever hope to rehabilitate fully. Little wonder that local advocacy efforts like the group Preservation Wayne have focused on residential neighborhood conservation and cultural corridors rather than “hard-to-preserve” sites like Packard. Nonprofit ownership and management alone has little hope of renovating such buildings.

Tech Town

Sites of this scale and function may benefit from a second, more conventional preservation mechanism: the innovation- and technology-led rehabilitation of industrial structures. Not far from the Packard plant, the TechTown public-private partnership sponsored by Wayne State University has achieved notable success. Located along the central corridor that follows Woodward Avenue north from downtown, TechTown’s 43-acre-campus spreads across multiple blocks containing a former Burroughs Adding Machine factory and other adjacent factories and commercial buildings, including some formerly owned by General Motors dealerships (Figure 30). Unlike the T-Plex, TechTown’s approach is dependent both on foundation funding and rental income.

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57 Campo 2012, AESOP Presentation.
58 Karen Nagher, Interview March 11, 2010
59 Saulny 2010a
from tenants. But the partnership’s conservation of historic buildings certainly takes a
more flexible, respectful, and successful approach to industrial heritage than the tabula-
rasa-driven Clark Street Technology Park that replaced the Cadillac-Chalmers plant.
One example is TechTown’s rehabilitation of a former 70-year Cadillac dealership,
closed in General Motors’ post-2007 reorganization and currently being mothballed for
conversion to offices. TechTown represents an important aspect of the creative
continuum that is beginning to modestly reshape and reoccupy abandoned industrial
Detroit. It is not inconceivable that TechTown, or an organization like it, might play a
role in rehabilitating limited areas of semi-abandoned complexes like Packard if issues
such as ownership were resolved.

Figure 30 about here

DIY: Do-it-yourself

While enthusiast- and technology- driven preservation models are compelling precisely
because they are familiar models that have demonstrated success, a third potential
preservation model is smaller-scale, less formal, and more incremental. Over the past
five years, entrepreneurs and creative residents of Detroit have embraced a “do it
yourself” (DIY) ethic of business development, new media, art, and place-based
experiment, all in dynamic combination with the city’s historic building stock,
including the ruins of the Packard plant (Figure 31). In so doing, Detroit’s greatest
liability—its seemingly relentless decline of ruined or dilapidated historic buildings—
has evolved into one of the city’s most significant and visible cultural assets. The
national media, led by the New York Times, has taken note. In 2009 and 2010, stories
about new businesses, creative culture, urban experiments, and locally-based small-
scale development projects in what some residents call “the D” paralleled those
tracking the familiar narrative of decline60.

Figure 31 about here

60 Saulny 2010a, 2010b, Ryzick 2010, Walker 2010
The national media’s new interest in this informal and incremental approach to revitalization in Detroit is typified by articles documenting cultural events and experiments that have made use of the city’s abundant vacant land and buildings. Such projects, including a guerrilla (illegal) art installation and garden atop the roof of an abandoned Packard Plant building, typify the city’s emerging creative milieu— one that seems, at least from in the projects described, to be mostly white and middle-class. Such “DIY” (do-it-yourself) actions, playfully engaging the present semi-abandoned condition of Detroit, suggest the existence of a small, but emerging constituency passionate about the creation of culture within the city’s dilapidated physical fabric. While Detroit’s unofficial “artists in residence” are engaged in individual creative gestures, not wider-scale conservation, there is little question that their efforts are sincere, that they are attracting nationwide attention, that these cultural activities have little to do with the economic-development driven efforts that have reshaped former automobile plants like Cadillac; and that their very visibility derives from their setting within one of the United States’s greatest and most visually compelling industrial settings.

*Market-less futures for Detroit’s industrial heritage*

Perhaps, rather than facing almost inevitable demolition for conventional economic development strategies, sites such as Packard might conceivably survive as places for cultural production under nonprofit stewardship. The demolition of Detroit’s automotive manufacturing heritage under the conventional policies of the past thirty years suggests that historic preservationists might widen their conception of preservation theory and practice to incorporate the survival of “hard-to-preserve” industrial structures under alternative scenarios.

What if, rather than pursuing an office park or industrial reuse scheme whose developer might demand demolition of all existing buildings in addition to millions of dollars in public subsidies, or instead of arguing for federal or state funds to demolish the Packard plant, the city of Detroit embraced Packard in its current state (Figure 24)?

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61 e.g. Yablonsky 2010, Ryzick 2010
Bizarre as this scenario might seem, it pales in the face of the impossibility of an actor willing or able to transform the complex into a prosperous center of new industry. Admitting this reality would open the door for a new conception of Packard’s buildings and their site.

Embracing Packard in its current state would begin with two actions: first, bringing the site into public ownership, and second, conveying the site to a nonprofit steward or stewards whose priorities would be to conserve what remained while ensuring, facilitating, and encouraging the reuse of the site for any and all interested parties with cultural or social purposes. Such a conveyance of the Packard site to a responsible steward would permit targeted, incremental investments to improve or rehabilitate the property, if and when demand coalesced. In the meantime, moderate securitizing of the site, while perhaps allowing occupation by informal agents such as the site’s current “caretaker”62 to continue, would provide opportunity for artistic experiments and practices that would be unique to Detroit and would likely attract substantial interest. Detroit may be in ruins, but its very ruined state is one of its most unique features.

Preserving the Packard plant as a semi-ruin is less radical than it might seem. Examples of postindustrial sites with substantial elements of their industrial past remaining may be found in places as diverse as the Ruhr Valley, Germany and in Albany, California. Near the city of Duisberg, a riverine landscape heaped high with slag, coal mines, and steel plants was preserved and redesigned in the 1990s as the Emscher Landschaft-Park (Figure 32). Emscher is a signal example of the emerging design movement called landscape urbanism, in which buildings, landscapes both designed and natural, and industrial waste are perceived as a single complementary environment whose current meaning stems from their vast scale and seemingly incompatible mixture of uses, structures, textures, and activities. Emscher exists because of a benevolent tradition of architectural and urbanistic practice in Germany known as the IBA, or International Building Exhibition. IBAs in recent decades have reimagined both urban and rural

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62 As of 2011, the Packard plant was inhabited by an informal caretaker, apparently tolerated by the site’s owner. See PreservationNation 2012
spaces, exploring such issues as shrinking cities, urban rehabilitation, and sustainable waterfronts.\textsuperscript{63}

Figure 32 about here

An ocean and a continent away, a much more accidental confluence of factors has created the unique postindustrial environment known as the Albany Bulb (Figure 33). A former landfill projecting into San Francisco Bay became, after a series of failed traditional development proposals, a locus for informal activity ranging from public art to dog-walking to homeless encampments. Unappealing from a conventional parks and regulatory perspective, the Albany Bulb has engendered a wide public constituency dedicated to preserving a unique environment in San Francisco Bay.\textsuperscript{64} Despite this, public actors persist in attempting to regulate and control informal uses in the space, much as New York State has done with a once similarly vibrant postindustrial site in Williamsburg, Brooklyn.\textsuperscript{65}

Figure 33 about here

Germany’s fortuitous combination of state support, cultural valuation of design and memory, and preservation of postindustrial sites is an unlikely possibility in Detroit, where both municipal and corporate cultures have proved themselves dedicated to traditional development models. Yet even in the Motor City, a vibrant DIY culture, together with other actors has generated an ample range of activities on the Packard site that shows it to have an equal potential to Emscher Park. Understanding that Packard, once a factory, is now as much as landscape as it is a cluster of buildings might promote a broader understanding of the plant as a site to be simultaneously left to nature, informally and opportunistically occupied, and perhaps even conventionally redeveloped. This understanding might in turn influence a sea change in the mindsets of the panoply of professionals driving the industrial redevelopment efforts that have thus far resulted in the demolition of most of Detroit’s industrial heritage.

\textsuperscript{63} Shay 2012
\textsuperscript{64} SFGate 2005
\textsuperscript{65} Campo 2002, 2013
Detroit is a damaged canvas, but it is also a broad one. Expansive and only semi-occupied, the city certainly provides space for a range of efforts both experimental and conservative in which interested parties can attempt to effect a more hopeful future for the city. Certainly the remaining pieces of Detroit’s brilliant industrial past deserve to exist within this urban environment.

But many of Detroit’s citizens already appreciate the city as a wholly new condition in which the unique industrial heritage generated in the past can survive through unconventional means. Detroit provides plenty of space for conventional solutions like office parks and (even) new automotive plants, but it also needs space for the remaining pieces of its brilliant industrial past. In Detroit and elsewhere in postindustrial America, residents and constituents of shrinking cities deserve better than to see these cities’ rich industrial material heritages demolished and replaced the vacant lots, suburban office parks, and fortresslike industrial complexes, all of which have negligible architectural and urban quality and debatable economic value. The remaining fragments of the industrial past, in contrast, present a valuable opportunity to give postindustrial cities a visual identity, to preserve a sense of pride in their citizens, and to foment creative cultures and industries that attract interest and attention. In turn, the survival of such sites might promote a redefining of preservation practice and theory by suggesting that the field abandon its purely market-driven ideology in favor of a ‘mixed media’ of solutions and ideas. In Detroit, Autopia’s end may yet leave a material heritage of industrial monuments behind. Only Detroiter themselves can determine whether or not the city can set a new example for shrinking cities in the years to come.
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Yablonsky, Linda (2010) “‘Artists in Residence: In the Long Shadow of Detroit’s Ruins a Creative Community is Transforming the City.’” New York Times Style Magazine Fall Travel Issue (published Sep. 27).

<table>
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<tr>
<th>Plant</th>
<th>Address</th>
<th>Year(s) Built</th>
<th>1980 Production Status</th>
<th>2010 Production Status</th>
<th>Fate of historic Buildings</th>
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<td>1</td>
<td>Chrysler Half-Ton Truck</td>
<td>Mound and 8-Mile Rds. at Mt. Elliot</td>
<td>1937+</td>
<td>active</td>
<td>active</td>
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<td>2</td>
<td>Plymouth Lynch Road Assembly Plant</td>
<td>Lynch Road at Mt. Elliot</td>
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<td>4</td>
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<td>1919</td>
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<td>5</td>
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<td>Piquette Ave at Brush</td>
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<td>1917-1941</td>
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Comments:
- Mostly located across city line in Warren, Michigan.
- Historic structures absorbed into modern facilities.
- Vacant or low-intensity storage uses, once held main or Plymouth assembly line.
- Former corporate center built last 20th Century, home of General Motors and informal cultural activity.
- Concrete-framed building vandalized but intact, other structures demolished.
- Houses TPlex, auto history museum.
- Plant subsumed into adjacent Jefferson North campus.
- Site cleared and vacant.
- Site is now used for container storage and vacant.
- Site owned and occupied by Detroit Edison in 1980; demolished beginning in 2003; vacant site used for storage.
Figures

Figure 1.

Automobile manufacturing also manufactured Detroit’s social fabric. By the early twentieth century, tens of thousands of Detroiter’s directly depended upon auto manufacturing for their livelihood. Here, employees of the Packard company pose outside the plant in around 1915. Image source: National Automotive History Collection, Detroit Public Library.
Figure 2.

Today abandoned, burned-out houses are a common feature in many Detroit neighborhoods. Photograph by the authors, 2010.
Figure 3.

Equally prevalent are long stretches of abandoned or underused commercial buildings along wide radial streets like Michigan Avenue. Photograph by the authors, 2010.
Like many other American cities, Detroit has recently built new baseball and football stadiums in downtown. Comerica Park opened in 1999. Photograph by the authors, 2007.
Figure 5.

In the last 20 years developers have also constructed some new housing in Detroit, such as these condominiums near downtown. Construction has slowed since the onset of economic crisis in 2007. Photograph by Karen Gage, 2011.
Figure 6.

In the 1920s, German architect Erich Mendelsohn admired Detroit’s dramatic scale contrasts. Similar contrasts characterized the city’s industrial neighborhoods. Source: Mendelsohn, AMERIKA.
Between 1900 and 1940, Detroit’s automobile companies constructed their plants adjacent to rail lines at what was then the edge of the built-up city. Most of these historic facilities have been demolished since 1980. Map by the authors and Geoffrey Moen.
Figure 8.

The Chrysler-Chalmers and Hudson plants on Detroit’s East Side were a dense agglomeration of structures constructed over a 45-year-period between 1910 and 1955. Source: Sanborn Map Company, 1951.
Figure 9.

The Cadillac plant was surrounded by major rail lines, but it was also convenient to busy Michigan Avenue. Source: Sanborn Map Company, 1951.
Like other early 20C auto plants, the Packard plant was adjacent to a busy street with high visibility (Grand Boulevard) and to rail lines for transport of materials and finished cars. Source: Sanborn Map Company, 1951.
Figure 11.

In 1917, the Chalmers plant was under construction even as the neighborhood around it was being built. Residential and industrial areas had a close economic and physical relationship in Detroit, with many plant workers living in nearby housing. Image source: Detroit Public Library.
Figure 12.

Albert Kahn designed the adjacent Hudson Automobile plant as a series of long concrete-framed pavilions with open courts in between, many of which were later filled in. The plant would be demolished only 15 years later this photograph was taken in 1946. Image source: Detroit Public Library.
The Chrysler Office and Display Building on Jefferson Avenue was also designed by Kahn’s office in 1934. Its Art Moderne styling was not dissimilar to the astylar plant buildings behind it constructed twenty years earlier. Image source: Detroit Public Library.
By the 1950s the Chrysler-Chalmers plant was not only out of space, but growing obsolete. This bridge carried car bodies on a conveyer belt over Jefferson Avenue between two sections of the plant. The plant survived until 1990. Images source: Detroit Public Library.
Figure 15.

Chrysler’s rebuilt Jefferson North plant, opened in 1992 on the site of the Chalmers factory, is remote from the street and highly securitized, reflecting contemporary industrial standards. Photograph by the authors, 2010.
Figure 16.

Chrysler demolished the Albert Kahn-designed Chalmers factory on the south side of Jefferson Avenue in 1991, but did not use the space, since the new plant was consolidated to the north. The site remains vacant today. Photograph by the authors, 2010.
Figure 17.

Chrysler also cleared much of the surrounding residential neighborhood in 1991-92 to provide security buffers, wide streets, and landscaped berms. It is hard not to conclude that much of this redesign was wasteful, unnecessary, and destructive. Photograph by the authors, 2010.
Figure 18.

The rebuilt Chrysler plant not only demolished every historic industrial building on the site, but cleared over 20 residential blocks to the west. This image shows approximately the same area as Figure 6. Image source: Google Earth.
Figure 19.

The Cadillac plant was a dense patchwork of concrete-framed buildings unlike Chrysler-Chalmers’ low-scaled, pavilionlike structures. Clark Street ran through the center of the plant. Though the plant stood for more than 70 years, photographs are oddly scarce: this one from Hyde (1980) is undated, but is probably from the 1960s or ’70s.
Clark Street in the 1950s resembled the downtown of an orderly small city more than an industrial corridor. Cadillac’s world headquarters was located in the building at center. Image source: Flickr (http://www.flickr.com/photos/hugo90/5346191649/, last accessed Aug. 2, 2011).
Figure 21.

Nothing of the Cadillac plant remains today; it was cleared in 1998. Where Cadillac headquarters once stood (at right) is a fenced field covered in rubble. Photograph by the authors, 2006.
Figure 22.

Visually negligible industrial sheds occupy part of the Cadillac site. They would not look out of place in an exurban office park anywhere in the United States. Photograph by the authors, 2010.
FedEx is one of the few employers at the Clark Street Technology Park on the site of the Cadillac plant. A few hundred employees occupy land that once employed many thousands. Photograph by the authors, 2007.
Figure 24.

A few blocks away from the Cadillac site, abandoned buildings still provide a sense of the early 20th-century Detroit industrial fabric. Photograph by the authors, 2010.
Like other early 20th-century automobile plants, the Packard plant was a dense assemblage of multistory buildings built in dramatic juxtaposition to small-scaled Detroit neighborhoods. The plant closed 17 years after this photograph was taken in 1939. Image source: Detroit Public Library.
Figure 26.

The Packard plant closed in 1956, but unlike almost all of Detroit’s other automotive plants, it has not been demolished. It subsists as a ruin today, though it remains privately owned. Photograph by the authors, 2003.
Figures 27 and 28. The Packard plant is slowly degrading as vandals, partygoers, and vagrants strip it of materials. These photographs, taken just seven years apart, show the damage that has occurred to the plant’s iconic Grand Boulevard bridge during that time. Photographs by the authors, 2003 and 2010.
Figure 29.

Not every historic automotive plant in Detroit is abandoned. Auto history enthusiasts have rehabilitated the Ford Piquette Street plant from 1904 and have converted it into a museum, the T-Plex, showcasing historic models. These and other enthusiasts are a major force behind industrial rehabilitations in other shrinking cities as well. Photograph by the authors, 2010.
Figure 30.

A more traditional industrial rehabilitation model is occurring at TechTown, a partnership between Wayne State University and a nonprofit organization. TechTown has reopened several industrial buildings to house small firms in innovation sectors. Photograph by the authors, 2010.
Figure 32.

The European landscape urbanism movement accepts industrial ruins as grounds for esthetic inspiration, cultural activity, and environmental remediation. Such an approach might transform our understanding of Detroit’s automotive ruins and perhaps save them.

Image source: Flickr (http://www.flickr.com/photos/la_raine/562630454/)
Much like the Albany Bulb, a former landfill on San Francisco Bay that is a site for culture, recreation and informal activity, the Packard Plant has in its ruin become a kind of sublime landscape. Might not preservation acknowledge Packard’s new meaning, rather than demolishing Packard as a safety hazard for new “economic development”? Image source: Flickr (http://www.flickr.com/photos/sweetiepiepress/2681865234/)