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How Racially Equitable are the Outcomes of Sustainability Planning?

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Abstract

Sustainability planning embodies ideals of how cities should be planning for a tomorrow that the entire world will share, and it places a third of its theorized emphasis on the importance of equity. I explore the tenets of sustainability planning, urban form values, and how to achieve a sustainable city. I applied a framework of sustainability planning and urban form over time to the City of Tacoma through an investigation of the One Tacoma Plan and corresponding historical documents, with a special emphasis on equity. My research shows that Tacoma has followed the urban form values through time and that, although it has many tenets of sustainability, it is still lacking in the equity category – one of the “Three E’s” of sustainability planning (environment, economy, and equity). My investigation finds that the Hilltop Neighborhood in Tacoma is susceptible to gentrification and that an increased focus on policy measures must be implemented to protect residents of this historic neighborhood from displacement.

Keywords: sustainability, equity, Tacoma, urban form, racism, planning

How Racially Equitable are the Outcomes of Sustainability Planning?

Recognition of the vast and destructive effects of human-fueled climate change surfaced in the 1970s when an MIT report, *The Limits of Growth*, predicted that the “global human system” would crash “midway through the 21st century” (Wheeler, 2012, p. 175). The buildup to this troubling revelation may be attributed to the start of the industrial revolution (c. 1870), as it led to global human dependence on fossil fuels. Manufacturing and car-based living exponentially increased the amount of toxins emitted into the earth’s atmosphere. At the same time, the global population boomed, further accelerating the rate and quantity of pollution entering the air, water, and soil. Along with these changes came a growing inequality along socioeconomic and racial lines, propelling planners to think of a way to frame their practice to allow society to continue living in a world unencumbered by pollution, sprawling suburbs, and rising sea levels. Planners and activists created sustainable development to answer that problem. At the United Nations 42nd Session in 1987, then Prime Minister of Norway, Gro Brundtland, called upon the assembly to view the planet as a major stakeholder in decision-making. Brundtland (1987) stated that “sustainable development is development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs” (p. 8).

Sustainability planning is a holistic planning framework that focuses on three Es: the environment, the economy, and equity that allows for the creation of sustainable development (Wheeler, 2004). Planners employ a thorough understanding of the importance of these “Three E’s.” Sustainability planning embodies the principles we should use when planning for the future that the entire world will share, and places a third of its theorized emphasis on the importance of equity. Because sustainability planning theory gives equity such a prominent role, eyebrows

should rightfully raise at cities that are rated as “sustainable” but have serious equity issues. Portland, for example, is often described as an incredibly sustainable city with its bike lanes, light rail mass transportation infrastructure, and solid Urban Growth Boundaries (UGB). But Portland suffers a growing chasm between its upper and lower classes, as well as its white and black residents, with more than a third of the city’s African American population living below the poverty line (Goodling, Green, & McClintock, 2015). Like Portland, Seattle experiences high levels of inequality while being considered a city on the cutting edge of sustainability (Berke & Conroy, 2000). How, then, does racial and economic inequity persist in cities lauded as sustainable? In an article about the greater Seattle area and the ways sustainability planning and smart growth are changing the urban landscape, Dierwechter (2014) explained that restricting expansion through UGBs creates higher priced homes and disproportionately restricts minorities from homeownership.

In this article, I explore sustainable development through an examination of Wheeler’s (2003) urban form values, which I will discuss and critique through a racial lens, with an emphasis on equity. Following this explanation, I will briefly apply this framework to the city of Tacoma, Washington. In order to do this, first, I will describe urban form values combined with the associated racial contexts of the time. Next, I will cover sustainability theory through an examination of “the three E’s” and consider how that dialogue changes when “livability” is added to the equation. Following that, I will offer an explanation of how various competing forces allow racial disparities to exist, and finally, I will apply this framework to Tacoma. I will aim to answer the question of how the changing urban form affected the demographics of Tacoma and its Hilltop neighborhood. Finally, I will confirm that the changing urban form resulted in an inequitable segregation of African Americans and their homes that persists today.

The Changing Urban Form

Acknowledging the historical and technological context of city planning is important and gives a concrete explanation for the forms (i.e. block size and road layout) that most North American cities built in the late 18th century exhibit today. Wheeler (2003) discussed five specific patterns--including compact grids, streetcar suburban grids, garden suburbs, automobile suburbs, and New Urbanism--that cities go through as they expand. In the proceeding sections, I will couple the discussion with a historical underpinning of the racial demographics and tensions of each period.

Compact Grids (1780s-1850s)

Compact grids emerged in the days of horse-drawn carriages in the 18th century. During that time, as populations grew, landowners and speculators divided land into small square blocks to sell. This has resulted in intimate, highly walkable downtown areas in many cities, such as New York City. A student of the prominent urban studies figure Jane Jacobs would recognize that this pattern contributed to the “low-rise, mixed-use, high-density” neighborhoods that Jacobs advocated for to enhance safety and stimulate vibrant cities (Mellon, 2009, p. 39). Wheeler (2003) pointed out that Portland’s downtown city blocks are only 200 feet per side, enabling them to exude the walkability that sustainability planning, smart growth, and New Urbanism desire. Godschalk (2004) referred to New Urbanism and smart growth as “cousins from the same intellectual family,” as both deal with more specific tenets of structure and growth management as a part of sustainability planning.

During this period in American history, the majority of African Americans were slaves and disproportionately located in the south where they were forced to work the land. There were 3.2 million people in slavery in 1850 (Anthony, 2017). Although the Compromise of 1850

outlawed the trading of slaves, it did not outlaw the possession of slaves. At that time, slaves accounted for one fifth of the nation's wealth; after all, between 1700 and 1760, 75% of the people who came to the "New World" were African slaves (Anthony, 2017). As Anthony (2017) clarified, "Although their work was essential to creating the infrastructure that supported the emergence of city life, blacks were not allowed to share in the wealth they helped create" and were forced to live separately, and often far from whites, in structures they created from natural resources (p. 105).

Streetcar Suburban Grids (1888-1930s)

The next pattern I will consider is the streetcar suburban grid. These grids emerged in the 1870s and 1880s with the technological advancement of the streetcar. Wheeler (2003) explained that these grids changed the urban fabric of Toronto and Portland; blocks became a little longer and streetcars enabled the population to "leapfrog" outward, necessitating suburbs (p. 320). Along streetcar routes, shops and retail options emerged in nodes. These nodal networks, created by streetcars, are seen again as a tenet of transit-oriented development, which is now being turned to by many cities to encourage compact and connected urban forms. Wheeler (2003) also stated that this outward expansion promoted by streetcar routes laid the foundation for suburban sprawl, which was to come into prominence in the mid-1900s.

However, in 1863, slaves were freed but were still heavily controlled by cultural norms and Jim Crow laws that mandated the "separate but equal" status and enforced segregation (Mason, 2013). Jim Crow laws "subordinated blacks to whites in all areas of social and economic life" (Massey & Denton, 1993, p. 26). During the early 20th century, African Americans lived in the same locations as they did while under the rules of slavery – they were

legally barred from living near white people. More than 90% of the country's 9.8 million African Americans lived in the south until 1910 (Oppenheimer, 2001).

Garden Suburbs (1870s-1920s)

This pattern was the first departure from the grid fabric seen thus far. Where previously blocks were compact with straight roads, the garden suburb featured winding patterns of streets, such as those seen in Portland and Toronto in the early 1900s (Wheeler, 2003). This form was not as widespread due to economic factors such as those of the Great Depression and the fact that it occurred in the same historical context as the streetcar suburban grid. There were not many transportation dollars put towards new roads and urban design during this time period. However, the cities winding patterns of streets were practiced in were remarkably transformed, shifting away from the grid network to beautiful and carefully planned garden suburbs.

The racial climate that coincided with the garden suburb movement was the same as the climate that accompanied streetcar suburban grids; the garden suburb movement was a shorter historical period that existed within the larger period of the streetcar suburban grid. They were two urban forms that existed at the same time, and during this time, legally enforced segregation of blacks from whites persisted.

Automobile Suburbs (1945-present)

The fourth pattern was the automobile suburb, which began after World War II ended in 1945. Noting that "with the post-war arrival of widespread automobile ownership, an economic boom and new large-scale housing production," Wheeler (2003) claimed the stage was set for suburban sprawl (p. 322). Winding roads, culs-de-sac, looping roads, and larger block sizes characterize this urban fabric--a drastic departure from the small blocks and linear roads seen in the streetcar suburban grid prior to this boom. The automobile allowed for the tenets preached by

garden suburbs to be met rapidly, resulting in a “huge ring of suburban sprawl” (Wheeler, 2003, p. 318). Wheeler described this outward expansion as a poison to the environment. He cited damage to ecosystems, dependency on automobiles, damage to greenfield land, and lack of community as reasons to label the automobile suburb an unsustainable urban design. Planning to reduce sprawl is one of the main tenets of sustainability planning and its goal to reduce pollution and wasted space.

The ‘Great Migration.’ The historical context that allowed for this suburban growth also had a hand in creating the segregated spaces we see in cities today. By the end of the war in 1945, over eight million Americans were serving in the Army--87% were white, while only 11% were African American (United States Selective Service System, 1948). To make up for production lost during the war years, factories in the industrial cities in the Northeast and Midwest had drawn African American men (and their families) from the rural south, moving north in what is known as the Great Migration. These African American men filled the empty roles left by white men in the cities (Powell, 1999). As many as five million African Americans moved to these northern industrial cities in the 1940s, forever changing their demographics. It is important to note that economics were not the sole, or even primary, motivator for the Great Migration. African Americans were being terrorized in the south and travelled north as refugees, trying to escape lynching and violence (Mock, 2015). This background of terror and trauma, which was never dealt with or addressed by those in power, led in part to generational poverty in many African American neighborhoods, both then and today.

The Great Migration represented a huge demographic change in the makeup of the United States. For example, in Chicago alone, between 1910 and 1970 the number of African Americans increased from around 40,000 to more than one million people--the percentage of

African Americans in Chicago rose from 2% to 33% (Tolnay, 2003). By 1970, 80% of African Americans lived in urban areas--and half of those areas were located in the north. Racial segregation had established itself through redlining practices and discrimination and Chicago was characterized by “a largely black central city surrounded by predominantly white suburbs” (Massey & Denton, 1993, p. 61).

Changing demographics. Following World War II, President Dwight D. Eisenhower, inspired by the Autobahn road systems in Germany, passed the Federal Aid Highway Act of 1956; this act created the interstate freeway system still used today in the United States (Baum-Snow, 2007). Henry Ford’s affordable mass automobile production, coupled with racial tensions in cities--when white men came home to see their old roles in the cities filled by African Americans--found that “most of the nation drove to suburbia - and stayed” (Dierwechter, 2008, p. 19). However, “most of the nation” realistically referred to those people who were able to create a new life in the suburbs, due to financial capability and easy access to mortgages, namely those who were white and middle/upper class. Orfield (2006) explained that due to exclusionary zoning, redlining practices by banks and mortgage companies, limiting VA loan availability only to returning white servicemen, housing discrimination, and fragmentation, African American people were not able to leave the inner cities where they had moved to during World War II (Miller, 2013). A white family was able to qualify for a mortgage and buy a house in the suburbs, while a comparably paid and otherwise equivalent black family was not (Orfield, 2006; Powell, 1999). The insurance industry was plagued with racist tendencies as well, even as recently as 1993 where the “Missouri Department of Insurance found that residents of low-income minority neighborhoods in St. Louis paid 50% more than low-income residents of white

areas for comparable policies” (Squires, 1996, p. 46). Structural and systemic racism heavily contributed to the suburbs becoming overwhelmingly white.

Orfield and Luce (2013) wrote about the changing demographics of suburbs, finding that in 2000, 50% of residents lived in a traditional suburb (defined as predominantly inhabited by white people); in 2010, just 39% lived in a traditional suburb. The benefits of living in a more diverse area are well documented; the residents of different races have more positive perceptions of each other, neighborhoods are more politically balanced, and are generally denser, more walkable, and more energy efficient (Orfield & Luce, 2013).

The New Urbanism (1980s-present)

The final city pattern Wheeler (2003) discussed is that of New Urbanism, which came to fruition at the end of the 20th century. New Urbanism was a reaction to the damaging effects of the automobile suburbs. It came with a desire to emphasize “regional growth management, downtown revitalization, walkable neighbourhoods (sic), and mixed-use and transit-oriented development” (Wheeler, 2003, p. 322). Where the previous four patterns have tangible urban forms associated with them, New Urbanism is still in its early stages. Many small New Urbanist enclaves exist, but they are not easy to incorporate with miles of existing built environments. Reshaping existing urban areas is a difficult and lengthy process.

Notwithstanding these challenges, New Urbanism is a style of planning currently being implemented in many places across the United States. As discussed before, growth management is often critiqued by the belief that it raises the prices of homes due to supply and demand (Washington Research Council, 2016). For example, Dierwechter (2014) described a New Urbanist enclave in the Puget Sound: Northwest Landing in Dupont, Washington. Dupont shows many of the New Urbanist design forms, such as walkable sidewalks and a mixed-use

community. However, it does not present itself as an equitable solution due to its predominantly white racial makeup and the 40% higher median income of the development compared to the rest of the county (Dierwechter, 2014).

By 1980, the segregation in American cities between African Americans and whites became even more stratified. At that time, 71% of whites lived in suburbs while 23% of African Americans lived in suburbs (Massey & Denton, 1993). As the 1980s pushed onwards, more African Americans began moving to the suburbs, it typically consisted of African American parts of the cities overgrowing the city boundary and becoming suburbs. Bobo (2011) reflected on race relations in America, stating that “despite important declines in overall rates of segregation over the past three decades and blacks’ increasing suburbanization, blacks remain highly segregated from whites” (p. 22). Bobo (2011) also stated that there remains a significant gap between the incomes of African Americans and whites. Structural inequality, particularly concerning race and income, continue to present unique challenges to sustainable development.

Sustainable Development

Wheeler (2003) defined five urban form values that he believed make up sustainable development. First is *compact* development. This refers to making efficient use of land by limiting urban sprawl and development. The second is *contiguous* development, meaning that new urban expansion needs to take place adjacent to existing structures to avoid and reduce empty space, which has the danger of being haphazardly filled. A type of contiguous development would be infill development---building on empty lots in the inner city instead of building on land on the outer ring. The third is *connected* development, which ensures that all neighborhoods in different parts of the city are easy and safe to travel through. Connected developments include mass transportation, walking, and biking. Fourth is *diverse* development

with mixed land uses, building types, styles, and prices. Diversity ensures that there is housing for all income levels and both jobs and housing are available in the area; this helps eliminate segregation and decreases automobile congestion and the associated pollution (Wheeler, 2003). Lastly, *ecological* development aims to protect and restore environmental elements such as greenways and wetlands.

If a city/neighborhood can be rated as having a “high” number of each of these five values, Wheeler (2003) considered it high in the form principles important to creating and maintaining a sustainable city. Wheeler (2003) rated the aforementioned varying types of urban forms by these values and showed that automobile suburbs rated the lowest on sustainability. He found that the compact grids are the most sustainable overall (rated “high” on the first four and “low” on ecological values.). New Urbanist urban fabric aims to rectify what compact grids are missing by placing an emphasis on caring for the environment (rated “medium” on all form values except connected, which Wheeler rated as “high”).

A sustainable urban form, such as New Urbanist development, would fold into the sustainable planning model, which emphasizes environment, equity, and economy--the Three Es mentioned before. A focus on the environment is the mainstay of the creation of the sustainability movement; one of the main initiatives is to reduce greenhouse gas emissions through better land-use planning, and provide alternate transportation types all with the hope that fewer people will be adding to pollution through automobile use (Wheeler, 2012). The environmental ‘E’ also deals with ecosystem protection and restoration. It applies to the practices of using solar energy and the building’s orientation to the sun to reduce energy needed for air conditioning. A focus on the economy tenet of sustainability includes the value switch from a city seeking any available form of economic growth (which will often damage the community

and environment) to an emphasis on socially and environmentally responsible employers within the community (Wheeler, 2012). Building a strong economy in an area includes investing in public education so that members of the community are better able to innovate and grow greener production practices as they enter the workforce. Lastly, equity is the third E in sustainability planning. Wheeler (2012) stated that of the Three E's, "equity is by far the least well developed and perhaps the most difficult to bring about in practice" (p. 181). This is a problem because rising inequality also brings with it increased sustainability problems such as "the degradation of ecosystems by impoverished people struggling to survive to the loss of social capital and mutual understanding essential in healthy democracies" (Wheeler, 2012, p. 181). The burden to ensure equity comes from the federal and state levels of government through the establishment of tax policies, a living minimum wage, funded social services, and guaranteed civil rights and fair treatment (Wheeler, 2012). However, local communities and governments have had some successes in ensuring affordable housing, setting a fair minimum wage, and fostering an environment where small businesses can thrive, proving local policies and advocates can make a difference.

Sustainability planning focuses on the fact that pollution is a major problem in the world; it is leading to rising sea levels, higher global temperatures, buildup of greenhouse gas, and sea-ice loss (President's Council of Advisors on Science, and Technology, 2011). However, when problems that plague the environment are combined with another of the Three E's--for example, equity--another situation emerges. Brulle and Pellow (2006) discussed certain segments within communities that bear an unequal amount of exposure to pollution and toxins due to where they live. Public health researchers have shown that people of color and poor people disproportionately live near hazardous facilities and in areas that cause them to bear a larger

health burden. This discussion of environmental justice includes the belief that all people deserve equal opportunity to not be placed in harm's way and to be equally protected by public health laws and regulations.

Intersections between each of the E's of sustainability planning produce specific challenges that deserve to be named in the goal to reach sustainable development. Godschalk (2004) noted these challenges and defined each of them. He described the tension between environment and equity as the *development conflict*, which he defined as “competing needs to improve the lot of poor people through economic growth while protecting the environment through growth management” (p. 6). The tension between environment and economy is the *resource conflict*, which “arises from competing claims on the consumption of natural resources and the preservation of their ability to reproduce, exemplified by the sustained yield concept” (Godschalk, 2004, p. 6). Sustained yield is the understanding that there must be limits on production to keep the crop/substance from being depleted entirely (Godschalk, 2004). Lastly, the combination of equitable sharing of opportunities and economic growth is the *property conflict*, defined as “competing claims on uses of property as both a private resource and a public good” (Godschalk, 2004, p. 6).

Godschalk (2004) argued that viewing sustainability development through only the Three E's does not guide best practices in today's world of land-use planning. He suggested that another metric be added to better handle and define the above contradictions. He created a prism, where the Three E's form a triangle on the bottom, with a fourth tenet—liveability—placed above them, creating a three-dimensional object, shown below:

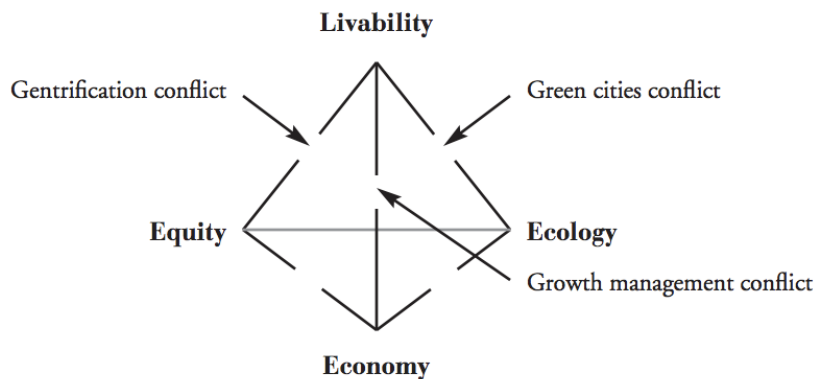


Figure 1. The sustainability/livability prism. Adapted from “Coping with Conflicts in Visions of Sustainable Development and Livable Communities,” by D. Godschalk, 2004, *Journal of the American Planning Association*, 70(1), 5.

Adding livability to the mix of conflicts helps guide decision making for sustainability. Between livability and equity is the *gentrification conflict*: “competing beliefs in preservation of poorer urban neighborhoods for the benefit of their present populations versus their redevelopment and upgrading in order to attract middle and upper class populations back to the central city” (Godschalk, 2004, p. 8). The *gentrification conflict* is important to note because it is not equitable in its formation, which is completely opposed to the goals of sustainability. Between livability and environment is the *green cities conflict*: “competing beliefs in the primacy of the natural versus the built environment” (Godschalk, 2004, p. 8). Between livability and economy is the *growth management conflict*: “competing beliefs in the extent to which unmanaged development, beholden only to market principles, can provide high-quality living environments” (Godschalk, 2004, p. 8). These conflicts all arise when planning for sustainability with the original Three E framework, but adding livability ensures these conflicts are dealt with before the plans are decided, and planners are blindsided by these extra effects. The importance of the

sustainability/livability prism is that it ensures planners consider livability before they plan instead of acting retroactively to care about the people in their city.

How Did This Happen?

Sustainability planning is a holistic framework through which to encounter and correct many problems in the world. Several equity, environmental, and economic issues have emerged through time in cities that are lauded as some of the most sustainable in the United States. My discussion in this section focuses primarily on equity issues and I will use Wheeler's (2003) key forces in shaping urban and regional form for analysis. These key forces are: *institutional*, *geographical*, *technological*, *social*, and *economic*. *Institutional* forces include survey, land grant patterns, Urban Growth Boundaries (UGBs), and legislation. *Geographical* forces refer to the mountain ranges, rivers, and other natural barriers that affect the way a city forms around/alongside them. *Technological* forces refer to the technologies such as streetcars and automobiles that enabled the development of the suburb and associated urban form. *Social* forces deal with the values and social movements that shape the direction people want to take the urban form in--such as the garden suburb movement where people wanted more green space. Lastly, the *economic* forces such as growth and recession highly influence what can and will be built.

Ross and Leigh (2000) discussed many of the above forces that have contributed to the structural racism that I referenced earlier. *Zoning*, an *institutional* force, is one of the primary forces that Ross and Leigh (2000) identified as responsible for the segregation of people. Originally, zoning was used by cities to keep people from living in industrial areas, but as time went on, it morphed into "municipalities ... blatantly [using] racial zoning as a tool to exclude undesirable groups from entering their communities and to [prevent] the spread of slums into upscale neighborhoods" (Ross & Leigh, 2000, p. 372). Today, we refer to racial zoning as

exclusionary zoning--the blatant practice of enforcing zoning rules that keep certain people, generally people of color and poor people, from being able to live in upscale neighborhoods (Ross & Leigh, 2000). However, the composition of the inner city is changing--more and more jobs are moving back downtown leading to rising property values and prices in the downtown area, pushing poor residents towards the suburbs. Between 1996 and 2013, jobs located within three miles of downtown increased by 7% (Wogan, 2016). Jobs are moving where the talent is and large employers being collocated with major universities in cities has been a significant draw for people to voluntarily move back into downtown areas.

A *social* force that Ross and Leigh (2000) discussed that enforces structural racism is the stigma of crime. Social desire to get “tough on crime” ends up incarcerating a disproportionate number of racial minorities instead of focusing on changing the economic and societal factors that lead people towards a life of crime (Ross & Leigh, 2000, p. 375). A *technological* force that keeps inner city groups from climbing up the socioeconomic ladder is the opposition to expanded mass transportation systems in cities. A fully functioning mass transportation system is vital for inner city communities to be afforded job opportunities where jobs exist (even though inner cities are strengthening their job markets) and some cities, such as Atlanta, refuse expansion outside of city limits.

Goodling, Green, and McClintock (2015) offered a very interesting *economic* force that has shaped American neighborhoods. Their article focuses specifically on Portland’s neighborhoods:

The particular urban form and demographic makeup of particular parts of the city are far from historical happenstance; rather, both are shaped by cycles of capital

accumulation and devaluation and by the social processes (including policy making and planning) that mediate them. (p. 509)

Their answer to this statement was that “capital switching” explains the uneven development in some cities. Capital switching is seen when one neighborhood of the city is pumped up with revitalization efforts and capital development, while another part of the city is neglected. Investment in one area of a city combines with the devaluation in another area of the city. Goodling, Green, and McClintock (2015) provided Portland as a case study, showing that the west side of the city has become more affluent and white, while the east side has become more racially diverse and poor--an outcome of capital switching.

Tacoma, WA Case Study

This section will use the city of Tacoma, Washington as a case study. I will apply Wheeler’s (2003) urban form values and sustainable development indicators to Tacoma’s history to determine if it is a sustainable city according to the aforementioned theories.



Figure 2. Map of current day Tacoma, Washington with downtown area circled in green. Adapted from *Google Maps*, by Google, 2018.

Historical Context

Although Tacoma's infrastructure was not built upon the backs of slaves from African countries like the first developed cities of the United States, Tacoma's history is riddled with racist behavior. Dierwechter (2017) explored the history of the greater Puget Sound area, stating, "outnumbered 12:1 in the early years, whites needed Indian labor, and later Chinese labor, to secure profitable production" (p. 79). In 1885, in a speech that is hauntingly similar to political rhetoric of today, then Mayor of Tacoma, Jacob Weisbach, recognized that the citizens of Tacoma were most afraid that their city was going to become a "Chinatown" and believed the Chinese must go because they were "taking jobs away from white Americans" (Gallacci & Karabaich, 2009, p. 23). This fear led to the "Tacoma Method" where, in that same year, 500 white citizens and government leaders of Tacoma forced the Chinese inhabitants (after the railroad was completed) to buy their own train ticket to Portland or walk there and never return to Tacoma. City of Tacoma citizens then burned all Chinese homes and businesses to the ground, mirroring Tacoma's history in racist policies that set the stage for the structural implications to come (Gomez, 2017).

The Changing Urban Form

Wheeler's (2003) theory of the evolution of urban form can be applied to Tacoma, Washington through a study of The One Tacoma: Comprehensive Plan (Atkinson, 2015). It lays out the six residential housing patterns in Part 1, Section Two of the plan, titled: *Urban Form*. These residential housing patterns almost exactly align with Wheeler's (2003) five types of urban patterns. To begin with the compact grid form, none of Tacoma's historic blocks align completely with its described 200 x 200 foot blocks. In Tacoma's downtown area (circled in *Figure 2*), the typical block is about 200 feet measured from west to east, but approximately 700

feet measured from north to south (Atkinson, 2015). However, with the advent of the streetcar in the 1870s, Tacoma's urban fabric aligns completely with Wheeler's (2003) described urban pattern of streetcar suburban grids. Streetcars and Tacoma's extensive streetcar system from 1890 to 1940 heavily shaped the urban fabric seen today in Tacoma. Chapter 7 of the One Tacoma plan is dedicated to transportation and acknowledged the heavy influence the streetcar had in creating some of Tacoma's oldest neighborhoods, such as Stadium, Manitou, Proctor, and South Tacoma (Atkinson, 2015). The blocks created during these years measure about 300 x 300 feet and can still be seen today. The Tacoma Office of Historic Preservation published a book about the creation of Tacoma's neighborhoods, which stated the creation of the central portion of the city was "highly dependent upon the development of the streetcar" (Tacoma Office of Historic Preservation, 1980, p.4).

Garden suburbs did not have much of an influence on Tacoma, but automobile suburbs had a lasting effect on Tacoma's urban fabric. With the huge popularity of the automobile following World War II, streetcar service completely ended and the rails were removed by 1941. Tacoma's sprawl pushed west and south of the city center, resulting in the winding roads and cul-de-sacs described by Wheeler (2003) as typical of this urban fabric.

In a publication by the Olympia Washington State Planning and Community Affairs Agency, nonwhite people in Washington State were tracked from 1900 until 1960 (Schmid, 1968). Between 1900 and 1940, there were 500 to 700 African American people living in Tacoma, but by 1960, their numbers had increased to 6,000. The publication also provided a graph of locations where African Americans had settled in 1960 (*Figure 3*), with each dot representing 10 people.

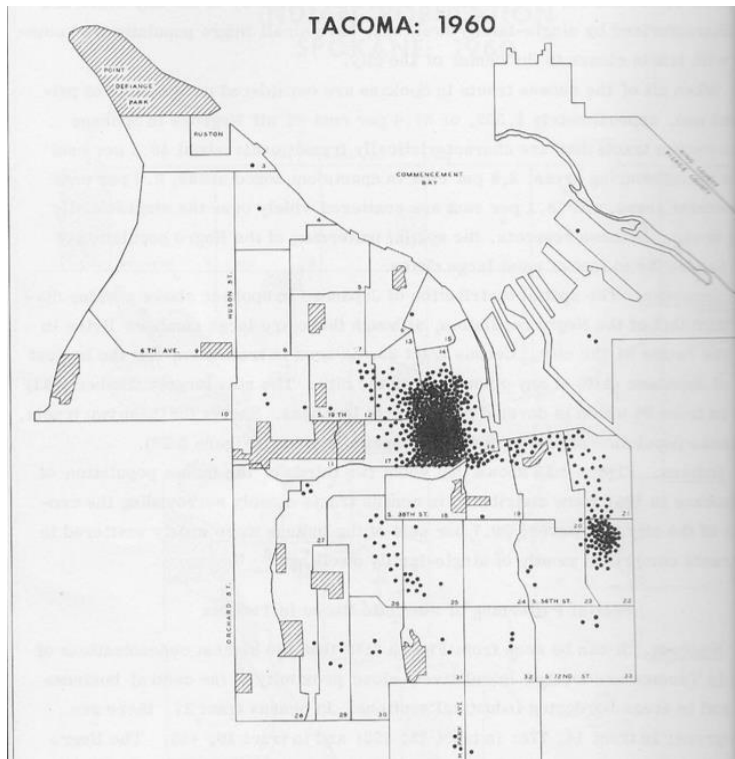


Figure 3. African American Population in 1960, each dot represents 10 people. Reprinted from *Nonwhite Races, State of Washington*, by C. Schmid, 1968, Olympia, WA: Washington State Planning and Community Affairs Agency.

Figure 3 shows that the structural policies that were discussed earlier in this paper, such as exclusionary zoning and rampant racist red-lining policies in Midwestern cities, were also applied in Tacoma (City of Tacoma, 2017). Structural barriers such as red-lining and cultural barriers such as racism kept African Americans segregated from the rest of the community. Interestingly enough, when census data is looked at for Tacoma today, the largest percent of African Americans in Tacoma still live in the same locations they did in 1960. Today, Central Tacoma (where the largest mass of black dots are found above) is 15.71% African American--a neighborhood which is one of the least white in Tacoma (Cedar Lake Ventures, 2015). The specific neighborhood these dots represent is known as the Hilltop. Hilltop was the first residential neighborhood to develop outside of Tacoma's downtown; its development was spurred by a cable car built in 1891, which connected it to downtown along with a robust

streetcar system (City of Tacoma, 2014). Hilltop was the largest and most ethnically diverse neighborhood in the city before the advent of the automobile. The proliferation of the automobile coincided with local industry decline in the 1960s, which began a time of disinvestment and decline in the Hilltop neighborhood. This disinvestment continued into the present day and according to the Hilltop Subarea Plan published by the City of Tacoma in 2014, 50-60% of Hilltop residents live under the poverty rate. In contrast, the rate for the entire city of Tacoma is 16%.

Currently, Tacoma is concerned with the tenets of New Urbanism and finding a way to implement those tenets. The One Tacoma Transportation Plan is pushing for the creation of Mixed Use Centers (MUC), which are:

intended to be “urban villages”— places that are distinctive, attractive, and rich in amenities and that provide more convenience and choice for residents and employees. A key strategy within MUCs is creating dense, walkable environments that are served by transit. Within MUCs, the City would focus on creating Complete Streets that accommodate a range of transportation choices.

(Atkinson, 2015, p. 35)

Current planning at the City level involves the above Mixed Use Centers, which connect with many of Wheeler’s (2003) urban form values discussed previously. These centers provide value to the residents of Tacoma by decreasing transit time, increasing diversity, and promoting a more environmentally friendly neighborhood.

Figure 4 illustrates the changing urban fabric of Tacoma over time. The numbers in the background correspond to the six residential pattern areas outlined in the Urban Form chapter of the One Tacoma: Comprehensive Plan (Atkinson, 2015).

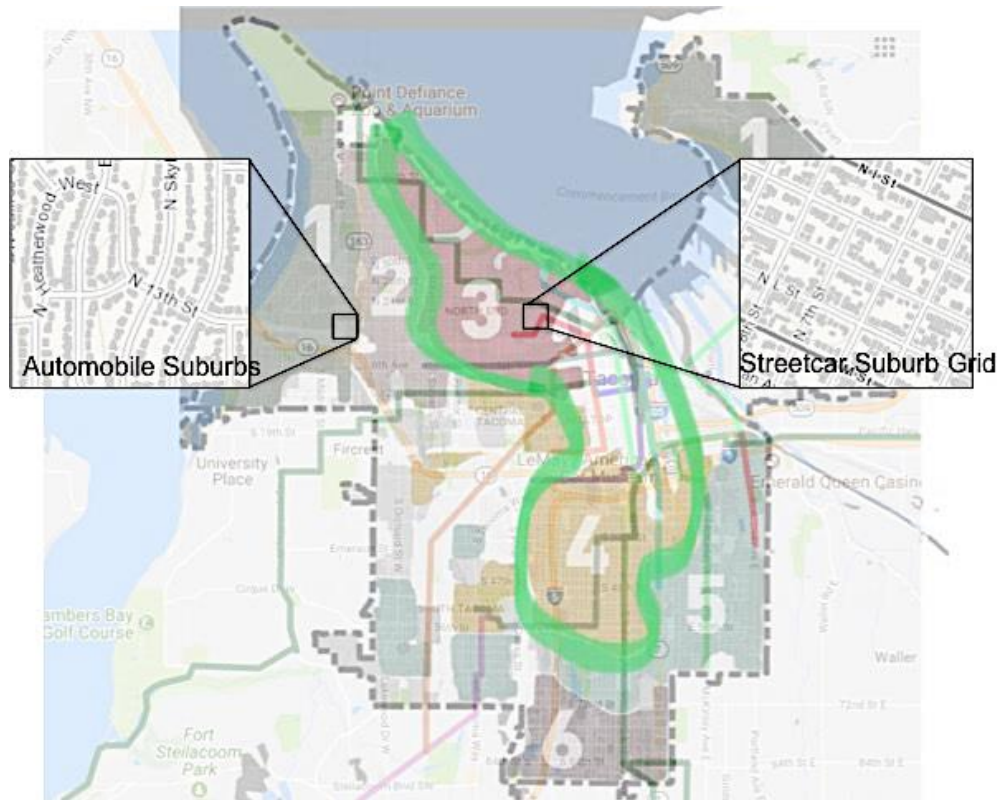


Fig. 4. Historic Tacoma streetcar lines overlaid with residential housing areas. The solid black, red, dark green, orange and red lines are historic streetcar lines. Reprinted from *Historic Tacoma Streetcar Lines*, by City of Tacoma, n.d., retrieved from https://www.google.com/maps/d/u/0/viewer?mid=1wVQOOZRx_G2adFNuPSS2eAx8tng&hl=en_US&ll=47.19414492732523%2C-122.41674900512692&z=12

In this image, Area 3 represented pre-World War II areas, the “pre-war compact,” and Area 4, the “pre-war expansion.” These areas, with their short, square blocks, featured the urban fabric ideals Wheeler (2003) in the streetcar suburban grids. This map of the historic streetcar lines overlaid with the varying areas of Tacoma was created with data from the Tacoma Public Library (Karnes & Sheerman, n.d.). There is a correlation of the “pre-war expansion” area, Area 4, with the streetcar lines, which predictably allowed for this expansion, just as Wheeler (2003) explained. In fact, Areas 3 and 4 were the residential areas with the most streetcar access, contributing to their urban fabric. The remaining Areas: 1, “post-war slopes,” 5, “midcentury

expansion,” and 6, “suburban fringe” all occurred after the streetcar system had been shut down and automobiles drove expansion. This expansion resulted in blocks that were three or four times larger than the compact areas and road types that Wheeler (2003) described in automobile suburb pattern. Lastly, Area 2, “mixed era transition” has a mix of pre- and post- World War II housing and did not benefit from the use of the streetcar systems.

Additionally, the two map cutouts in *Figure 4* show the differences in urban fabrics of streetcar driven expansion and automobile expansion. The green ring around Areas 3 and 4 is to draw attention to the density of the once marvelous streetcar lines of Tacoma, with over 125 miles of electric streetcar lines (Karnes & Sheuerman, n.d.).

In an example of the tenets of a streetcar suburb in North Tacoma, *Figure 5* shows houses close together, sharing the land, with no garages or sheds facing the sidewalk. Generally, existing streetcar suburbs have high walk scores and are closer to shops and transportation hubs. The houses having such close proximity to the sidewalks encourages relationships with neighbors and residents.

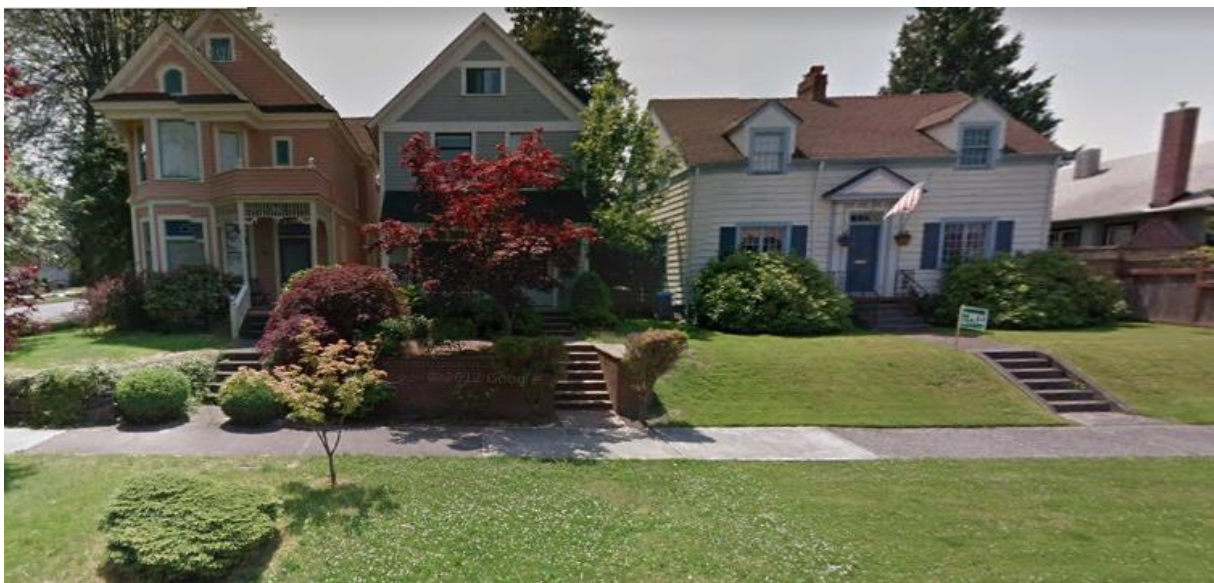


Figure 5. An example of a block on a streetcar suburban grid, North M Street in Tacoma, WA. Walk score: 71. Walk score is calculated on ease of walkability and distance to nearby amenities

(Walk Score, 2018).

In *Figure 6*, we see an automobile suburb in Tacoma, WA. It is telling to notice the difference between this automobile suburb and the streetcar suburb in North Tacoma (*Figure 5*). There are long driveways connecting the street to the house, so that a resident could go from the outside world directly into their own world, avoiding contact with their neighbors. The lots take up more space and because of this, we again see one of the damaging effects of sprawl: inefficiently used land.



Figure 6. A typical automobile suburb shown on North Heatherwood Street in Tacoma, WA. Houses and lots are more sprawling in this suburb shape. Walk score: 34.

Sustainable Development

Wheeler's (2003) five urban form values--compact, contiguous, connected, diverse, and ecological--were what he believed were needed to attain a sustainable urban form. Tacoma's dedication to the MUC goal touches on all of these tenets except the ecological development (One Tacoma Transportation Plan, 2015). However, the One Tacoma: Comprehensive Plan has a chapter dedicated to Environment and Watershed Health, which explains the steps Tacoma will take to create a healthier environment and to protect the air and waterways.

Currently in Tacoma, there is discussion about the dangers of gentrification, especially in relation to the Hilltop neighborhood (which is the area that coincides with the largest number of

African Americans in Tacoma seen in *Figure 2*). Godschalk (2004), with his discussion of livability as an important element of sustainable development, stated the tension between livability and equity is referred to as the gentrification conflict: Is it more important to protect current populations and their homes or to allow for revitalization by outsiders in order to attract more middle and upper-class populations? Orfield and Luce (2013) provided an interesting answer to whether a neighborhood will become gentrified or not. They state that if a neighborhood is made up of more than 23% of nonwhite races, then it will remain nonwhite and, in most cases, become less integrated. They recognize 23% as the threshold at which white people will stay--anything more, and they will relocate to an outer ring suburb with a majority white population. Orfield and Luce's (2013) work indicated that Tacoma's Central and South neighborhoods are likely candidates for gentrification because the African Americans population makes up less than 23% of the population. Another cause of gentrification, one that is becoming an increasing problem in Tacoma as a whole, is rising property values. Tacoma's median home price has risen over 14% in the last year as people move in from much more expensive cities, such as Seattle (Cohen, 2018). This, combined with the extension of Tacoma's Link Light Rail, has encouraged outsiders to purchase affordable property in the Hilltop, gaining proximity to public transportation and an increased ability to commute to Seattle. We see the effect of these changes as people relocate out of the area. From 2010 to 2015, 35% of African Americans who lived in the Hilltop have moved out due to rising house prices (Ruud, 2017).

How Did This Happen?

As defined earlier, five key forces shape the urban form: *institutional, geographical, technological, social, and economic* (Wheeler, 2003). When applied to Tacoma, it is easy to see how a number of these have strongly influenced the urban fabric of the city. For example, the

geographical landscape heavily shapes the urban form in Tacoma. Tacoma is a port-city and because of this, has a non-negotiable city-limit of the water that surrounds it. This barrier pushed the suburban sprawl toward the south, since it could not go in any other direction. As discussed previously, *technology* also heavily influenced the growth patterns of Tacoma. The streetcar system allowed for compact growth in Areas 3 and 4, and developed in the small block pattern as described by Wheeler (2003). Once automobiles became popular, development changed and streetcars were abandoned. Once residents did not value their proximity to the streetcar for transportation, they no longer needed compact residential structures and began to sprawl towards the periphery of the city, their cars allowing for this change (*Figure 5*). *Economics* shaped many things: the post-war economic boom shaped the fabric of cities due to the car-induced sprawl mentioned above, which led to the production of new, larger houses further from city centers. Today, recessions play a role as they decrease production and spending. For example, the One Tacoma: Comprehensive Plan explained that bus services were cut by 31% following the Recession in 2008 (Atkinson, 2015). Lack of public transportation leads to more individual cars on the road, in turn leading to congestion and increased pollution, negatively affecting the health of the environment and the health of humankind.

A decrease in public transportation is especially troubling due to its importance to poorer, African American residents; failing to extend public transportation systems decreases the ability of people without personal vehicles to gain new job opportunities (Ross & Leigh, 2000). Although access to bus lines has decreased in Tacoma, a new Link light rail expansion is scheduled to be built that will run directly through the Hilltop Neighborhood and enable many people to be connected with new opportunities. Although this is the hope of City of Tacoma government and the agencies working on its construction, who claim that they chose to run it

through Hilltop to encourage economic development in the neighborhood, the Link has already shown unintended consequences (Ruud, 2017). The expansion of the light rail has not yet begun but residents of the Hilltop Neighborhood are being displaced due to rising property values accompanying this new development. Agencies such as the Tacoma Housing Authority are attempting to combat this change and keep residents in the neighborhood by buying old properties in order to keep the rent costs down.

The final force described by Wheeler (2003) was the importance of *social* forces in the urban form. Agreeing with Wheeler (2003), Ross and Leigh (2000) discussed an important social belief that shapes the lower socio-economic areas: the importance of highlighting both government and community-led efforts to revitalize an area, since neither alone will bring about a successful outcome. Ross and Leigh (2000) examined the importance of reversing the stigma of crime in an area and focusing on educational and developmental opportunities, instead of focusing on policing and mass incarceration. The City of Tacoma is tangibly aware of the situation in Hilltop; in fact, the mother of current Mayor Victoria Woodards was a longtime resident before she was priced out, as well (Ruud, 2017). With the incoming Link Light Rail, the City has formed the Hilltop Engagement Committee to keep residents informed and has created a “Links to Opportunity” project that will work with local businesses and residents to counter the negative effects of the light rail expansion. With construction slated to begin in the fall of 2018, time will tell if the steps taken by the City of Tacoma will revitalize the Hilltop or if it will continue to lose its current residents.

Conclusion

By 2042, the United States will not have a single racial majority (Orfield & Luce, 2013). Even so, the problems discussed here will not evaporate. The United States and the City of

Tacoma will need to continue to ensure structures, laws, and policies are in place to make sure all groups of people are treated equitably and the livability of their lives is being considered. The institutionally racist structures currently in place, formed by a white, male majority, will take much longer to remove. From a sustainability standpoint, an increase in equity--through creation of mixed use developments that attract many socioeconomic classes of people, combined with transit oriented development--will keep more individual vehicles off of the road, helping the environment to heal. Additionally, all of this needed development will increase the economic E of the Three E's. To defend against the structurally racist policies of the past, those that created segregated neighborhoods, we must focus on several items: exclusionary zoning must be ended, laws and incentives for mixed incomes to live together need to be passed, and coordinated legislation for managing urban growth must be implemented (Orfield, 2006; Dierwechter, 2017). The benefits of desegregated neighborhoods have been discussed previously, but another important step is learning about people different than ourselves, as well as living near and empathizing with them; together, these will bring humanity a step closer to caring about sustaining each other and the planet.

In this paper, I have focused on showing that the spaces and politics that sustainability planning creates are not immune to structural racism. Although equity is one third of the Three Es of sustainability planning, it is a tough goal to tackle due to the deeply ingrained racist history that has allowed inequitable spaces to be created. Although Orfield and Luce (2013) stated that stable integration is possible in neighborhoods, it will take a concerted effort on the part of institutions through

race-conscious strategies, hard work, and political collaboration among local governments ... a renewed commitment to fair-housing enforcement, including

local stable integration plans, equitable education policies, and incentives that encourage newer, whiter, and richer suburbs to build their fair share of affordable units. (p. 396)

Equity is an entire third of the sustainability diagram. The benefits of the actions listed by Orfield and Luce (2013) can go a long way in working towards that goal of equity, and after that, sustainability. Research has shown that although academics are aware of the tenets that make up sustainability planning (simplified to the Three E's), many cities and neighborhoods are not being built or implemented with very much emphasis on equity. I showed the lack of focus on equity through the case study of Tacoma, Washington. Although the current Tacoma city government and projects are trying to take equity into account, reversing the racist structures of hundreds of years is quite an undertaking. It would be worthwhile to do an additional case study on Tacoma five or ten years following the completion of the Link Light rails. This would allow researchers to see how the light rail expansion has affected the demographics of the Hilltop to see if it truly did link the residents to opportunity or if its longtime residents were displaced. In order to assure equity for all citizens, we must continue to critically examine the relationships between institutional racism, the struggle for equity, sustainability, and urban development. This constant examination is necessary due to the generations that our country allowed racist policies and structures to thrive--it is our duty to ensure that never happens again.

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