2016

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Toledo Tomorrow: Reading Norman Bel Geddes' Vision for the Future in a Shrinking Midwestern City

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Abstract

This paper examines Norman Bel Geddes' 1945 *Toledo Tomorrow* plan, his only proposal for a specific city, and its stamp on the morphology of today's Toledo. The paper surveys retrospectively at the changes in the morphology of the city and critically analyzes the impact of the *Toledo Tomorrow* Plan. Today's Toledo, a shrinking rustbelt city, reflects Geddes' legacy of neglecting the historic core; focusing on highway infrastructure, that has since worked in tandem with the forces of decentralization and suburbanization; and the city's weak relationship with its natural features and larger region.

Keywords

Geddes' 1945 *Toledo Tomorrow* plan, City of Toledo, Ohio, Futurama, Magic Motorways, Shrinking rustbelt city

On July 3, 1945, a special edition of the *Toledo Blade* newspaper announced the opening of Toledo Tomorrow, an exhibition of a giant model, 59 feet in diameter, depicting a major reorganization of the city. "Eyes of the Nation on Toledo Tomorrow," the headline announced (Doordan, 2002). The exhibition, sponsored by the *Blade*, was an effort to publicize a grand re-imagining of Toledo; the catalog described the plan "not as a blueprint for the city's planners and builders, but as an inspiration for future living" (Geddes, 1945: dedication page).

The Toledo Tomorrow exhibition was the culmination of a series of projects by Norman Bel Geddes, a leader in the then-new field of industrial design. A prolific designer who worked in a number of arenas ranging from stage design to city design, he drew attention himself and to the importance of design by signing many of his products. His popularity peaked in the years between the two world wars, the so-called golden age of industrial design (Feeney, 2013). He was also a large personality and a well-known public figure who was active in New York society circles. In a cartoon published in the *New Yorker* in

1932, a group of businessmen sit around a conference table; one of them says, "Gentlemen, I am convinced that our next new biscuit must be styled by Norman Bel Geddes" (Feeney, 2013; Goldberger, 2013).

The architecture critic Paul Goldberger (2013) writes that while Geddes never designed any biscuits, he did design almost everything else. Although he was largely forgotten for a time, more recent evaluations of his work have placed him as "perhaps *the* key figure—in the first generation of industrial designers" (Goldberger, 2013). Taken together, Geddes' designs and his publications, notably his 1932 book *Horizons*, established his reputation as a practical visionary.

This reputation led to an important commission. In 1937, sponsored by Shell Oil, Geddes started thinking about the "City of Tomorrow," (Fig. 1) part of an advertising campaign for Shell Oil based on the concept of "Traffic-Conditions-of-the-Future." Geddes was required to produce sixteen sketches providing solutions to problems of traffic congestion. Instead, Shell got a model of an interstate system and the entire city of New York in which flowing expressways and large interchanges were superimposed on the rectilinear New York grid; Geddes also included a future city traffic plan. He conceived of the future city "primarily in terms of the efficient and aesthetic arrangement of skyscrapers and of the flow of automobiles which serviced them" (Meikle, 2001: 7), giving a hint of ideas to come in his future work.

FIGURE 1: City of Tomorrow proposal for Shell Oil, Source: *Life* (5 July 1937)

From July to November 1937, the City of Tomorrow was publicized in Shell Oil advertisements in widely circulated publications like *Life* magazine and the *Saturday Evening Post*. A number of influential people were invited to view the model in New York, including architects, designers, highway planners, a confidant of President Roosevelt, and planners for the 1939 New York World's Fair. In the fall of 1937, funded by Shell, the model was exhibited in cities such as Detroit, Chicago, St. Louis and San Francisco, while a film presentation of the model was shown in smaller cities (Meikle, 2001).

This effort was followed by the *Futurama* exhibit Geddes designed for the New York World's Fair in 1939, when he was at the peak of his popularity. Sponsored by General Motors, it showcased a vision in which automobile transportation would transform American cities. It was "an opportunity to demonstrate a whole new way of living that expressed the freedom, individuality, progressive perspective and can-do attitude that Geddes hoped for in America" (Speck, 2012: 289). The exhibit no longer exists, but film and photographs show Geddes' vision of the postwar city, with its wide, sweeping freeways, cloverleaf intersections, sleek skyscrapers and smoothly flowing traffic. Goldberger (2013) suggests that Geddes had a vision of what the American city of the future was going to look like before

anyone else. "It looks like the Houston of 2013 on a good day, with no smog and with constantly moving traffic" (Goldberger, 2013: 1).

In 1940, Geddes published *Magic Motorways* and in it reflected on the popularity of his *Futurama* exhibit: "Five million people saw the Futurama of the General Motors Highway and Horizon Exhibit at the New York World's Fair during the summer of 1939. In long queues that stretched more than a mile, from 5,000 to 15,000 men, women and children at a time, stood, all day long every day, under the hot sun and in the rain, waiting more than an hour for their turn at to get a sixteen-minute glimpse at the motorways of the world of tomorrow" (Geddes, 1940: 3). Geddes detailed his ideas on the future of the city in this book, devoting much attention to traffic problems - safety, congestion, speed, etc. In his view, "automobiles are in no way responsible for our traffic problem. The entire responsibility lies in the faulty roads, which are behind the times" (Geddes, 1940: 12-13).

Geddes' work found fans in Toledo, Ohio. Toledo in the 1940s was a city ready for a boost in spirits. The end of World War I had been followed by a decade of great economic prosperity. Willys-Overland, the second largest automobile company in the country, second only to Ford, was headquartered in Toledo and accounted for 41% of the city's payroll in the 1920s. Investments in the stock market created a lot of wealth and city grew rapidly in the "Roaring Twenties." Toledo began its dominance of the glass industry with the creation of Owens-Illinois in 1929 and Libbey-Owens-Ford in 1930 (Floyd, 2005).

The 1929 stock market crash and the Depression that followed hit Toledo hard, but President Roosevelt's New Deal, including investment in public construction projects brought federal dollars and led to the city's economic recovery. Then came World War II, and given its strength in manufacturing, war-related production helped Toledo economically (Floyd, 2005). Willys-Overland adapted its wartime

Jeep for civilian use and began manufacturing the vehicle in Toledo in 1944. The city was a destination for many Southerners who moved north in the 1940s and 1950s, looking for work, part of the Great Migration (Lehman, 1991).

City leaders were active in the 1940s. Following the war and responding to the influx of new residents, the Board of Community Relations was constituted in 1946 to ease the transition for the city's new residents and to assist with race relations. A Labor-Management-Citizens Committee was established to mediate labor issues (Floyd, 2005). Also in 1946, Toledo was the first city in the U.S. in which residents voted for a payroll income tax to invest in the city (Blade, 1981a).

Coming out of the war, Toledo's civic leaders in the 1940s were planning for a bright future, but Paul Block, Jr., publisher of the local newspaper the Toledo Blade, and influential civic leader, was worried about Toledo's image (Valongo, 2002). In 1944, the *Toledo Blade* placed a series of advertisements promoting the city in trade journals and New York newspapers. These advertisements and a statistical description of the city's population and economy were published in a pamphlet called *This is Toledo*. Convinced that the city's worst days were over, Block was looking for "a dramatic gesture that would signal the city's resurgence" (Doordan, 2002: 57). In 1944, he commissioned Geddes to develop a study with proposals for Toledo's future. This was the *Toledo Tomorrow* plan (Fig. 2) which made a splash locally and nationally. Thousands of locals visited the exhibit, which opened on July 4, 1945, in the Stratford Indoor Theater of the Toledo Zoo. On peak days the rate reached five hundred visitors an hour. The Governor of Ohio, as well as urban planners from across the country came to look at the plan. The opening was covered in national newspapers and earned a photo spread in *Life* magazine (Ligibel, 1999). City leaders also had an educational component in mind, and school children were brought to the exhibit (Szuberla, 2015).

In 1981, a conference titled *Midwest Cities: Culture and Crisis*, organized at the University of Toledo, attempted to provide some context for the *Toledo Tomorrow* plan. Reporting on the conference, the Toledo Blade newspaper said that *Toledo Tomorrow* "was not a master plan for the city's development, but rather...a Blade-sponsored \$250,000 "shot-in-the-arm" to provide inspiration for other planners and reawaken civic pride (Toledo Blade, 1981b). At the same conference, Paul Block, Jr. said of the commission that he "conceived it as a stunt" and that he was inspired by a magazine article about a similar project in Portland, Oregon. The paper reported Block's idea thus: "Why not bring Norman Bel Geddes back to redesign the city he came from?" - and so Toledo Tomorrow was born" (Toledo Blade, 1981a).

FIGURE 2 - TOLEDO TOMORROW PLAN

Source: Geddes, Norman Bel, 1945, Toledo Tomorrow Plan

With his bold ideas and highly publicized body of work, Geddes was well known to the American public. He also had a powerful influence on the public discourse on cities in the first half of the 20th century, perhaps rivaled only by that of Lewis Mumford. Though his work has since largely faded from attention, today's cities continue to reflect Geddes' vision of the future (Ellis, 2005; Innes, 2005; Albrecht, 2012). The scholarship on his work on the future of cities, however, has been limited to examinations of his

more general proposals in books and exhibitions. Focusing on the *Toledo Tomorrow* plan offers the opportunity to examine the influence of his ideas as they applied to a specific place.

This paper examines the vision embodied in Geddes' *Toledo Tomorrow* plan as a precursor of the contemporary auto-centric American city that Toledo exemplifies. We highlight the plan's vision of a future city driven by principles of efficient and effective infrastructure, and we analyze the morphology of the city to understand the imprint of the *Toledo Tomorrow* plan on the city today. The plan itself included the following components:

- The nation's first union terminal for three major types of public transportation – air, rail and highway.
- A network of five airports catering to private passengers, commercial passengers, freight, training including a central airport, part of a union terminal, connecting air travel with trains, buses and sea planes.
- Consolidation of rail lines, yards and terminals.
- A system of congestion-proof highways with feeder roads.
- Beautification of the riverfront and development of the lower river and Maumee Bay areas for commerce and industry.
- Patterns for “communities” designed for easier and more efficient daily life.

We structure this article in four main sections. First, we focus on the context in which the *Toledo Tomorrow* plan was developed, when America had just emerged from the Depression and would soon enter a period shaped by mass production and consumption. Next, we analyze Geddes' 1945 *Toledo Tomorrow* plan and describe its influence on the city's current morphology. We focus on three dimensions: the neglect of the historic core; the role of infrastructure, particularly for transportation;

and how the designed city confronted natural features and connected to the larger geography of the region. We follow this with a discussion of the broader legacy of Geddes' work for our cities in general and for Toledo in particular, and a conclusion.

Context

Industrial capitalism and mass production: Creating more things for more people

Geddes' work on the future of cities began around the Depression, when, as the popularity of the World's Fairs shows, Americans were "receptive to futuristic visions that promised escape from a dreary, oppressive present" (Ellis, 2005). Geddes' *Futurama* modeled a city in which the problems of the industrial cities of the 1930s had been solved (Ellis 2005; Miekke 2001).

This was also the beginning of a new era in design when the desirable and the practical were twin goals. Following the recession of 1927, while production capacity was still high, sales of consumer goods had slowed. Believing that design could help pique consumer interest, some American manufacturers began to hire artists to redesign their products (Heller, 2012; Meikle, 2001). At Cranbrook, Eliel Saarinen was designing commercial prototypes for a range of products, many of which appeared in the 1934 exhibition "Contemporary Industrial Art" at the Metropolitan Museum of Art in New York City. But good design was intended not only to improve the quality of products, but also to point the way towards better living. The *Toledo Tomorrow* plan, for example, "seemed to promise a future in which a century of harsh economic, labor, political and social conflicts would be resolved by good design" and "embodied the belief underlying all design work of the era: that ingenuity balanced with an appreciation for the needs of the end user, an understanding of production processes and materials, and the ability to communicate these ideas could and would indeed improve the lives of consumers" (Valongo, 2002).

This vision certainly permeated Geddes' writings. Referring to *Futurama*, he says, "Much of the initial appeal of *Futurama* was due to its imaginative quality. But the reason that its popularity never diminished was that its boldness was based on soundness. The motorways which it featured were not only desirable, but practical" (Geddes, 1940: 6). Similarly, Speck (2012) argues that "the distinctive genius of *Futurama*'s vision was that it seemed appealing, achievable, and real. The additive, incremental quality of its great metropolis seemed much more authentic than the crushing geometric order proposed by polemicists like Le Corbusier" (p. 296).

Faith in the power of technology and engineering was evident in *Toledo Tomorrow* as well, with Geddes noting that "The changes which it envisages are feasible by engineering standards and it would be possible to carry them out exactly as depicted on the model" (Geddes, 1945: 3). Thus, while the idea of mass consumption was beginning to take hold in the mid-20th century, it was coupled with a faith in technology – the benefits of which were touted most loudly by the very companies with interests in those technologies. For example, the automobile/highway lobby, which included companies like GM and Shell Oil, campaigned for roads and freeways, took key government positions, worked together to move public policy towards a more auto-dependent transportation system (Ellis, 2005), and lobbied hard to influence public opinion. Businesses also used the World's Fairs as an opportunity to sketch an image of a brighter future offered by industrial capitalism. "The goal was to sell ideas rather than goods. Exhibitions were intended to make Americans comfortable with mass production and a new consumption-oriented way of life" (Speck, 2012: 291). At the end of the visitors' carefully choreographed progress through the *Futurama* model, they saw among other things a model auto showroom displaying new GM cars and a model department store stocked with the newest Frigidaire-brand home appliances.

At a larger scale, *Futurama* was also conceived as a city without slums, a city delivered from all of the social ills of industrial capitalism through the application of expert design (Ellis, 2005). It showcased a huge highway system that negotiated all kinds of terrain (not just the city), depicting smooth, efficient movement over many landscape types and separating vehicular from pedestrian traffic. Similarly, print advertisements for the *City of Tomorrow* predicted that all vehicles in the city would be routed on thoroughfares designed to carry traffic at different speeds; a network of 50-mile-per-hour express highways in the city would create continuous traffic flow “uninterrupted by stoplights, intersections or pedestrians”; and elevated sidewalks above local streets would separate trucks and cars from pedestrians (Meikle, 2001: 4).

Geddes foresaw the future city as infrastructure-dependent and based on mass production and consumption, and then he designed for it. The markers of this approach can be seen in his *Toledo Tomorrow* plan, and Toledo's current morphology reflects his intentions. Geddes celebrated a way of life that the advent of the automobile would provide, with less traffic congestion and more of the efficient, mass-produced, middle-class housing that we know today as suburbs. In Geddes' view, “America could remake itself into a thriving, dynamic economy based on creating more things for more people. In the process, it would generate new opportunities, new places and new ways of living that would become a model for the rest of the world to follow” (Speck, 2012: 289-90).

Analysis: Geddes' *Toledo Tomorrow* plan and its influence on the morphology of the city

Neglect of the Existing Core

Although Toledo was the location of French trading posts as early as 1680, the current form of the city traces its history to 1818 when a syndicate based in Cincinnati purchased land at the mouth of Swan Creek and named it Port Lawrence; another syndicate founded the city of Vistula just to the north.

Toledo was born from the merging of these two existing settlements. The confluence of the two grids and the development of a third, the Jeffersonian grid, form the framework on which Toledo was built, a clear example of an "American grid" (Baird, 1987). Towards the north of the Port Lawrence settlement and bordering the original Vistula settlement is the historic core of the city. With a historically significant county courthouse and other institutional buildings in the vicinity, this civic center mall, a legacy of the City Beautiful movement, is a jewel in the center of the city (Fig. 3)

FIGURE 3: 1837 Map of the City of Toledo showing the origin of the three grid systems: Downtown, Vistula, and Port Lawrence, Source: City of Toledo

Geddes largely ignored this historic center. He acknowledged its existence in his plan and drawing, but he clearly did not view it as an asset and made no effort to integrate it into the plan. While the plan briefly mentions the beautification of other city elements such as the riverfront, it does not engage the core. Rather, this small collection of beautiful and historically significant buildings with public spaces

between them sits isolated in the center of the city, treated no differently from many other less historically and architecturally significant elements of Toledo, such as neighborhoods streets.

For example, Cherry Street forms the dividing line between the Port Lawrence and Vistula grids, borders the civic center mall, and is one of Toledo's main arteries. This street hardly merits a mention, while other major roads like Monroe and Central that converge on downtown, forming what Geddes has referred to as "armatures," are prominent in the plan. The areas close to the historic core garner greater attention, with proposals for a union terminal, an express highway, a large central airport, and a union freight terminal, but there is no link between the core and the proposed union terminal. .

According to Geddes' plan, Toledo's highways would form a powerful triangle at the center of the city. His emphasis on Monroe Avenue and Central Avenue, with the river forming the third side, defined a new core. These two streets - especially Monroe- continue to be major paths, bringing traffic into downtown. Across the river from this core, Geddes developed a new focal point where several proposed roads - the Dixie Express highway, an improved Woodville Road, and a new Ravine Parkway - come together. But the plan does little to develop, expand, or elevate the importance of the heart of the city, one of Toledo's few possible gathering spaces.

Geddes' plan for Toledo also had little use for the existing fabric, except as a site on which to try out his new ideas. "When the horse was discarded," he says, "the winding roads over which he juggled were not discarded with him. The automobile inherited them.... Today we are still rebuilding old roads that were constructed for another vehicle instead of starting to build special roads for the special needs of the automobile" (Geddes, 1940: 13). Clearly, Geddes had little use for what Trancik (1986), in his analysis of urban morphology, refers to as "place theory": how one might perceive a place based on

history or culture. As Ellis (2005) suggests, Geddes regarded the city core as old enough to be obsolete, but not old enough to be historic.

Today's Toledo, a shrinking rustbelt city, reflects Geddes' legacy of neglecting the core, as well as a more recent history of highway systems working in tandem with the forces of decentralization and suburbanization. To this day, the civic center mall lacks clear definition. Moreover, the numerous developments in the vicinity of the historic core - a high-rise that houses government offices, a convention center, a minor league ballpark and an indoor arena - were designed independently as "objects" in the city fabric rather than parts of a whole (Shetty and Luescher, 2010a, 2010b). In treating the core as simply another part of the city rather than its heart, recent designers have continued in the tradition of Geddes and subsequent planners.

Transportation Infrastructure and the Shape of the City

Antecedents of the emphasis on transportation infrastructure in the *Toledo Tomorrow* plan are visible in the *Futurama* exhibit. A 1938 pencil drawing by Geddes showing a "future city traffic plan" includes elevated expressways, turning ramps with acceleration lanes entering the city, feeder streets, and a central location for the General Motors Exhibit (Fig. 4). This was very much a precursor to the plan for Toledo.

FIGURE 4: 1938 PENCIL DRAWING BY GEDDES

Geddes' 1938 diagram showing a "city traffic plan for 1960" for the General Motors' *Futurama* exhibit at the 1939-40 New York World's Fair, Source: Speck, L. W. (2012) 'Futurama', in Albrecht, D. (ed.) *Norman Bel Geddes designs America: I have seen the future* (Abrams, New York) p. 289.

Geddes thought of his *Futurama* plan as a solution to the urban traffic problem. In it, he proposed a traffic-light system at railroad crossings to maximize traffic flow, a city bypass, an intersection between a highway and country road, separation of pedestrians and vehicles within the city, a bridge with approaches intended to eliminate bottlenecks, and various parking options. The focus on transportation infrastructure becomes even clearer when one considers that the final model (of New York) had only a four actual buildings. The rest were building types, "cast from molds in a process of virtual mass production" (Miekle, 2001: 22).

Geddes envisioned the future city as a place where expressways transported residents quickly and efficiently from dense commercial districts to neighborhoods, their homes in the suburbs or small towns (Speck, 2012: 289). Similarly, the *Toledo Tomorrow* plan compares the existing city with its "pattern of

congested city life with homes huddled together” to a future city where “air, light and beauty are woven into the fibre of Toledo Tomorrow” and “congested living has disappeared” (Geddes, 1945: 14). One way to achieve this end was through major connecting streets and, more importantly, a system of highways - including express highways - that would be part of a future national highway system.

Geddes proposed a system of eight highways for Toledo, and the highways built during and after the Eisenhower era largely followed the routes laid out in Geddes’ plan. His proposed Express Highway to Cleveland became I-280, and the Express Highway to Detroit became I-75. The plan shows the conversion of Anthony Wayne Trail to an express highway that is now State Highway 24, while the proposed highway along Detroit Avenue now merges into South Dixie Highway. His proposed Woodville Road Express Highway is now, in part, State Highway 65. Geddes’ Riverside Express Parkway, however, was not built at its proposed location. Now called the Greenbelt Parkway, it follows a parallel trajectory slightly north but connects to Central Avenue just as Geddes proposed. His plans for Toledo’s highways have left a clear stamp on the city (Fig. 5).

FIGURE 5: 1917 Map of Toledo from the *Automobile Blue Book*, an American series of road guides for motorists in the United States and Canada, Source: *Automobile Blue Book*, 1917

Geddes proposed a union terminal that would be the first in the world to bring all of the main modes of public transportation – buses, planes and trains – into a single terminal. He located this terminal a few minutes from the central business district, a location he said was dictated by the needs of all the transportation services. He also suggested consolidating railroad operations, not just to simplify public use and reduce costs (Geddes, 1945: 11) but also to reduce the number of grade-crossings, which he identified as one of Toledo's principal traffic problems. Also part of the plan were five airports – a central airport connected to the union terminal and seaplanes, a freight airport at the mouth of the river near highways and industrial land uses, and three airports for private and commercial flights. Because Toledo has not become “a stopping point on many of the nation's principal airways” (Geddes, 1945: 7), this last part of the plan has not been implemented. Today, Toledo is served by just one airport located about 10 miles west of downtown.

FIGURE 6: Figure ground of Toledo today showing I-75 slicing through the city, Source: Department of Architecture and Environmental Design, Bowling Green State University, Ohio

Not all of Geddes' proposals for transportation infrastructure have come to pass: for example, the union terminal was never built. Still, subsequent plans for Toledo show a strong allegiance to the principle of moving people quickly and efficiently through the city (Fig. 6), reflecting clearly the primacy of the street over the block or the square, a distinguishing feature of morphology of American cities (Baird, 1987). The shape of Toledo today is largely a result of this local prioritization of efficient traffic flow. It also reflects a more widespread automobile-based decentralization, which, according to Fishman (2005), resulted from the most important government policy in the United States: the creation of the interstate highway system, with which also Geddes was involved. One consequence of all these forces is that Toledo has become a drive-through city, a quality clearly visible in Figure 7, which presents a series of maps showing the evolution of the city. Recently there have been local attempts - by the Toledo Design Center, for example - to create a more livable, walkable city. But the legacy of the highway, which has long bypassed the city and dictated its shape, has been hard to shake.

FIGURE 7: Evolution of the City of Toledo represented by grid formation and development showing highways, Source: Department of Architecture and Environmental Design, Bowling Green State University, Ohio

Natural features and their collision with Geddes' plan

Geddes' earlier work, particularly *Futurama* and *Magic Motorways*, made it clear that while he thought at a large and even continental scale, he had little use for natural features. As he says, "the Futurama is a large-scale model representing almost every type of terrain in America and illustrating how a motorway may be laid down over the entire country - across mountains, over rivers and lakes, through cities and past towns - never deviating from a straight course and always adhering to the four basic principles of highway design: safety, comfort, speed and economy" (Geddes, 1940: 4). In Geddes' plan for Toledo, one sees such highways connecting the city to Cleveland and Detroit, for example. Although the city was known early on as the gateway to the Great Lakes (*Automobile Blue Book*, 1917), Geddes did not acknowledge this natural feature or the city's proximity to Lake Erie.

Instead, Geddes focused on streamlining traffic and moving people around efficiently. He wanted highways to bypass city centers, as they would only cause more congestion. He also wanted to avoid going around cities since that would increase the distance travelled between two points. Thus he proposed a third alternative, straight point-to-point highways "between the environs of cities, instead of directly from the center of one city to the center of another...if the purpose of the motorway as now conceived is that of being a high-speed non-stop thoroughfare, the motorway would only bungle that job if it got tangled up with a city. It would lose its integrity" (Geddes, 1940: 211).

Geddes' conception of this highway system extended to his thinking about the entrance to a city and the experience of entering a city. In Toledo, Geddes proposed a sequence of multi-lane feeder highways that would flow from the large city-to-city highways and connect to express boulevards within the city, drawing in traffic and people. Geddes describes the entrance to the typical city as seen from the air. "As

one soars toward it, one's first air view is no longer that of highways becoming more cluttered. One missed the shabby realty developments, the marginal farms whose streams are being polluted by outlying factories, auto graveyards, dumps, and the roadside shanties that used to mark city approaches" (Geddes, 1940: 211).

Not all of Geddes' proposed highway system came to be built in Toledo. While there is adequate infrastructure to whisk people quickly through the city, the system is not well enough developed to achieve his envisioned entrance to the city. The most striking entrance is from the south on US-75: one approaches the river, sees the office buildings of the small downtown on the opposite bank, and notices the docks, barges, grain elevators and storage facilities that are so much a part of this industrial city. Other entrances to the city, however, are much like the generic entrances to Des Moines that Gandelsonas (2012) describes. Whether lined with car dealerships or strip malls, they form a largely unremarkable sequence of portals and transitions (p. 19) leading into the city. Geddes' organizing principle was to streamline movement, not to create a formal entrance or a visual identity. Sadly, that legacy in large part still holds (Fig. 8).

FIGURE 8: Motorway feeder to city, Source: Geddes, Norman Bel, 1940, *Magic Motorways*, Random house, p. 218
The evolution of Toledo illustrates the city's relationship with its waterways: Lake Erie and the Maumee

River at the larger scale, and, internal to the city, smaller water bodies like Swann Creek and the Ottawa River. Geddes' plan shows these last two, but neither plays any part in the plan, nor do other natural features such as Oak Openings (a rare ecosystem of oak savanna, 2 miles west of the current airport). The Maumee River, the city's defining natural feature, gets its own section, but the focus of that section is on how the river can serve a transportation and freight network. Geddes says that his plans for the river are two-fold, involving parks and the development of the port (Geddes, 1945: 17). Yet he covers plans for a riverside park in just a couple of sentences, and even then he proposes a quay to accommodate not just passenger and pleasure boats, but also light cargo ships. The remainder of the section focuses on details of bridges and infrastructure.

Geddes also ignored the natural feature of the river bends, as well as the unique development that historically resulted from them. The bends in the Maumee gave rise to three original settlements, each of which was settled in a grid perpendicular to the river. As they extended over the landscape, they each maintained their individual orientation, but when they merged to become present-day Toledo, they yielded "visual frissons" (Baird, 1987). Rather than highlighting or even acknowledging the uniqueness the river contributes to the urban fabric, *Toledo Tomorrow* and subsequent plans have simply ignored it.

Today, Toledo's history of recognizing the river's role in a multi-modal transportation system but not really integrating it into the fabric of the city manifests itself particularly in the downtown district where there is public access to the river. Over the years, there have been numerous efforts to develop the riverside, including those by well-known names like Sasaki Associates and Yamasaki. The biggest effort was a development in the 1980s called SeaGate, which included office buildings, a hotel, a convention center, a festival marketplace and a riverside park. The hope at the time was that "as long as the Maumee flows, SeaGate, and particularly the Riverfront Promenade Park, have a chance at success" (Davidson-Powers, 1986: 25). Even at that time, though, "it was a fairly quiet place for a downtown development, indicative of the still-ghostly atmosphere of much of the city's core" (Davidson-Powers, 1986: 25). Since those words were written, Toledo has lost about 17% of its population (about 26% since its peak in 1980); most of these downtown and riverside developments, including the park, remain severely underutilized.

Toledo Tomorrow: A Broader Influence on Urban Morphology

The *Toledo Tomorrow* plan, though putatively for and about Toledo, was really a continuation of Geddes' investigations of the future of cities, particularly in an automobile-centered society. It was not

just a recycling of the visual ideas of 1939's *Futurama* and 1944's *Magic Motorways*, but an expansion of those ideas for a real city, one he envisioned as a transportation hub. Both because of its geographic location and its prominent role in the auto industry, Toledo proved to be a perfect candidate for Geddes' ideas.

While Geddes' impact is clear in the morphology of a city like Toledo, his vision for the future as laid out in *Magic Motorways*, *Futurama*, *Toledo Tomorrow* and other works, have influenced urban morphology in general, far beyond the single city for which he developed a plan. We examine this briefly, identifying three broad themes central to his work, that continue to be reflected in cities today: the influence of auto-dependency on urban morphology, modern design and the faith in technology, and the idea of a consumption society.

The automobile and urban morphology

Geddes' vision of an auto-dependent future, which he sold to policy makers and the public, is very much embodied in contemporary American urban patterns. Even if one cannot draw a direct link between his ideas on "magic motorways" and today's highways, Geddes "pursued avenues to alter America's fledgling car culture." He even drew the attention of President Roosevelt, who appointed him to work on the plans for the National Motorway Planning Authority. Those plans did have some influence on the highway system developed later under President Eisenhower (Fig. 9).

In addition, the federal government published two important documents on freeway policy around the time that *Futurama* and *Toledo Tomorrow* were familiarizing Americans with the idea of highways - the first in 1939 and the second in 1944 (Ellis, 2005). The system of highways proposed under the Federal-Aid Highway Act of 1944 conceptually resembled Geddes' network in *Futurama* (Speck, 2012). By the

1950s, the U.S. was constructing the highway system that, combined with industrial decentralization, led to the unintended consequence of large-scale suburbanization (Fishman 2005).

FIGURE 9: EISENHOWER HIGHWAY SYSTEM, Source: Rebecca C. Brown, In Jacobs, Frank, 2009, *Strange Maps, An Atlas of Cartographic Curiosities*, Viking Studio, p. 169

Modernism and its technology-centered approach

Geddes belonged to the era between the wars when the idea of better living through better design was taking hold. Writing about Geddes (and Joseph Urban, a contemporary of Geddes), Innes (2005) says that they "promoted a very clear concept of modernity through their own designs" (p. 291), and that the "definition of modernity that these two designers introduced was so coherent and convincing that it has retained its popular appeal" (p. 294). Geddes' 1932 book *Horizons*, which showcased his designs of objects from weighing scales to airplanes, as well as his designs of buildings from restaurants to airports, familiarized the public with the new aesthetic of streamlining. "By popularizing streamlining when only a few engineers were considering its functional use, he made possible the design style of the thirties" (Meikle, 2001: 48). It was also an era when views of the future and of the power of technology to achieve this future were unrelentingly positive (Speck, 2012; Goldberger, 2013).

Of course, the scale of Geddes' imagination was not limited to objects and buildings. Geddes was re-thinking cities as well. As Meikle (2001) writes, "what appeared at the time to be visionary changes to the form of the city were made feasible by engineering" (p. 16). In *Futurama*, the modern city seemed "appealing, achievable, and real" (Speck, 2012: 296). Visitors to the *Futurama* exhibit, with its sweeping expressways and smooth, fast-moving traffic, came out of it with a lapel button that announced, "I have seen the future" (Feeney, 2013). Much of that vision, as we see in Toledo, is reflected in the shape of our cities today (Fig. 10).

FIGURE 10: Lapel button given to visitors as they exited the *Futurama* exhibit, Source: The Harry Ransom Center, The University of Texas at Austin

A consumption society

In *Futurama* and in *Toledo Tomorrow*, Geddes also envisioned and then designed a city without reference to social class, struggle, or conflict. In his utopian vision, technology would support a "whole new way of living that expressed freedom, individuality, progressive perspective, and can-do attitude...." His designs "portrayed a life of personal choices enabled by technological advances, increased leisure time and far greater mobility. His cities were sleek, logical and efficient" (Speck, 2012: 289).

Geddes was also prescient in his understanding of the power of private interests in a society based on industrial capitalism and characterized by mass production and increasing consumption. Indeed, he has been criticized for "his affiliation with sponsors whose narrow goal was to expand the market for their automotive products" (Ellis, 2005: 65). For example, Geddes' main consultant for the *Futurama* exhibit was Miller McClintock, a traffic expert and founder of an industry-supported street traffic research center at Harvard "that existed primarily to produce academic studies of traffic for use by lobbyists seeking more and better highways. The ultimate goal was to increase the nation's traffic capacity and thus sell more cars" (Meikle, 2001: 16). Similarly, Geddes' visions for the future city would create a mass market for the products manufactured by his sponsors, among them companies like GM and Shell Oil. "With everyone on wheels and the entire national landscape built around the automobile, a mass market for gasoline, oil and hundreds of other auto-related products would be *built into* American urban form for the next century" (Ellis, 2005: 59).

Conclusion

Today Toledo still has difficulty thinking about what it wants to be, and Geddes' *Toledo Tomorrow* plan didn't help. It presented an early vision of a city engineered around infrastructure that can maintain constant, outward growth, but it did not define what shape the city could take beyond that dictated by transportation. Toledo had visions of becoming a hub in the region, but it was too close to Detroit for that. Nor did the plan clarify Toledo's geographical advantages: it did not offer any strategies for capitalizing on the city's proximity to Lake Erie and or its location on the waterways that connect the Great Lakes. Like the plan, the city has turned away from its historic center, growing ever outward.

These trends promoted *entfremdung*, the separation of things that are properly in harmony. A neglected historic core, highways that ring the city as well as cut through its center, and inattention to

the natural features of the landscape have been among the three strongest legacies of the plan, and they continue to this day. The city has become "a facilitator of services, a receptacle of goods, a warehouse rather than a repository, its spaces formed not out of a desire to establish points of stasis but for 'expediting processes'" (Krieger, 1987: 45).

Many cities in the American rust belt, Toledo among them, are being shaped by development-driven actions with little regard to an overall plan (Shetty and Luescher, 2010a). These cities present a "wild morphology" typical of the American city - not just lacking in spatial devices such as focus, termination, and closure (Baird, 1987), but also lacking unity and coherence in the physical fabric of the city. In the past several decades, this phenomenon has been exacerbated by the mass exodus of city residents leaving behind vacant and abandoned properties in the city center and as well as in neighborhoods (Silverman, 1982). Geddes identified 22,000 vacant lots in the city but did not address them in the plan; this approach continues today. As more and more residents depart, the city is left with gaps in its physical fabric as well as distressed communities with fewer jobs, resources and opportunities. Now, the challenge for cities like Toledo is to imagine and plan a future city with not just a more coherent urban fabric but one that meets the challenges they face.

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