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Exporting Strategies for Urban Livability: Examining Copenhagen, Denmark as a Model City for Quality of Life Generated through Urban Design

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Exporting Strategies for Urban Livability: Examining Copenhagen, Denmark as a Model City for Quality of Life Generated through Urban Design

A Senior Thesis in Urban Studies
Austen L. Peterson
Trinity College Class of 2017
Spring 2017

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Abstract

Over the next fifteen years, the world’s population is expected to reach new heights at 8.5 billion people. Currently, half of the global population is living in cities, which in turn, will inevitably increase with the growth of humanity. As the Mayor of Copenhagen, Frank Jensen, so poignantly explains, “A sustainable world starts with sustainable cities. In Copenhagen, we keep this in mind as we strive to combine sustainable solutions with a focus on growth and quality of life to make Copenhagen an even more livable city.”1 Urbanization is an unavoidable phenomenon and challenges the threshold of a successful city; however, this research will prove the crucial benefits of strategic urban planning in the face of these challenges.

Researching urban livability tactics in Denmark will expand our global understanding of urbanization and allow us to appropriately apply strategies for improving quality of life. Implementing smart urbanism and efficient infrastructural design will ultimately shift the focus of cities to prioritize the inhabitants of the urban landscape. Providing strategies to responsibly and joyfully coexist in the city and with the city will guide the following research process with the goal of proving the tremendous benefits of urban design that prioritizes the quality of human life.

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Acknowledgements

The act of writing a Senior Thesis has given me a chance to reflect on my experience and evolution as a student at Trinity College. I did not anticipate joining the Urban Studies department and never could have predicted my trajectory in the field; however, my fate was sealed nearly instantaneously as I enrolled in Introduction to Urban Studies. I immediately gravitated towards the real-life applicability of the material and the interdisciplinary nature of each and every discussion.

Before long, I was traveling with the Center for Urban and Global Studies to China and Myanmar as a means of expanding my educational framework on a global scale. Having little international travel experience, this trip acted as a pivotal opportunity that ultimately pushed my intellectual limit. This experience sparked a curiosity in me that had not previously existed and ultimately strengthened my desire to pursue a global education; that led me to Copenhagen, Denmark in the fall of 2015.

The inspiration for this thesis stems from my time living and learning in Copenhagen. As a student at DIS, Danish Institute for Study Abroad, I participated in the Urban Studies department where I routinely engaged in a unique discourse with my peers and urban scholars from Denmark. In particular, I am extremely appreciative of my Danish professors Bianca Hermansen, Sophia Schuff, Suzanne da Cunha Bang, and Silvia Dragomir, as they had an immense influence on my interest in urban livability and my understanding of Danish society. In addition, I wish to thank Bettina Werner for spreading her wealth of knowledge as a key informant in my study.

I am forever grateful for the incredible guidance I received from both Professor Garth Myers and Dean Xiangming Chen over the past three years. I feel fortunate to
have grown as a student with the support of two incredible urban scholars. And lastly, I thank my family for applauding my academic endeavors since a young age. Without their unwavering support, I would not have seen the world and expanded my personal and academic horizons. I attribute this culminating research to their nurturing and selfless spirits.
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Framing the Study

With a mere square mileage of 17,000 feet, the nation of Denmark makes up a microscopic portion of the globe. With a significantly smaller population than the state of California, the nation of Denmark is seldom recognized as a contributor to global society. To make matters more comical, people often joke that Denmark is home to more pigs than people. The sun even sets at three in the afternoon on the shortest day of the year; yet, despite these seemingly undesirable qualities, Denmark is consistently rated at the top of global happiness and livability indexes, which creates a unique and paradoxical opportunity for urban research.

After living in and experiencing what the city of Copenhagen has to offer, I became undeniably fascinated with the culture, design, moral code, and function of the city as a whole. Michael Booth's book caught my eye in the Copenhagen airport with the title, *The Almost Nearly Perfect People: Behind the Myth of the Scandinavian Utopia*. I immediately purchased his novel with the intention of delving deeper into this philosophical idea that I had similarly been contemplating. His novel serves as a literary inspiration for my Senior Thesis, which seeks to present Denmark, and Copenhagen more specifically, as an ideal embodiment of the causal link between holistic urban design strategies and a high quality of life for residents. My research will decode the “myth” behind this utopia by analyzing both quantitatively and qualitatively the ability for smart urban design to promote livability and in turn, the highest quality of life.

Copenhagen has outpaced many international cities with its regard for sustainable urban growth. Both the government and NGOs consistently produce public
reports that facilitate the diffusion of smart urban design tactics. For example, *State of Green* was established to showcase Denmark’s desire to “lead the transition to a green growth economy.” The aspiration to influence international audiences emphasizes the value that could be gained from Denmark. This research seeks to promote the strategies used in Denmark as valuable methods for fostering urban livability in global cities. Denmark’s desire to share methodologies ought to be adapted by other governments, both local and national, in order to develop a new urban discourse—a discourse founded upon a constant, transparent, and interactive dialogue between government agencies, urban stakeholders, and citizens. Cultivating an open forum for promoting strategies for urban livability will mitigate the detrimental qualities of widespread development and population growth currently plaguing cities.

Denmark, the smallest of the Scandinavian countries, and a nation consistently ranked at the top of happiness and quality of life indexes worldwide, presents an unparalleled venue for urban research. Various studies conclude that when surveyed, “82 percent of Danes were ‘thriving’ (the highest score)…Their average ‘daily experience’ scored a world-beating 7.9 out of 10.” People in the Scandinavian region as a whole “were not only the most contented people in the world, but also the most peaceful, tolerant, egalitarian, progressive, prosperous, modern, liberal, liberated, best educated, and most technologically advanced.” The capital city of Denmark, Copenhagen, represents an innovative urban center whose residents and government

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2 Jensen and Morten, 5.  
4 Booth, 5.
actors share the same motivation to constantly achieve the highest standard of living. The following research strives to analyze their unique approach to urban design and its powerful impact on citizen’s lives.

The nation of Denmark has experienced growing prominence in the fields of urban design and architecture due to figures like Jan Gehl and Bjarke Ingels. Gehl’s principles of urban livability have influenced cities worldwide, while Bjarke Ingels has quickly escalated to “starchitect” status with prominent commissions in New York City, Washington, and Shanghai among other global cities. A shift in awareness brought about by such figures, in conjunction with a growing interest in bicycle urbanism and sustainable development worldwide, has contributed to the breadth of research conducted and disseminated from Denmark. Researchers approach the topic of quality of life through urban design in a seemingly holistic way. In other words, current research addresses this topic through both a quantitative and qualitative lens, as the virtues of Danish society are mostly rooted in qualitative principles. The subsequent research argues in favor of participatory planning structures, active transportation initiatives, and user-driven architecture and design as critical factors to urban livability and the achievement of higher standards of urban living. Moreover, the following questions frame my research process and illustrate my approach to analyzing Copenhagen, Denmark as a model case study. Consistently referring to these overarching questions has allowed me to employ a critical lens in which I hone in on, what I argue are, the greatest contributors to a high quality of urban life.
1. How can a rapidly urbanizing city offer a high quality of life for residents while simultaneously mitigating consequences associated with population growth?

2. What are the key strategies cities can implement to promote urban livability?

3. What is the role of the government, both national and local, in implementing strategic urban design?

4. What are the most adaptable and scalable lessons cities can gleam from Copenhagen?
Methodology

The field of urban design, despite having a long theoretical history, has gained significant traction since the 1950’s, as people sought an understanding of rapid urbanization. Urban design has increasingly gained the attention of scholars, as the field greatly lacked both quantitative and qualitative research. I approach the concept of urban design as an integrative field that relies on disciplines ranging from architecture to sociology, as these professions and their respective ideologies encompass the built environment and the inhabitants within it.

The following research utilizes pertinent field observations that were previously conducted in the region under investigation. My research conducted in the fall of 2015 employed a variety of Jan Gehl’s methods, which strike a balance between qualitative and quantitative observation tactics. I routinely observed urban spaces by counting, mapping, tracing, tracking, noticing traces of human activity, photographing the landscape, writing diary entries, and practicing test walks (See Figures 6 and 7). This holistic approach to urban observation generates both statistical points of reference while simultaneously depicting how humans engage with the built environment. In addition to this research structure, interviews and filmed lectures complement my analysis of local plans and documents. A literature review of scholarly and primary sources supplements the locally conducted research and highlights the applicability of the given case study on a global scale.

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5 Bianca Hermansen, “Jan Gehl: Making Cities for People” (lecture, DIS, Copenhagen, Denmark, August 31, 2015).
My discussion of urban livability enlists both previously conducted and current research that analyzes public policy initiatives, active transportation infrastructure, and strategic architecture and urban design. Moreover, an analysis of these topics will highlight the form and function of public space, the influence of architectural design, and the importance of active transportation to human health and environmental sustainability. The aforementioned subtopics will ultimately prove how strategic urban design is utilized in Copenhagen to create a livable city.

My research process is theoretically rooted in a humanistic perspective, which encompasses the theory of human scale and the notion of designing cities for people. Jan Gehl’s Life Between Buildings serves as a primary scholarly reference that defines and applies the concept of human-scale (See Figure 1). His deeply rooted urban research complements my investigation of the city as an organism and uncovers additional factors contributing to lively streets and humane urban spaces. This theoretical framework engages the human sensory apparatus and its causal link to a high quality of urban living. By prioritizing the role of human sight, touch, and hearing, among other sensory characteristics, urban design is successfully appropriated for the human scale.\(^6\)

Moreover, this theoretical framework is complemented by the increasing value in designing a metropolis for people: “We will become the world’s most livable city: a sustainable city with urban space inviting people to a unique and varied urban life. We

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will become a metropolis for people.”

I utilize the aforementioned theories presented by urban scholars and the City of Copenhagen to frame the following research and analysis of livable cities as a result of tactical urban design.

In conjunction with the previously mentioned theoretical framework of this study, I employ an all-encompassing discussion of politics, physical infrastructure, and design to demonstrate and prove how cities like Copenhagen, as well as other highly ranked livable cities, promote and ultimately achieve such a high quality of life.

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Defining Urban Livability

Urban livability refers to the symbiotic interdependence of ecological, social, and economic systems in city spaces. More specifically, these systems are linked to the political climate of a given city, mobility through transportation structures, and the design and architecture of public spaces. The process of synthesizing the aforementioned systems is realized through designed urban form. According to Bianca Hermansen, Director of Global Design and Engagement at LEGO, every aspect of our built environment originates from design and humans have the right and ability to dictate how we approach urban design. By prioritizing urban livability in the process of design, the built environment is given a humanistic quality, which ultimately strengthens the ability for urban civilizations to live in harmony with nature.

Livability begins with a holistic understanding of a city’s collective identity, behavior, and needs—a livable city is a democratic city. Implementing strategies for urban livability must start with identifying what type of city residents seek. In order to achieve urban livability, residents and designers must engage in a challenging dialogue that addresses difficult questions: Does every individual need to own a car? What kind of city do we want: a city full of moving objects or a city full of faces? Designing cities is a matter of priorities, and the built environment will ultimately hold the greatest potential to promote a high quality of life if we prioritize best practices for urban livability.

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8 Bianca Hermansen, “UW College of Built Environments Lecture Series” (Lecture, UW College, Washington, 2014).
Political Climate

Urban transformation is intrinsically linked to the political climate of cities and nations around the world. As the government structure in Denmark suggests, participatory practices in urban planning are gaining traction on a global scale as a political solution to the greatest challenges of rapid urbanization. The concept of participatory planning is defined as “the practice of consulting and involving the public in decision-making of organizations or institutions responsible for planning.”\(^{10}\) This concept acts as a foundational quality of urban planning efforts in Denmark. As Ivar Lyhne, Helle Nielsen, and Sara Bjorn Aaen indicate in their research on the participatory planning process, “Denmark is an interesting case of public participation practice in the sense that it is known for a generally open administration and consensus planning tradition.”\(^{11}\) The political structure in Denmark places a strong focus on civic engagement through open and transparent systems of operation.

The prioritization of “communicative and deliberative planning” places public influence at the “heart” of planning efforts and encourages a trusting, transparent, and forward-thinking society.\(^ {12}\) As research on the very nature of participatory planning comes to light, it becomes increasingly apparent that “public participation does not take place in a vacuum, but in a context of politics, institutions, [and] resources.”\(^ {13}\) Moreover, a structure of democratic collectivism most effectively creates a venue for successful


\(^{11}\) Lyhne, Nielsen & Aaen, 313.

\(^{12}\) Lyhne, Nielsen & Aaen, 313.

\(^{13}\) Lyhne, Nielsen & Aaen, 314.
participatory planning. As Lyhne suggests, egalitarian societies like Denmark depend on a sense of collectivism over individualism, which their socialist welfare system has historically sought to achieve.

The sense of transparency and openness that Denmark exhibits through its holistic planning methods and initiatives is a direct result of the welfare system in place. Denmark boasts an incredibly high level of transparency among citizens and trust towards governance. It is most commonly believed that Denmark and many Northern European nations positioned as socialist societies continuously rank at the top of livability charts. Bettina Werner complements this view by emphasizing the level of harmony and balance between the public, the private, and the state.\textsuperscript{14}

Participatory urban design is a unique feature of Danish initiatives that highlight the growing interest in urban design and civic engagement in every stage of urban redevelopment. Both formal government institutions and informal sectors of governance pursue a bottom-up approach to urban initiatives. Municipalities in Scandinavia—Sweden, Denmark, and Norway—require by law a participatory review process with any urban state project over roughly $20,000. In many cases, stakeholders, ranging from government players to neighborhood residents, participate in a series of open forums. Werner claims these meetings typically occur with little contestation; yet, many municipalities continue to take the process very seriously in order to gain a complete understanding of resident opinions, as they are the ones that will ultimately use the space. By requiring this process by law, project stakeholders are incentivized to include

\textsuperscript{14} Bettina Werner (Urban Ethnographer), interview with the author, March 28, 2017.
elements of participatory planning that will further encourage the transparent and user-driven nature of urban development exemplified in Copenhagen.\footnote{Bettina Werner, 2017.}

Both local and national, as well as formal and informal, governments should seek to advocate for participatory urban design as a strategy for improving the quality of urban living. The municipal government in Copenhagen, as well as smaller private institutions facilitating urban change such as Bettina Werner’s CoUrban, encourages the “people on the street” to take part in the urban development process. Werner highlights the importance and desire to “give a voice” to people that do not normally have a stake in issues of importance.\footnote{Bettina Werner, 2017.}

Promoting best practices for urban livability can broadly address the future of urban landscapes. Cities around the world, both small and large, can implement basic practices as a means of improving urban living in the face of rapid urbanization. Although Copenhagen is a small city in comparison to global cities, urban scholars working in the region believe that livable strategies can be implemented on a variety of different scales. As Werner describes in a personal interview, “There is not a single city that is not divided into smaller neighborhoods with smaller units of governance.”\footnote{Bettina Werner, 2017.} She justifies the adaptability of ideas by indicating that every project must be scaled at some point. Urban projects small and large eventually require an assessment of individual streets, buildings, signage, and more. For instance, “you cannot suddenly implement bicycle urbanism on a city-wide scale. You have to address each individual street and assess where the main arteries are and create the best connectivity and cohesive
Conceptualizing the city as a collection of neighborhoods capable of change encourages municipalities worldwide to deconstruct the scale of their city and address initiatives on local levels.

Involving local residents in the decision making process encourages the realization and promotion of best practices for urban livability. Best practices for urban livability identified in Copenhagen range from walkability, pedestrianization of public urban spaces, implementation of efficient and safe bicycle infrastructure, and the creation of social meeting places. These concepts, ideas that both William Whyte and Jane Jacobs sought to address in their careers, are consistently implemented in the urban landscape of Copenhagen, which contributes to its staggering position in the discussion of urban livability.

Both the local and national government structure in Copenhagen facilitates the realization of urban planning initiatives and smart urbanism goals. A variety of units, both informal and formal, contribute to the political landscape in Denmark. Firstly, local councils are established in every neighborhood. These small-scale groups, comprised of a board of volunteers that meet approximately once a month, utilize monetary funds to support local initiatives. This example of small-scale governance supports the goal for achieving urban transformation on neighborhood scales.

Moving beyond the local scale, the municipalities, which in Copenhagen refers to both the municipality of Copenhagen and Frederiksberg—a neighborhood within the theoretical borders of the city; yet, enforcing its own municipal structure—are comprised

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18 Bettina Werner, 2017.
of a variety of departments operated by city politicians. The municipalities possess greater funds and have the ability to approve and support larger regional initiatives.

Larger urban projects typically gain attention and funding from regional government units, which include stakeholders from the greater Copenhagen area. For example, the Cycle Superhighway initiative exemplifies a far-reaching urban project involving 30 municipalities. Given the prominent nature of the project and its physical territory, the regional governments can provide greater funding and place a higher level of importance on its development.

The national government additionally has a stake in urban development on both regional and local scales. The national government has the ability to provide higher levels of funding and resources through departments such as the Ministry of Environment and the Ministry of Housing. It is in the best interest of the national government to support both regional and local urban initiatives in order to continuously maintain and promote the progressive nature of their urban landscape.

Copenhagen benefits from a relatively unique governance structure given the influential role of philanthropic organizations. A significant amount of funding for urban related projects is derived from philanthropic organizations such as Realdania and CoUrban. Realdania, for example, utilizes philanthropy as a vehicle to “solve some of society’s major problems” relating to the built environment.19 They seek to improve quality of life standards by funding initiatives that will improve the urban fabric of cities. Realdania, similar to other governance actors in Copenhagen, firmly supports the promotion of a collective identity through participatory planning. As CEO Jesper Nygård

expresses, “We embrace our social responsibility with a proactive and agenda-setting approach. Our motto is ‘Quality of life for all through the built environment.’” 20 A sense of collectivism over individualism stems from the open and inviting structure of private and public enterprises. Realdania is comprised of 150,000 members all over the nation and encourages any real estate owner in Denmark to become a member of the organization.

After a long-standing history in financial lending, Realdania has evolved as a “member-based philanthropic organization” that supports projects in the build environment: cities, buildings, and the built heritage. 21 Realdania grounds their fundraising efforts and support of urban initiatives in the heritage of Copenhagen’s built environment and further complements the holistic nature of urban planning and the need for it to cater to a collective identity. A diffusion of these ideals is ultimately achieved through Realdania’s widespread collaboration with global organizations such as the UN Global Compact and the European Foundation Centre.

Furthermore, seeking collaboration with “local enthusiasts or researchers” contributes to the participatory nature of urban planning and the success of transformative urban projects in Copenhagen. 22 As opposed to tackling projects individually, Realdania and like-minded stakeholders, both formal and informal, “work to ensure that [their] contribution has a catalytic effect that exceeds” what can be achieved independently. 23

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20 Realdania, 2017.
22 Realdania, 2017.
23 Realdania, 2017.
Case Study I: Cycle Superhighway

The implementation of the Cycle Superhighway throughout the greater Copenhagen region exemplifies the value of taking a collective approach to public policy and urban projects. According to the City of Copenhagen, “the initiatives are intended as a way to encourage more commuters to travel by bicycle, even if their commutes are longer than 5km.” The breadth of political involvement in the development of the Cycle Superhighway is indicative of the widespread prioritization of active transportation in the region. Ayfer Baykal, head of Copenhagen City Council’s Technical and Environmental Administration, emphasizes the benefits of collaborative regeneration efforts: “There are enormous gains to be had if we can get people to cycle in and out of the city. Collaborating with our neighbouring municipalities to build the bike-bahns is the best thing we’ve done for cyclists since we started building cycle lanes 100 years ago.” Not only does the project promote active transportation and the health benefits associated with this mode of travel, but also the case of the Cycle Superhighway exemplifies overall improvements in social capital and mobility as a result. The process of linking outer regions to the city center increases the convenience of this cost-efficient method of transportation while simultaneously strengthening the overall social climate of the city.

As Bianca Hermansen points out, “design is not about decoration, it’s about problem-solving,” and the Cycle Superhighway directly supports the concept of

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improving societal norms through built urban form. By providing a venue for cheap and convenient regional transportation, the municipal governments around Copenhagen stimulate a more diverse and abundant circulation of human capital. Increasing the mobility of residents not only in the city, but also in the region as a whole increases social interactions and broadens the influence of urban livability.

Moreover, the Cycle Superhighway’s design promotes regional access to nature—a design tool crucial to the synthesis of our designed urban environment and the natural environment. As Jared Green poignantly states, urban design must “create access to nature to improve our health and well-being and teach us to rely on a greater natural system.” To this point, the theory of “ecotopia” presented by scholars Gundala Proksch, Joshua Brevoort, and Lisa Chun promotes “the seamless integration of natural systems into the built environment.” Prioritizing the concept of an “ecotopia” encourages a “future city in which natural systems not only re-emerge but also become an inseparable part of the urban fabric.” Urban design that addresses a symbiotic relationship with natural systems inherently promotes the notion of sustainable urban development and the importance of living harmoniously with nature. The realization of a synthesized urban and ecological system is ultimately dependent on public policy initiatives and civic engagement. As the Cycle Superhighway exemplifies, local, regional, and national policy has the ability to enforce projects that facilitate the betterment of society and nature through urban experiences.

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29 Proksch, Brevoort, and Chun, 262.
Case Study II: Integrated Urban Renewal

Similar to many cities around the world, Copenhagen has experienced significant levels of urbanization. This phenomenon demands the attention of urban policy in order to maintain the highest quality of life in the urban core, while simultaneously addressing the needs of disadvantaged neighborhoods that inevitably contribute to the urban fabric.

By creating an interconnected network of smaller neighborhood entities and government sectors, public policy can successfully address the various needs of the different communities that comprise the greater urban landscape. Public policy and funding efforts seek to promote not only attention grabbing mega-projects, but also crucial revitalization efforts in disadvantaged areas. By prioritizing “inter-departmental efforts,” urban policy in Copenhagen aims to remediate individual neighborhoods through green and smart growth projects with the intention of improving quality of life.30

Integrated Urban Renewal (IUR) exemplifies a public policy initiative that prioritizes the improvement and maintenance of all urban areas in Copenhagen. This holistic process synthesizes physical, social, cultural, and environmental improvements through government funding for selected projects. The creation of such a program is intended to encourage positive development in areas that exhibit great potential despite their seemingly disadvantaged state.

IUR’s mission engages Henri Lefebvre’s concept of the “right to the city.” By addressing the needs of every stakeholder and resident in the city, IUR, similar to many planning and design initiatives in Copenhagen, utilizes Lefebvre’s notion of oeuvre, or

30 Technical and Environmental Administration, “Policy for Disadvantaged Areas,” The City of Copenhagen, 11.
“creative and collective participation” in the process of urban renewal. IUR provides residents of disadvantaged neighborhoods with “the rights to participation and appropriation.” These rights act as stimulants in the promotion of urban livability through user-generated urbanism, as residents gain ownership, influence, and the desire to occupy and use public space.\footnote{John Bela, “User-Generate Urbanism and the Right to the City,” Edited by Jeffrey Hou, Benjamin Spencer, Thaisa Way, and Ken Yocom, \textit{Now Urbanism} (New York: Routledge, 2015), 161.}

In keeping with the holistic nature of the program, IUR targets neighborhoods in need of both physical and social remediation. This program specifically attracts resident participation through meetings and self-appointed focus groups. A bottom-up participatory approach is intended to generate commitment and ownership within the communities. In addition, the structure of public policy initiatives in Copenhagen requires extensive assessment in order to accrue knowledge for future endeavors. Although IUR efforts take place on the district level, the process ensures ongoing communal engagement through the assessment and continued communication of project success.

Integrated Urban Renewal includes three phases as follows: start-up phase, implementation phase, and anchoring phase. In the start-up phase, citizen involvement is prominent and focus groups are appointed. The implementation phase, as one might imagine, refers to the physical realization of the participatory planning process. The structure of IUR favors a bottom-up approach to urban policy with the intention of fostering a strong sense of ownership over the project and community as a whole. This
mindset additionally encourages residents to work towards guaranteeing that the project lives on, which is addressed during the anchoring phase of the process.32

The anchoring phase additionally prioritizes the principles of collectivism and the generation of urban livability through resident ownership. The process of assessing IUR projects acts as a model for urban renewal initiatives on a global scale. The participatory nature of IUR proves that “communities know best what they need and what they can handle. If communities feel empowered, they can solve many of their own problems and plot out their own paths to future sustainability.”33 By establishing a foundation for community engagement, government supported initiatives will thrive within local contexts and generate the most lasting success.

33 Green, 10.
Mobility & Transport

Cities like Copenhagen strive to achieve a higher quality of life through “green mobility,” which aims to promote safe and efficient cycling conditions alongside “integrated public transportation.” The term “Copenhagenize” is widely used among civilians and scholars to promote the vision for bicycle-friendly urban spaces that encourage inhabitants to rely on this low-expense, yet highly convenient form of transportation. This facet of urban design not only mitigates pollution and traffic congestion, but also it facilitates a higher quality of life and well being through exercise and pleasure. The “Solutions for Sustainable Cities” report provides specific data that proves the sweeping benefits of bicycle urbanism (See Figure 3). The concept of bicycle urbanism can be sufficiently characterized through both quantitative and qualitative data, as both the statistics and experiences themselves justify the benefits.

Urban design must prioritize the presence of the pedestrian and the cyclist in order to generate livable spaces and a higher quality of life for residents. As urban theorists have uncovered, “rather than allow domination by vehicles, people on foot or riding a bicycle should be accommodated, and the environment should provide opportunities for socializing, and greenery.” From a personal perspective, Werner views bicycle urbanism as a crucial attributor to a higher quality of life: “Bicycle urbanism is good for health.” She delves deeper into her view of bicycle urbanism by addressing the accessibility and freedom associated with this method of active

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34 Jensen and Morten, 5.
transportation: “I can leave my house 10 minutes before I need to get to work. [Cycling] promotes accessibility and freedom; safety is also a huge part of the picture. There are many places where you can bike, but it’s not necessarily going to feel the most comfortable.”

Promoting bicycle ownership in conjunction with the implementation of bicycle infrastructure is a key factor in stimulating a bicycle culture. In Denmark, 90% of the population owns a bike whereas only 56% of residents own a car.

The goal of providing convenient bicycle infrastructure in Copenhagen is achieved through a “no missing links” strategy that creates a seamless network of bicycle lanes that function similarly to the vehicle roads with separate lanes and traffic signals. The European Model for designing bicycle infrastructure differs from many models implemented in North America, as the European model favors the safety of the bicyclist by placing parked cars closer to the traffic and the cyclists closer to the sidewalk. This infrastructural design places a greater importance on the cyclist as opposed to the vehicular traffic.

Furthermore, “more and broader bicycle lanes, improved design of intersections, and behavioral campaigns are the means of achieving a safer city for the cyclists. With those types of initiatives, Copenhagen wishes to achieve a rise in the proportion of inhabitants feeling safe while biking (from 67% in 2010 to 80% in 2015 and further to 90% in 2025).” The implementation of efficient and safe bicycle infrastructure is supplemented by alternate modes of equally efficient transportation. The

36 Bettina Werner, 2017.
37 “Bike Culture: Europe vs. America.” Reliance Foundry, last modified April 15, 2015.
38 Jensen and Morten, 8.
39 Jensen and Morten, 8.
implementation of integrated public transportation in the city of Copenhagen highlights the smart growth tactics being harnessed in the face of rapid urbanization. This streamlined system allows residents and visitors to utilize a single ticket for every type of transportation. In addition, you can easily monitor the status of transportation through an online interface. This system supports the use of complementary modes of mobility by allowing bicycles on both the bus and metro.

The holistic approach the government has taken in providing integrated public transportation seeks to improve the flow and function of the city. Government produced reports provide additional quantitative data by indicating that, “In the same amount of space and time, 1 person can be transported in a car, 6 persons can be transported by bicycle and 4.5 persons by bus.”\(^\text{40}\) This report offers an exhaustive assessment of the systems currently in place in Copenhagen that will become increasingly pertinent to a global audience.

A study conducted by McGill University’s Charis Loong, Dea van Lierop, and Ahmed El-Geneidy analyzed commuting patterns of University students in Montreal in tandem with their level of energy to ultimately prove the positive link between quality of life and active transportation. The study found, similarly to Werner’s account, that “active forms of transportation leave people feeling energized.”\(^\text{41}\) Walking and cycling, the two most active forms of transportation, have the potential to not only alleviate the time and stress associated with more “western” forms of transportation—vehicular travel—but also improve punctuality and an overall outlook on monotonous daily routines. Research

\(^{40}\) Jensen and Morten, 11-12.

firmly proves that “people-powered commutes tend to be more punctual.”42 This concept is echoed in Danish society, as residents consistently cite convenience and efficiency as predominant reasons to bicycle. Although the authors of this study acknowledge that commutes take on different forms in different urban environments, their optimistic research and results prove the benefits of effective bicycle urbanism and the promotion of active transportation methods.

Rida Khatoun and Sherali Zeadally’s literature emphasizes the need for “smart city developers, architects, and designers” to “provide scalable, cost-effective solutions to address” global urbanization and the need to promote higher quality and standards of urban living.43 Their research complements State of Green, coined the “official green brand for Denmark,” which “fosters relations with international stakeholders interested in learning from the Danish experience.”44 This private partnership funded by the Danish Government allows citizens, scholars, and stakeholders of any background to engage in a dialogue about the future of successful urban development.

Residents and government officials in Copenhagen have historically shared a similar sentiment towards the importance of bicycle urbanism. Infrastructural developments aimed at promoting cycling as a routine method of transportation contributed to the City of Copenhagen’s goal of becoming the best cycling city in the world by 2015 (See Figure 4).

42 Small, 2016.
44 Jensen and Morten, 5.
The desire to become the best cycling city in the world contributes to the constant regard for urban livability and its influence on quality of life in Copenhagen. Urban theorists in the region avidly support active transportation, as it generates humanistic qualities in the urban environment. Slower methods of transportation force people to come down to the street level and experience other faces in their commute and daily life. Designing urban environments at the appropriate human scale allows inhabitants to build social relationships and experience intentional or spontaneous meetings with other community members, which ultimately increases trust in society and desirable levels of livability.45

Promoting urban design that favors a human scale directly contributes to the argument for active transportation. As Bettina Werner explains,

Humans are very small and very slow. For us to be able to have a flow of positive hormones and increase our well being in urban environments, we constantly need impressions. We need impressions roughly every four seconds. That doesn't happen when we’re in a car because we’re moving too fast. It also doesn’t happen if we don’t have a change of scenery."46

Research highlights the extremely difficult nature of designing urban environments that create the necessary positive stimuli for human satisfaction; however, proposed strategies for urban livability include decreasing the scale of housing while increasing the frequency of transitions between built features, facades, and greenery, for example. This method of planning favors the visual senses utilized during active

45 Bettina Werner, 2017.
46 Bettina Werner, 2017.
transportation in order to generate positive mental feelings in association with our urban environment.\(^47\)

Efficient and safe bicycle infrastructure embodies a key component to successful urban design and its ability to stimulate higher standards of urban livability. Cities like Copenhagen and Amsterdam are consistently recognized for their renowned bicycle infrastructure, which is often linked to their ranking as livable cities. Bicycle urbanism in the United States has historically been a design afterthought, whereas Copenhagen has a forward thinking mentality that prioritizes a bicycle culture. Moreover, “the US is doing a really poor job with promoting bicycle infrastructure. [US cities] are putting down bicycle infrastructure using the argument that cities are so spread out and saying ‘it’s too far to get around’ and blaming issues on sprawl.”\(^48\) Werner continues to express her view on the contentious issue of urban sprawl by saying, “Sprawl in and of itself is of course the most cost inefficient type of planning you can do.”\(^49\) Incentivizing residents to remain within close proximity to urban amenities prevents urban sprawl in Copenhagen. Additionally, constructing a widespread network of bicycle infrastructure generates connectivity and mitigates the detrimental qualities associated with sprawl.

In many cities around the world, temporal and spatial routines cause people to gravitate towards a certain method of transportation. Moreover, current structural features in the urban landscape—proximity to amenities, for example—encourage the use of a vehicle. To many, automobile usage symbolizes independence and the highest sense of convenience; however, the progressive infrastructure in Copenhagen directly

\(^{47}\) Bettina Werner, 2017.  
\(^{48}\) Bettina Werner, 2017.  
\(^{49}\) Bettina Werner, 2017.
contradicts this widely believed concept. Their planning initiatives have been successful in diminishing the convenience of car ownership and instead placing walkability and cycling at an advantage. According to Werner, “34% of people bike to work at least ten miles a day; one way” whereas in Portland, the top bicycle city in the US, you have only “7% of people biking every day and it is most likely not for ten miles.”\(^{50}\) In order to address this statistical pitfall in cities, the implementation of bicycle infrastructure in tandem with the promotion of a bicycle culture must rise to the forefront of planning discussions.

According to urban scholar James Faulconbridge, public policy aimed at addressing land use organization should seek to generate an urban landscape with necessary amenities within close proximity to residents. Daily life, he indicates, transpires where people work, shop, go to school, and live. In turn, the ability to see other people and activities taking place from an individual’s home requires the careful assembly of urban functions. Being able to reach crucial services and events by foot enriches urban livability through the concentration of amenities.\(^{51}\) In order to incentivize methods of active transportation, urban initiatives must disincentivize the use of the car while adjusting the spatial organization of urban enclaves to complement active transportation methods. Governments ought to enforce basic public policies that support urban livability. For example, increasing the cost of car parking while simultaneously

\(^{50}\) Bettina Werner, 2017.
increasing the number of pedestrian-only streets will ultimately lessen the convenience of automobile usage.52

Urban design must complement temporal structures, or the times at which different daily practices happen. Additionally, urban design must address the time it takes to travel between various sites of routine activity. The time spaces of everyday life have to be considered when designing lower carbon transportation methods. By re-conceptualizing land usage patterns, urban design can address the current shortcomings of urban spatial organization and its influence on chosen transportation methods.53

Urban initiatives in Copenhagen seek to address the causal link between transportation and economic and cultural vitality. Street-level projects are positioned to prevent automobile traffic by transforming inner city thoroughfares into pedestrian and cycling-only networks. Not only does this urban transformation promote active modes of transportation, but also it facilitates the economic vitality of boutiques, restaurants, markets, and various sites of social interaction, as illustrated in the following case studies.

53 Faulconbridge, 2016.
Case Study III: Nørrebro\^{	ext{a}}\text{gade}

Nørrebro\^{	ext{a}}\text{gade represents the busiest bicycle route in Europe and acts as a main thoroughfare through Copenhagen. With an average of 50,000 bikes traveling on the street per day, a great deal of government attention and funding has been allocated to improve this specific avenue.}\textsuperscript{54}

A traffic survey conducted on Nørrebro\^{	ext{a}}\text{gade assessed the various transportation methods being employed on a daily basis. The municipality of Copenhagen utilized the traffic survey to gain a better understanding of how people traveled through the main arteries of the city. The study indicated that twice as many people traveled by bike than by car. Therefore, “the main argument from the city’s point of view was that this street was socially unbalanced. It did not fit reality.\textsuperscript{55}} As a result of the study findings, the government sought to rectify the structure of Nørrebro\^{	ext{a}}\text{gade in order to more efficiently accommodate the demand for bicycle urbanism. The government sought to balance the street with the intention of strengthening urban livability as a result.

By doubling the width of the bicycle lanes on Nørrebro\^{	ext{a}}\text{gade, the City of Copenhagen successfully improved ecological, social, and economic sustainability. Statistics show that “people on bikes spent an average of 24% more money in shops” given their flexible mobility.\textsuperscript{56} Additionally, in the case of Nørrebro\^{	ext{a}}\text{gade, cultural life on the sidewalks was vastly improved, as the flow of slow human traffic increased. By allocating taxpayer dollars towards an urban project that positively influenced citizen’s

\textsuperscript{54} Bianca Hermansen, UW Washington (2014).
\textsuperscript{55} Bianca Hermansen, UW Washington (2014).
\textsuperscript{56} Bianca Hermansen, UW Washington (2014).
daily lives, the City of Copenhagen successfully stimulated a higher quality of life for the people that depend on a well-functioning urban landscape on a daily basis.

As research on bicycle urbanism suggests, prioritizing a dominant form of traffic that occurs at a slower speed contributes to safe and livable environments. More specifically, “if the speed of movement is reduced from 60 to 6 kilometers per hour (35 to 3.5 mph), the number of people on the streets will appear to be ten times greater, because each person will be within visual range ten times longer.”\(^{57}\) The elongation of commutes as a result of slower methods of transportation inevitably leads to the presence of more humans on city streets. This quality ultimately encourages vibrant life to occur on the streets through human interaction, cultural expression, and spatial awareness, all of which contribute to urban livability.

The improvement of bicycle infrastructure on Nørrebrogade directly portrays the ability for slower methods of active transportation to elicit lively streets. According to Gehl’s research, “if people are tempted to remain in the public spaces for a long time, a few people and a few events can grow to a considerable activity level.”\(^{58}\) The widening of Nørrebrogade’s bicycle lanes simultaneously promotes a vibrant sidewalk culture as a result of slowed, yet flexible, transportation.

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\(^{57}\) Gehl, 77.

\(^{58}\) Gehl, 79.
Case Study IV: The Bicycle Snake “Cykelslangen”

Cykelslangen, a 235-metre-long pedestrian and cycle bridge, links the Fisketorvet Shopping Centre to the Bryggebro Bridge in Copenhagen’s city center. The bridge is 4 meters wide and 190 meters long, with a 90-metre-long ramp (See Figure 5). 59

The completion of Copenhagen’s new cycle bridge, Cykelslangen—also known as The Bicycle Snake—provides “Copenhagen’s cyclists with a fun ride along the harbor…as part of Copenhagen’s strategy to be one of the best cycling cities in the world, the new cycle bridge will guarantee cyclists improved accessibility and connection to the city.” 60 With a focus on accessibility and connectivity, the City of Copenhagen addresses the crucial link between residents and amenities and the importance of proximity in dense urban spaces. Furthermore, the bridge connects two regions of the city that were originally separated by waterways. The existing geographic landscape presented a challenge for many residents and inhibited the accessibility and fluidity of convenient bicycle transportation.

Not only did this project intend to solve the fragmented organization of the riverfront, but also it aimed to address the presumed gender and age discrimination associated with the existing infrastructure. Before the Bicycle Snake bridge was introduced, cyclists were forced to push their bike up and down the stairs to reconnect with the main thoroughfare. Residents and planners took notice of the way this activity played out with respect to gender and age, as many females, children, and elderly were

60 Frandsen, 2015.
less inclined to push their bikes at this location. For that reason, the City of Copenhagen sought to implement a form of infrastructure that would eliminate any element of discrimination.

Werner’s discussion of this costly infrastructure insinuates that few cities around the globe would implement such a financially risky investment in order to appease cyclists; however, the City of Copenhagen’s progressive sense of optimism in constructing Cykelslangen ultimately presents an admirable mindset to adapt in the process of achieving urban livability.61

Many cities around the globe neither have the financial resources nor the inclination to support a mega-project of this nature; however, I utilize the case of Cykelslangen to illustrate the various forms strategies for urban livability can take. Whether this case study educates cities on the power of innovative transportation infrastructure or the importance of sociological awareness, the depiction of Cykelslangen ultimately provides scalable tactics to engage a global audience.

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61 Bettina Werner, 2017.
The study of architecture and design relates directly to Jan Gehl’s widespread prominence as an urban architect and design consultant. Gehl’s methods focus specifically on the “intersection of built form and public life,” or in other words, the relationship between city spaces and the humans inhabiting them. The urban built environment is entirely a product of design ranging from the infrastructural qualities to the streets, public spaces, and buildings. How city spaces are designed is a direct result of human decisions and urban stakeholders have the ability to devise efficient and gratifying urban form.

Danish design is widely known for its unique innovation and adventurous aesthetic qualities. The nation utilizes its architectural reputation to further promote high standards of living in its urban core. Their approach to architecture is as follows,

Collaboration between knowledge institutions, architects, engineers and private and public partners has led to creative solutions. Solutions that improve the quality of life for the people who live and work in the buildings as well as the overall impression of the city with innovative renovation projects and new world class architecture.

Danish society believes strongly in the ability to improve quality of life through architecture and sustainable design. Both efficient new construction and modern retrofitting techniques preserve the history of the city and encourage life to occur in and around the built environment while simultaneously improving microclimates and prioritizing human and environmental livability.

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62 Birgitte Svarre, “Senses, Scale, and 12 Quality Criteria” (presentation, Copenhagen, Denmark, 2015).
63 Bianca Hermansen, UW Washington (2014).
64 Jensen and Morten, 39.
Danish architecture and design complements humanistic ideologies and the importance of designing for a human scale. By planning a city with low but dense buildings with a focus on foot traffic and proximity of amenities, the city becomes a livable city. To emphasize the humanization of urban development, “The design of buildings in relation to relevant human dimensions is crucial—how much can be reached on foot from a given point, and how much it is possible to see and experience” determines a livable space.\(^{65}\) This notion promotes the aforementioned concept of proximity and the value gained from convenient spatial organization. Architecture and design in urban spaces, as indicated in Copenhagen’s built environment, has the potential to create a “living city,” one in which quality of life is stimulated through well-functioning urban arenas.

Quantitative data sheds a positive light on the implementation of strategies for urban livability. Statistical surveys conducted in Copenhagen prove that livable design tactics markedly improve urban vibrancy by creating venues for social activities. By understanding and therefore prioritizing the human relationship with urban spaces, designers and planners have improved the cultural climate in Copenhagen. This phenomenon is made evident by a rise in festivals, carnivals, and tourism. Gehl adds, “Even more important, everyday activities have grown in scope and number.”\(^{66}\) In Copenhagen, surveys indicate that social and recreational activities have quadrupled, which illustrates the remarkable resurgence of vibrant street life as a result of perceptive urban design.

\(^{65}\) Gehl, 83.
\(^{66}\) Gehl, 51.
The design and construction of public streets and amenities is closely linked to the sociological perspective of Copenhagen’s residents and organizations. Danish scholar Gunnar Lind Haase Svendsen discusses the role of socio-spatial planning in the context of design and architecture. Physical spaces act as venues for social interaction and can serve as a tool for social betterment if designed appropriately. For instance, community centers, public squares, informal auditoriums, and other “socially” designed spaces place an importance on social capital and mobility. Designing social gathering spaces enables intergroup interaction and encourages a virtuous cycle of bridging social capital.

This concept further emphasizes the need for mixed-use and multi-functional spaces, which demand physical and social cohesion in an effort to bridge social capital. Multi-functional spaces in Copenhagen intend to bring people together under the impression that “if people do not spend time together, they don’t learn from each other,” which results in a lack of cooperation and trust. Without cooperation and trust, urban livability proves unattainable. This perspective on social capital shows the under analyzed, nevertheless crucial, connection between the built environment and societal functionality.

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68 Lind Haase Svendsen, 67.
Case Study V: Odense Public Streets

An urban renewal project in Odense, the third-largest city in Denmark, exhibits the ability for urban design to transform the built environment to improve quality of life on the streets. Realdania provides funding for a comprehensive urban development project that “will transform a four-lane road dividing the city in two into a new urban space with housing, shops, and businesses.”69 The project seeks to synthesize public transportation, pedestrianism, and bicycle infrastructure to increase human traffic and life on the streets.70

The improvement of public streets all over the nation of Denmark illustrates the widespread desire to promote urban livability by increasing accessibility, convenience, and the practicality of the built environment. In turn, this user-driven regeneration provides a venue for social interaction and ultimately a space for human connections to develop. The prioritization of human satisfaction in urban spaces must guide urban design efforts, as it acts as a primary tool for generating higher qualities of life.

As the project in Odense portrays, implementing simple physical alterations to urban landscapes has the ability to increase life on the streets. For example, the act of converting a vehicle street to a pedestrian-only promenade leads to a breadth of positive outcomes ranging from economic vitality in shops and cafes to the informal interaction of urban inhabitants. This transformation showcases the ability for urban design to reclaim the streets from vehicular traffic in order to successfully encourage a pedestrian and bicycle culture. This furthermore promotes the concept of a living city,

70 “From Street to City,” 2017.
“one in which spaces inside buildings are supplemented with usable outdoor areas, and where public spaces have a much better chance of working well.” 71 This project prioritizes a mix of life where homes, culture, businesses, and shopping venues successfully co-exist to create a diverse, yet highly livable urban environment.

71 Gehl, 32.
Case Study VI: Potato Rows

The concept of designing a “village street” in urban residential areas promotes the humanization and livability of streets. Potato Rows, a conglomeration of residential streets in the center of Copenhagen, physically embodies Gehl’s village street theory: “two unbroken rows of houses oriented toward the street [with] a clear and consistent assembly of activities.” Urban design that employs the village street concept prioritizes proximity and semi-private communities, which ultimately enhances urban livability.

This residential enclave illustrates the ability for local actors to implement strategies for urban livability on a neighborhood scale. Although the streets in this neighborhood do not outwardly prohibit vehicle traffic, the residents collectively support various design tactics that contribute to a safe and livable community. Rowhouse neighborhoods differ from large-scale housing complexes in terms of resident density; however, the spatial organization of neighborhoods like Potato Rows elicits critical opportunities for adaptation. Despite having small front yards and fewer inhabitants than large-scale apartment developments, Potato Rows’ village street layout fosters a vibrant communal atmosphere through shared public space and the encouragement of elongated outdoor stays (See Figures 6 and 7). By electing to improve and maintain shared public spaces, residents of Potato Rows act upon shared ideologies and in turn participate in significantly higher levels of outdoor activities with neighbors and urban peers.

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72 Gehl, 83.
73 Gehl, 79.
As Figure 8 and 9 indicate (See Appendix), the case of Potato Rows offers an optimistic portrayal of ground-level urban efforts. Through user-driven urban design, the residents promote the notion of eyes on the street and a higher level of safety through abundant activity in communal spaces. By placing picnic tables and family-oriented resources in the street, vehicle traffic is inevitably prevented while pedestrianization is encouraged. This design strategy ultimately promotes a sense communal ownership and showcases the value in informal, yet constant resident surveillance.

In addition to the function of the streetscape on Potato Rows, the homes embody a semi-private, semi-public urban environment (See Figure 10) that stimulates neighborhood familiarity and livability, as residents share a sense of ownership. The presence of communal infrastructure (i.e. hopscotch, tables, planters, and toys) facilitates social interactions and contributes to the overall health and well being of not only neighborhood residents, but also the function of the street itself.

Potato Rows represents a useful case study to influence global urban development efforts as cities continue to grow and adapt to rapid population growth. In sum,

The connection demonstrated between street life, the number of people and events, and the time spent outdoors provides one of the most crucial keys to the way in which conditions for life between buildings can be improved in existing and new residential areas—namely by improving conditions for outdoor stays.\textsuperscript{74}

Although the development of rowhouses does not efficiently accommodate density, the ideologies and physical qualities promoted at Potato Rows indicate pertinent development strategies that must be employed on every scale. Many lessons

\textsuperscript{74} Gehl, 79.
can be gleamed from the urban form of “village streets,” and developers worldwide should seek to prioritize semi-private spaces that encourage outdoor stays and strengthen collective identities.
Case Study VII: Islands Brygge

On the municipal level, Islands Brygge represents a waterfront redevelopment site that prioritizes the preservation of history while planning for the future. The municipal government plays a prominent role in implementing widespread urban change that encourages the vitality of livable spaces. Islands Brygge, arguably the most livable space in Copenhagen, was transformed in 2003 into a multi-functional recreation area that synthesizes waterfront transportation, business development, and opportunities for social engagement.

The revitalization of Islands Brygge demonstrates the ability for design to stimulate urban vitality. This regeneration effort emphasizes the importance of thoroughly assessing urban environments and the corresponding needs of residents in order to develop the most desirable venues for urban life. As Gehl describes, “Whether the public environment invites or repels is, among other things, a question of how the public environment is placed in relation to the private, and how the border zone between two areas is designed.”75 Despite the differing urban context of Islands Brygge, the project parallels the semi-private, semi-public framework employed in residential neighborhoods like Potato Rows. Enforcing flexible boundaries contributes to urban connectivity and accessibility that further promotes life on the streets through visual invitation.76

Islands Brygge’s transitive physical form embodies the adaptable qualities of a livable space by giving residents and visitors “the ability to claim it as their own, to feel

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75 Gehl, 113.
76 Gehl, 115.
some type of ownership there.” The designed infrastructure does not dictate the intended use of the space and instead stimulates a multitude of different actions that ultimately contribute to an eclectic and adaptable urban arena that permeates in the surrounding neighborhood. As Gehl states,

> It is not enough merely to create spaces that enable people to come and go. Favorable conditions for moving about in and lingering in the spaces must also exist, as well as those for participating in a wide range of social and recreational activities.  

Islands Brygge’s success can largely be attributed to its balance between flexible and structured design. The physical layout does not dictate the intended use of space; however, design elements on land and in the harbor encourage imaginative recreational uses and the personalization of shared public space (See Figure 11).

The redevelopment of Islands Brygge stimulates urban livability through strategic physical design strategies that promote contact over isolation; a theory generated by Jan Gehl in his analysis of life between buildings. Beneficial human contact is facilitated in built environments that combine the following elements: no walls, short distances, low speeds, one level, and orientation toward others (See Figure 12). Although Islands Brygge’s physical qualities exceed the basic principles proposed by Gehl, the redevelopment meets the threshold for necessary contact generated in public spaces. Creating such a venue for residents to experience ultimately contributes to the ability for individuals to feel ownership and acceptance in a shared urban environment.

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78 Gehl, 129.  
79 Gehl, 72.
Complexity of the Issue

In order to present the utmost transparent argument of Copenhagen as a model city for urban development strategies, it is imperative to discuss the unique and seemingly unattainable factors that contribute to its ability to achieve the highest standards of living.

In an effort to contextualize Denmark’s global status, I employ statistical points of reference to evaluate the economic and social position of their society. Quantitative examinations of Denmark consistently reference their tax rate, Gini Index rank, and welfare expenditures as a result of their unique socialist system.

Despite Denmark’s small physical size, the nation is often defined by its significant tax rate. Danes “pay the most for the goods in their shops (42 percent more than the European average), the most for their cars, the most for their meals in restaurants (up to 150 percent more), and it is all because of their taxes.” More specifically, the Danish income tax ranges from 42 percent upward to 60 percent. In addition, the government taxes 180 percent on top of the purchase price of a private vehicle, which supports the aforementioned discussion of methods for discouraging car consumption in order to promote pedestrianism and bicycle urbanism. Subsequently, a 25 percent VAT, “value added tax,” is added to virtually every purchase. The sum of these taxes, in conjunction with tax requirements not mentioned, contributes to a total taxpayer rate of roughly 58 to 72 percent. Despite the astronomical tax rates ruling Danish society, residents have yet to demand tax reductions, as they seem to

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80 Booth, 56.
81 Booth, 57.
82 Booth, 57.
comprehend the collective sacrifice necessary to support their robust welfare system and socialist ideologies. To this point,

Their [the Danes] willingness to hand over great chunks of their earnings for the good of society would appear to imply two forces at work. The first is that the Danes trust that their government will spend their money wisely...The second explanation is that the Danes are tremendously publicly spirited people.\(^8^3\)

Moreover, the Gini Coefficient is commonly referenced in discussions of equality and economic vitality. The Gini Coefficient represents “a statistical method for analyzing the distribution of wealth in a nation.”\(^8^4\) This quantitative methodology contributes to an understanding of happiness and quality of life on a global scale and complements the global contextualization of Denmark.

Denmark consistently ranks at the low end of the Gini Index, which indicates its high levels of equality. Denmark ranks similarly to the other Nordic countries of Sweden, Norway, Finland, and Iceland.\(^8^5\) This achievement correlates to the widespread livability of Denmark, a nation categorized as a “low-poverty, low-inequality, high-income, high-tax, high-welfare, high-innovation, high-employment country.”\(^8^6\) The egalitarian nature of Denmark is a result of a robust socialist welfare system. As shown in Figure 13, the Danes allocate higher levels of taxpayer funding to welfare systems that support the needs of all citizens.

The socialist system in Denmark reflects the widespread desire for collective betterment. Although Denmark is entirely unique in its tax structure, the principles of urban livability explored throughout my research are still achievable on various levels

\(^8^3\) Booth, 60.
\(^8^4\) Booth, 31.
\(^8^5\) Andy Kiersz, “Here are the Most Unequal Countries in the World,” Business Insider, November 8, 2014.
\(^8^6\) Matt Bruenig, “United State vs. Denmark, in 17 Charts,” Demos, October 20, 2015.
and remain worthy of discussion on a global scale. Denmark’s government revenue through taxes is the highest in the world, which paired with its socialist roots, presumably contributes to its ability to achieve the highest standards of living. Many could argue that Denmark’s impressive wealth generated through exorbitant tax rates solely allows for the realization of widespread urban regeneration and in turn livability; however, I challenge this framework and persistently argue for the dissemination of a new urban discourse as a result of this study.

Although Copenhagen, Denmark represents a small sample in the global scheme of urban investigation, understanding this region’s approach to urban livability contributes to the creation of a new discourse in urban planning. As Martin Joseph Barry emphasizes, European regions are “ripe with new ideas and new perspectives on bringing contemporary urban discourse and participatory design” to the forefront of urban initiatives. Barry’s claim complements the research and analyses previously discussed and the illustration of Copenhagen as a progressive and forward-thinking region offering powerful strategies for achieving urban livability.

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Conclusion

Conclusion Part I

Implementing strategies for urban livability undoubtedly generates an ideal quality of life for urban residents in our constantly growing and ever-changing cities. Facilitating government involvement as well as participatory planning efforts in the process of urban revitalization will inherently encourage a new urban discourse to evolve. The urban theories currently in place favor the observation and understanding of North American cities; however, “no single hegemonic theory of cities is sufficient for all modern metropolises,” especially in the case of European and Asian cities. Creating a new interdisciplinary discourse for urban theory that rejects the limitations of the urban “schools” of thought will assist in the understanding of a broader urban landscape in the midst of globalization.

The strategies for urban livability observed in Copenhagen indicate the importance of humanizing the city and creating a metropolis for people where vibrant life takes place in between the buildings. Urban regeneration efforts must prioritize bicycle urbanism and the pedestrianization of public streets. In addition, public policy efforts must seek to improve disadvantaged neighborhoods and promote a collective urban identity. Urban design has the ability to mitigate the detrimental consequences of rapid urbanization if approached in a holistic and thoughtful way. Using Copenhagen as a model for urban design will encourage the rise of a progressive, user-driven urban framework that can ultimately benefit urban communities worldwide.

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As scholars begin to engage in a new discourse associated with urbanization, a breadth of new terminology arises to more accurately encapsulate the field. Instead of abiding by the traditional western schools of thought and Eurocentric points of view, Denmark’s approach highlighted throughout my research elicits a shifting urban framework. This new perspective, I argue, is centered on user-driven urbanism and tactical urbanism, which entails participatory planning practices, efficient and transparent government entities, analysis and implementation of integrated transportation infrastructure, and the realization of user-friendly public spaces through design and architecture. A synthesis of the aforementioned categories contributes to the “appropriation of space to meet people’s needs,” which represents the basic threshold for achieving urban livability.\(^{90}\)

As Barry proclaims, “a dramatically new approach is required if we are to bring a human-centered perspective to designing livable cities around the world in the coming century.”\(^{91}\) A new model for city making must prioritize flexible urban environments achieved through bottom-up urban initiatives.\(^{92}\) Copenhagen’s tactic of setting both physical and ideological goals facilitates a holistic approach to urban planning. Setting out to become the world’s most bicycle friendly city, for example, encouraged a physical transformation throughout the urban environment. Moreover, proclaiming the desire to become a “metropolis for people” represents an ideological goal achieved through user-driven and participatory planning efforts.

\(^{90}\) Bela, 163.
\(^{91}\) Barry, 224.
\(^{92}\) Bela, 161.
Although not every strategy for achieving urban livability will seamlessly transfer to another urban context, developing a new forum for discussing and experimenting with urban revitalization leads to progress and growth. As Jan Gehl indicates,

Careful work with the livability of cities and residential areas continues to be an important issue. The growing intensity, with which high quality public spaces are currently used around the world, as well as the increased general interest in the quality of cities and their public spaces, emphasizes this point.93

Furthermore, Michael Sorkin and Michael Kimmelman demand we “refocus our attention on civic and public sites,” as “people come to cities to make their lives better. ‘They want to eat, meet, and make love so we should focus on places where those connections happen—in the streets and squares.”94 Sorkin and Kimmelman ultimately illustrate the intrinsic link between the built environment and its inhabitants and therefore the value in humanizing urban landscapes.

To the point of Sorkin and Kimmelman, “attention has turned to urban landscapes as the savior of livability in the modern city,” as the cases in Copenhagen portray.95 Urbanists have prioritized the design and improvement of spaces in between buildings, as these shared venues foster a collective identity and urban livability through “serendipity, connection, and innovation.”96 We must utilize public policy initiatives, integrated transportation improvements, and thoughtful architecture and design as best practices for achieving livability in order to “take good care of the people and the precious life between buildings.”97

93 Gehl, 7.
94 Barry, 226.
95 Barry, 226.
96 Barry, 226.
97 Gehl, 7.
Jan Gehl urges the importance of small scale planning, as “the battle for high quality in cities and building projects must be won at the very small scale.”

Establishing the foundation of urban planning at the local level facilitates an education and an awareness of the effects of user-driven and tactical urban planning. Evaluating urban planning through a broad lens contributes to the critical understanding of inseparably linked large, medium, and small-scale initiatives. In other words, “The problems involved in assembling or dispersing people and activities must be examined in a broad planning context. Decisions at the large scale, in city and regional planning; at the medium scale, in site planning; and at the small scale are inseparably linked.”

It is important to promote public interest and the notion of a collective identity on various scales in order to achieve widespread urban betterment.

Current generations are prompted to value self-interest, but I warn against this characteristic, as it will cause the decline of civic engagement at a pivotal moment in the history of urban development. Adopting strategies for urban livability will “give urban residents the freedom to build the city they inhabit” and the desire to promote and honor a collective urban identity. Initial steps towards achieving urban livability must occur on a local level through the development of a language that resonates with local communities. Efforts to achieve urban livability must engage civic interest to give rise to user-driven urban planning and tactical urbanism. As my research strives to suggest, striking a balance between politics, planning, and design ultimately offers the most

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98 Gehl, 84.
99 Gehl, 83.
100 Bela, 163.
effective solution for achieving urban livability and the higher standards of living associated with this phenomenon.
Conclusion Part II

If given an opportunity to extend my research on urban livability tactics, I would seek to address a variety of additional case studies that build upon the aforementioned discussion. In order to facilitate the rise of a progressive and interdisciplinary discourse, the continuation of urban research and analysis is more imperative than ever before. The material I presented seeks to educate readers about strategies for achieving urban livability; however, I acknowledge the need for an even deeper and more dynamic discussion of urban livability through a global lens.

Continued research efforts would allow me to diversify the case studies I present in an effort to illustrate realizable strategies for urban livability. Although I specifically focus on Copenhagen, with the exception of the Odense Public Streets project, the discussion of user-driven and tactical urban design invites a global audience and therefore must incorporate global research and analytics.

My urban research has confirmed the inevitable process of metropolitan expansion. The future of cities remains a contentious subject and requires a thorough analysis of topics I did not address such as economic policy, real estate development trends, gentrification, and climate mitigation strategies among a multitude of other debates. I acknowledge the critical role of these topics in an urban context and hope to strengthen my expertise in the future.

More specifically, I hope to one day focus my research on groundbreaking case studies that illustrate a global movement towards smart urbanism. By analyzing carbon
neutral cities, pocket park systems, and green architecture, I would seek to understand an apparent link between human happiness and environmental sustainability.

Cities continue to grow in size, density, and function, which ought to inspire a new generation of urban research and the normalization of a progressive urban discourse. With the ideological guidance of scholars like Jan Gehl, Jane Jacobs, and William Whyte, to name a few, I am confident that future research will support the development of a humane metropolis. We must never lose sight of the critical relationship between cities and the very people that inhabit them.
Appendix

Figure 1. A theoretical reminder framed in Gehl People’s office in Copenhagen.\textsuperscript{101}

THE SUSTAINABLE BENEFITS

ECONOMIC
- Cycling provides a low-cost form of transport.
- Reduced journey times and traffic congestion increase economic productivity.
- Healthier citizens reduce health care costs at an estimated rate of €0.77 per km cycled.

ENVIRONMENTAL
- Reduced noise.
- Reduced air pollution.
- Reduced CO\textsubscript{2} emissions.

SOCIAL
- 88% of cyclist do it because it is the fastest or most convenient way of getting to work.
- Creation of jobs.
- Improved city life.

Figure 2. Mapping out the benefits of bicycle urbanism from “Solutions for Sustainable Cities.”\textsuperscript{102}

Figure 3. Respondents to a study who felt energized arriving to work or school.\textsuperscript{103}

\textsuperscript{101} Austen Peterson, October 15, 2015.
\textsuperscript{102} Jensen and Morten, 9.
Figure 4. Copenhagen becomes the world's most bike-friendly city in 2015.\textsuperscript{104}

Figure 5. Cykelslangen: a mega-project for bicycle urbanism in Copenhagen.\textsuperscript{105}


\textsuperscript{105} Frandsen, 2015.
Figures 6 & 7. Jan Gehl’s research methods implemented in field observation at Potato Rows.  


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107 Austen Peterson, September 6, 2015.
Figure 10. An illustration of the semi-private, semi-public design concept by Jan Gehl.\textsuperscript{108}

Figure 11. Waterfront infrastructure at Islands Brygge being utilized in a variety of manners.\textsuperscript{109}

<table>
<thead>
<tr>
<th>isolation</th>
<th>contact</th>
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</thead>
<tbody>
<tr>
<td>walls</td>
<td>no walls</td>
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<tr>
<td>long distances</td>
<td>short distances</td>
</tr>
<tr>
<td>high speeds</td>
<td>low speeds</td>
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<tr>
<td>multiple levels</td>
<td>one level</td>
</tr>
<tr>
<td>orientation away from others</td>
<td>orientation toward others</td>
</tr>
</tbody>
</table>

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\textsuperscript{108} Gehl, 59.  \textsuperscript{109} Austen Peterson, August 19, 2015.  \textsuperscript{110} Gehl, 72.
Figure 13. Denmark’s Welfare Expenditures compared to the United States.\textsuperscript{111}

\textsuperscript{111} Matt Bruenig, “United State vs. Denmark, in 17 Charts,” \textit{Demos}, October 20, 2015.
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