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Copenhagenization: The Spread of the Copenhagen Cycling Gospel A Case Study in Urban Policy Mobility

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Class of 2020

In Partial Fulfilment of Requirements

for the Degree of Bachelor of Arts

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Acknowledgments

I am extremely grateful for the four years that I've spent at Trinity College. These have been four transformative and enlightening years. I am thankful to have attended an institution where the faculty genuinely care for my academic and personal development.

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It seems as if it is impossible to talk about urban cycling without mentioning

Copenhagen. This city has become synonymous with biking culture, and is one of the first things

people think about in relation to the Danish capital. While living and studying for a semester in

Copenhagen, I was able to experience and become ingrained in the cycling culture of the city. I

witnessed the multitude of benefits of diverting attention from cars and investing in alternative,

more equitable modes of transportation, like walking and cycling. Upon my return to the United

States, I experienced profound chagrin at the state of cycling in US cities, which can not begin to

compete with Copenhagen in terms of cycling.

It is not only I that took note, but city leaders and activists around the country are also paying attention, comparing the deficiency of cycling infrastructure in the United States to the prioritization of cycling in Copenhagen. There is no denying that Copenhagen exerts influence in the realm of cycling on cities around the globe, and municipalities worldwide look to it as an example. In their book about bicycle and car politics in Copenhagen, Jason Henderson and Natalie Marie Gulsrud write, "Copenhagen is a model of green mobility. Copenhagen appears in global scholarship on sustainable mobility, dozens of foreign delegations flock to Copenhagen for study tours every year, and cycling is used in promoting local economic development and tourism" ¹¹

¹ Henderson, Jason, and Natalie Marie Gulsrud. *Street Fights in Copenhagen: Bicycle and Car Politics in a Green Mobility City.* Routledge, 2019, pp. 11.

After decades of car-centric policies, US cities have recently been making more of an effort to invest in cycling infrastructure and encourage higher cycling rates. In the process, they are looking towards global leaders in cycling policy as models, specifically Copenhagen.

Through different processes of idea exchange like policy tourism and private consultancy firms, American cities are increasingly employing techniques used in Copenhagen to implement their own cycling policies. They turn to big names in the Danish cycling world for their expertise:

Copenhagenize, Gehl Cities for People, Cycling Embassy of Denmark.

Thus, my research question is: what is the role that Danish organizations have played in shaping cycling policy and design in the United States? To what extent have they been successful in making cycling in the US more like Copenhagen? Is their specific mission to make cities more like Copenhagen? By navigating these discussions, I hope to understand the forces that are shaping cycling in the US cities, and the potential future of what cycling can become. In addition, this will also help define the role that Copenhagen plays within these networks of policy mobility and the scope of its influence. I chose to focus on Danish non-governmental organizations because they are perhaps the most visible method of policy migration from Copenhagen to other cities, able to work outside of bureaucratic constraints.

This investigation is centered within a multitude of other discussions. One is the urban policy mobility framework, through which policy is diffused from one city to another. This framework investigates how policies travel globally: how municipalities adopt and implement ideas originated in other cities, and by which methods these policies are exchanged. Essentially it is the study of the globalization of urban policy.

This inquiry will also overlap with the fields of urban sustainability and urban transportation. Cycling is at the very intersection of these two areas, due to its nature as a zero-emissions form of transportation. Copenhagen is a global leader in sustainability, famously announcing that it aimed to be carbon-neutral by 2025.² With its high rate of cycling, it already has a very low rate of emissions compared to cities of similar size. Thus, city leaders are looking to it in order to meet their own sustainability goals; for many, increasing rates of cycling are key components of their plans. Global governance structures come into play here, as Copenhagen has been a significant player in the C40 Cities Network, and this has been a forum of transmitting its sustainability initiatives to other municipalities. Sustainability and decreasing congestion are priorities for many American cities, and as guidance they often look to Copenhagen and hire consultants to implement some of the same strategies in their cities.

I. Background

Copenhagen is the capital and the largest city of Denmark, and as such is the country's economic, cultural, and political center. It has a population of about 633,000 in the municipality. Situated on the east coast of the island of Zealand, it enjoys easy access to Sweden via the Øresund Bridge to Malmö. Its residents enjoy a high quality of life, with high average incomes and high life expectancies.

²City of Copenhagen, CPH 2025 Climate Plan. Copenhagen, Technical and Environmental Administration, 2012.

Denmark regularly ranks near the top of indexes such as the UN's World Happiness Report, the EIU's Global Liveability Index, and the Social Progress Index.³⁴⁵ For context, the United States does not rank in the Top 20 for any of these lists.

Some of its successes no doubt are tied to its reputation as the leading bicycle city in the world. Copenhagen was awarded the title of European Green Capital in 2014, singled out due to its good practices in urban planning and design.⁶ The city aims to become the world's first carbon-neutral city by 2025, achieved in concert with its ambitions to become the most cycling-friendly city in the world. Copenhagen is famously devoted to increasing its share of cyclists to 50%.⁷ Currently, the proportion of trips taken by bicycle to places of work or education is 41%, some of the highest rates of cycling in the world.⁸ This is much higher than in any American city - Portland, OR, has the highest cycling rates among large American cities at 6.3%. The much-smaller city of Davis, CA, has the highest cycling modal share in all of the United States at 23.2%, but this is an outlier, as the next highest city on the list, Berkley, CA has a cycling rate of only 9.7%.⁹ Copenhagen's exceptional cycling rate is achieved through investing in world-class cycling infrastructure, prioritizing cyclist safety, discouraging car use, and other such practices by the municipality.

https://bikeleague.org/sites/default/files/Where We Ride 2014 data web.pdf#12

[.]

³ Helliwell, John F., et al. "Chapter Two: Social Environments for World Happiness." *World Happiness Report*, Gallup World Poll, 20 Mar. 2020, worldhappiness.report/ed/2020/social-environments-for-world-happiness/.

⁴ "The Global Liveability Index 2019." *The Economist Intelligence Unit*, The Economist, www.eiu.com/public/topical report.aspx?campaignid=liveability2019.

⁵ "2019 Social Progress Index." Social Progress Imperative, www.socialprogress.org/index/global.

⁶ "2014 – Copenhagen." *European Green Capital 2014 Copenhagen Comments*, European Commission, https://ec.europa.eu/environment/europeangreencapital/winning-cities/2014-copenhagen/.

⁷ City of Copenhagen. 2017. Copenhagen City of Cyclists: Facts and Figures 2017. Copenhagen, Technical and Environmental Administration, pp. 3.

⁸ Ibid, 3.

⁹ McLeod, Ken and Elizabeth Murphy. "Where We Ride: Analysis of Bicycle Commuting in US Cities." *The League of American Bicyclists*, 2014.

For these reasons, Copenhagen has been studied extensively in the urban transportation and urban sustainability realms by geographers and urbanists. Many of these studies look at transportation and sustainability as intertwined, and mention Copenhagen as a good model of these practices. Timothy Beatley has written extensively about urban sustainability, frequently citing Copenhagen as an example of a Green City. 10 Copenhagen has been written about in terms of its metropolitan planning approach for land-use and transit-oriented development in the form of the finger plan (a land-use strategy which concentrates suburban development along commuter rail lines, leaving the land in-between preserved for agriculture and recreation) as a model for decreasing commuter emissions and preserving green space. 11 Other studies emphasize the economic and health benefits of promoting cycling policies and use statistics from Copenhagen as evidence. 12 Another approach is to measure the safety of bicycle infrastructure through the demographics of cyclists within a given city. In Copenhagen, the proportion of women and children that cycle is very high, demonstrating that the facilities for cycling are very safe, and that these practices could be used to develop safe cycling practices in other cities.¹³ Much attention has been given to Copenhagen for its ambitious Climate Plan, and its goal to be carbon neutral by 2025. In this plan, increasing cycling is essential to decrease emissions. The

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¹⁰ Beatley, Timothy. *Green Urbanism: Learning from European Cities*. Island Press, 2000.

¹¹Brüel, Michaela. "Copenhagen, Denmark: Green City amid the Finger Metropolis." *Green Cities of Europe*. Ed. by Timothy Beatley. Island Press, 2012, pp. 83-108.

¹² *Cycling Futures*, edited by Jennifer Bonham and Marilyn Johnson, University of Adelaide Press, 2015, pp. 107–130.

¹³ Pucher, John, and Ralph Bueler. "Walking and Cycling for Healthy Cities." *Built Environment (1978-)*, vol. 36, no. 4, 2010, pp. 391–414.

IPCC states the importance of switching to low-carbon modes of transportation, and mentions

Copenhagen as a model of deliberate urban-design policies that encourage cycling and walking.¹⁴

These studies emphasize the importance of density, intentional and sustainable land-use policies, and well-maintained bicycle infrastructure in promoting cycling as a sustainable transportation solution. They point to Copenhagen as an example of all of these best practices, and as a model for other cities to emulate in aspirations for sustainable mobility. It is important to study Copenhagen's cycling policies and strategies to understand how these components have been implemented in other cities, and to understand on an international scale how cities are looking to shift their modal strategies.

Because of its progressiveness in urban sustainability and mobility, Copenhagen is a hub for practitioners, such as architects, engineers, and urban planners, drawn to these ideals. Within the city, there are many Danish urban design, planning, and architecture firms that work domestically and internationally, synthesizing Copenhagen ideals into their own approaches.

Many of these practitioners have written their own studies and books about Copenhagen in terms of mobility and urban space, most notably Jan Gehl and Mikael-Colville Andersen. In his book *Public Spaces, Public Life*, Gehl traced the improvements Copenhagen had made in the latter half of the twentieth century in its quality of life and the vibrancy of its streets. ¹⁵ Mikael-Colville Andersen, penned *Copenhagenize*, a guide to fostering cycling in cities with design and

¹⁴ Sims, Ralph, et al. "Transport." Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge and New York, Cambridge University Press, 620.

¹⁵ Gehl, Jahn and Lars Gemzoe. *Public Spaces, Public Life*. Danish Architectural Press & The Royal Danish Academy of Fine Arts, School of Architecture Publishers, 1991.

infrastructure; this is also the name of his cycling consulting company, which will be discussed further in this thesis.

There is a large body of work on bicycle urbanism. Continuing the same themes, bicycling is discussed as a solution to climate change. This has been approached from a global perspective, in official governance reports such as the IPCC, and from an academic perspective looking into case studies of cycling in specific cities and countries. Often, accounts of cycling are based in Europe, as that is where most of the world's top cycling cities are located. These accounts often provide policy proposals based on European experiences for other cities. Much of the discussion is framed as a need for a paradigm shift away from cars and automobile-centric planning.

This discussion is echoed in works specific to urban cycling in American cities.

Academic works on cycling in the United States ponder the car-oriented culture and planning legacies, and the difficulties that cycling faces in confronting this current dynamic. ¹⁷ In *One Less Car*, Zack Furness discusses the dominant ideologies that have shaped transportation in the United States until now, such as free market proponents and multinational corporations, and asserts that cycling is fundamentally political in that it eschews and contests this 'system of automobility,' and investigates cyclists as a marginalized group that is organizing to challenge this system. Melody Hoffan agrees that cycling is fundamentally political, but critiques current cycling organizations and planning approaches in the United States for overlooking minority and

¹⁶ Bruntlett, Melissa and Chris Bruntlett. *Building the Cycling City The Dutch Blueprint for Urban Vitality*. Island Press, 2018.

¹⁷ Furness, Zack. One Less Car: Bicycling and the Politics of Automobility. Temple University Publishing, 2010.

marginalized populations. ¹⁸ Practicing professionals within the United States recognize the defects of the current autocentric planning model and are attempting to challenge the current sprawling land-use models that perpetuate car dependency. The New Urbanism movement aims to move back towards a more traditional model of urban development, a pattern which would encourage more people to walk or bike. Famous American architect Peter Calthorpe, in his *Urbanism in the Age of Climate Change*, investigates potential futures of U.S. cities and their impacts on the environment and quality of life depending on which pattern of development they will follow. ¹⁹

There are more colloquial works aimed at the general public attempting to convince people of the multitude of benefits of cycling, such as Peter Walker's *How Cycling Can Save the World*. ²⁰ Walker discusses the many advantages of shifting to a cycling world, such as improvements in public health, equity, and economic strength, in simple and understandable terms. In *Bikenomics: How Cycling can Save the Economy*, Elly Blue argues that the current North American transportation model is financially unsustainable and a drag on public spending, and presents the bicycle as a solution to current infrastructure financing challenges. ²¹

Generally, the topics of Copenhagen and urban cycling have been approached most often from the perspective of sustainability and climate change mitigation, but also from the lens of financial viability and quality of life. This thesis will build off of these approaches. The goal of this work is not to convince an audience of the benefits of cycling or transit-oriented

¹⁸ Hoffmann, Melody L. *Bike Lanes Are White Lanes: Bicycle Advocacy and Urban Planning*. University of Nebraska, 2016.

¹⁹ Calthorpe, Peter. *Urbanism in the Age of Climate Change*. Island Press, 2011.

²⁰ Walker, Peter. How Cycling Can Save the World. New York City, Penguin Random House, 2017.

²¹ Blue, Elly. *Bikenomics: How Cycling can Save the Economy*. Microcosm Publishing, 2013.

development policies, as that has been done; the goal of this thesis is to investigate the methods through which cycling policies have traveled from Copenhagen to the United States and the influence that they have had.

II. Literature Review

This thesis will examine the influence of Copenhagen-based organizations on cycling in the United States through the framework of global urban policy mobilities. The urban policy mobility approach is essentially the study of the globalization of local urban policy. The study of urban policy mobilities is derived from the wider field of policy transfer situated within political science. Policy transfer is defined by Dolowitz and Marsh as: "... a process in which knowledge about policies, administrative arrangements, institutions etc. in one time and/or place is used in the development of policies, administrative arrangements and institutions in another time and/or place." This general definition provides the basis for further discussions of this process.

As McCann and Ward explain it, local officials are under pressure to keep up with policy trends and quickly implement solutions or fixes, so they look to other cities and countries through a variety of methods for best practices²³. This process occurs in every form of policy making, including urban policy, culminating in a constant flow of ideas through many channels, and rendering seemingly discordant, scattered, parts of the world similar in their implemented policies to certain issues. Policy transfer may be carried out through state or non-state actors; it

²² Dolowitz, David and David Marsh. "Who Learns What from Whom: a Review of the Policy Transfer Literature." *Political Studies*. vol. 44, no. 2, 1996, pp. 343-357.

²³ McCann, Eugene., Kevin Ward, and Allan Cochrane. *Mobile Urbanism: Cities and Policymaking in the Global Age.* Minneapolis: University of Minnesota, 2011.

is often not local bureaucrats conducting the transaction, but rather more mobile actors, such as think-tanks, consulting firms, and international governance organizations. Diana Stone refers to these actors as "policy transfer entrepreneurs", as they specialize in facilitating exchanges between different places, and have the resources to facilitate research collaboration and information sharing²⁴. Within these flows of ideas and networks, policies pertaining to urban issues travel around the world from city to city.

The practice of global urban policy transfer builds networks of cities and policymakers, and defines and stratisfies cities through the effectiveness and usefulness of their policies to the global order. Because policy transfer is all about identifying best practices to implement in other places, cities are identified and marketed through their best practices, such as regeneration or sustainability measures. ²⁵ Cities are constructed as models for a certain type of policy. McCann and Ward write that, "Here we are not talking of literal movement but the figurative uprooting and making mobile of certain places as referential components of particular models, for example the 'Barcelona model' of urban regeneration, or the 'Vancouverism' model of urban design. There are numerous ways in which places in all their complexity are reduced to a particularly one-dimensional 'model' that is then moved by policy actors. "²⁶ In this way, Copenhagen is defined as a best practice for urban sustainability and design, and especially for urban cycling due to its successes in these realms.

²⁴ Stone, Diana. "Transfer Agents and Global Networks in the 'Transnationalisation' of Policy." *Journal of European Public Policy*, vol. 11, 2004, pp. 545-66.

²⁵ McCann, Eugene, Kevin Ward, and Allan Cochrane. *Mobile Urbanism: Cities and Policymaking in the Global Age.* Minneapolis: University of Minnesota, 2011, pp. xiv.

²⁶ McCann, Eugene, and Kevin Ward. "Policy Assemblages, Mobilities and Mutations: Toward a Multidisciplinary Conversation." Political Studies Review, vol. 10, no. 3, Sept. 2012, pp. 325–332, doi:10.1111/j.1478-9302.2012.00276.x.

The urban policy mobilities literature focuses specifically on the transfer of urban policies. As it is described by Cristina Temenos and Kevin Ward, "At its core are two interrelated and overlapping agendas. One is focused on the mobility of policy and associated expertise and knowledge; the second is focused on the actors and practices through which policy is rendered mobile and traveled." A work on the topic of urban policy mobility must consider both of these agendas, as they are inseparable. Through this framework, this thesis will focus on Danish non-state actors, such as consultancy firms and advocacy organizations, as the actors through which policy is rendered and will explore how American cities have been affected by this transfer of cycling policy.

The field of study of urban policy mobilities emerged in the mid-2000s from scholars such as Jamie Peck, Eugene McCann, Kevin Ward, and Jennifer Robinson, drawn from the larger and already existing field of global policy transfer. These scholars attempt to discern how policies move from place to place, the ways in which they mutate or stay the same, and how different players within political, urban, and social networks interact with each other and these policies. They build off of the literature of 'policy transfer' from before their time while critiquing its inadequacies. This approach seeks to understand "the city in the world and the world in the city," and the process through which urban space is shaped by globalized factors. Due to the large amount of factors that contribute to political processes and global urbanism, and due to the interdisciplinary nature of the field, there is no single approach to urban policy mobilities.

²⁷ Temenos, Cristina and Kevin Ward. "Examining Global Urban Policy Mobilities." *Doing Global Urban Research*. Edited by John Harrison and Michael Hoyler. London, Sage Publications, 2018. pp 66-80. ²⁸ Ibid, 68.

The previous literature of policy transfer presents a large body of work on how policies are learned and moved from one place to another in hopes of similar results. Developed in the 1990s, the policy transfer literature arose in the field of political science to study the movement of policies globally and the subsequent repercussions. This literature attempts to understand the learning and emulation of policy across jurisdictions from other models and the ways in which this is done²⁹. This discussion attempts to identify conditions for successful models of transfer and to present benchmarks to measure the outcomes of transfers. Policy transfer studies place importance to some degree on the agents through which policy transfer is rendered.³⁰

However, Eugene McCann, Kevin Ward, and Allan Cochrane critique this previous approach for being heterogeneous and for failing to consider policy transfer as a socio-spatial process.³¹ This approach only considered nations, and not cities, even though cities are playing an increasingly important global role. The urban policy mobilities approach centers specifically on cities as creators and consumers of policy and the socio-spatial dynamics that produce these policies. In an increasingly urbanizing world, urban policies have significant power, thus it is imperative to study these policies and their effects. In many cases, cities are more progressive than their respective nations, such as on issues of climate change or immigration, and may lead the way for significant change in other cities and the rest of the country. Thus, large and powerful cities have significant influence, and may cause a more localized form of urban policy transfer, as smaller cities around the country look toward them as models. In this case, large US

²⁹ Carroll, Peter, and Richard Common. *Policy Transfer and Learning in Public Policy and Management International Contexts, Content and Development*. London; New York: Routledge, 2013.

³⁰ Stone, Diana. "Transfer Agents and Global Networks in the 'Transnationalisation' of Policy." *Journal of European Public Policy*, vol. 11, 2004, pp. 545-66.

³¹ McCann, Eugene., Kevin Ward, and Allan Cochrane. *Mobile Urbanism: Cities and Policymaking in the Global Age.* Minneapolis: University of Minnesota, 2011.

cities, such as New York City or San Francisco, may be influenced by global "best practice" cities such as Copenhagen to promote more progressive cycling policies, and in turn, influence smaller cities around the country to advance their own cycling initiatives.

Tom Baker and Christina Temenos offer an introduction to the urban policy mobilities theoretical framework and debate in a short article titled "Urban Policy Mobilities Research: Introduction to a Debate." They identify three discernable theoretical orientations present within the existing literature. The first uses this theoretical framework to understand the production of cities through global-relational connections. This centers on how policy is made in a place, but in consideration of influences from other places. Prominent thinkers in this orientation are Eugene McCann, Kevin Ward, and Allan Cochrane. They offer insights into how mobile policies are placed and how they derive legitimacy from locality. They conceptualize that cities are produced in light of broader global processes, but at the same time, these global processes are based in and originate from urban localities. "...there can be no easy separation between processes of territorialization and deterritorialization" Thus, cities cannot be understood without reference to their connections to other places and influences.

The second strain of thought uses policy mobilities as an avenue to understand dominant political-institutional establishments. This works examines policy mobilities for their role in the reproduction of these establishments and focuses on the actors whose daily work involves making policy. Nick Clarke, Nik Theodore, and Jamie Peck are notable contributors to this

³² Baker, Tom and Christina Temenos. "Urban Policy Mobilities Research: Introduction to a Debate." *International Journal of Urban and Regional Research.* vol. 39, no. 4, July 2015, pp 824-827. https://doi.org/10.1111/1468-2427.12252

³³ McCann, Eugene., Kevin Ward, and Allan Cochrane. *Mobile Urbanism: Cities and Policymaking in the Global Age.* Minneapolis: University of Minnesota, 2011, pp. xx.

sphere. Clarke and Theodore's works examine the concept of "policy transfer" and how it informs processes and models of policy-making, specifically neo-liberal models.³⁴ They argue that policy-making has transnationalized to such a degree as to render the idea of independent, domestic policy-making irrelevant³⁵. Peck investigates "creativity politics" and how they travel and mutate between urban spaces.³⁶ This approach sees policy transfer as a socio-spatial process in which the policies themselves are not fixed, in which they are changed as they travel. These policies are transformed in part due to the actors through which they are imparted, and this strain takes into account these actors. They draw a line between the more casual 'policy learning', in which bureaucrats and local officials scan the policy landscape for solutions to similar problems, and between the more rigorous policy transfer, in which there is an intentional transmission of policies following a certain agenda by dedicated transfer agents.³⁷

The third orientation within urban policy mobilities literature is that of understanding the agency of policy mobilities in socio-material assemblages and through comparisons of places against others. In this vein, Russell Prince and Colin MacFarlane, in different works, investigate how policies are facilitated through socio-material assemblages in different places.³⁸ This approach pays more attention to materials and techniques, such as policy documents,

³⁴ Peck, Jamie, and Nik Theodore. "Exporting workfare/importing welfare-to-work: exploring the politics of Third Way policy transfer." *Political geography* 20.4 (2001): 427-460.

³⁵ Peck, Jamie, and Nik Theodore. *Fast Policy: Experimental Statecraft at the Thresholds of Neoliberalism*. University of Minnesota Press, 2015, pp. 3.

³⁶ Peck, Jamie. "Recreative City: Amsterdam, Vehicular Ideas and the Adaptive Spaces of Creativity Policy." *International Journal of Urban and Regional Research*, 36, 2012: 462-485. doi:10.1111/j.1468-2427.2011.01071.

³⁷ Peck, Jamie, and Nik Theodore. *Fast Policy: Experimental Statecraft at the Thresholds of Neoliberalism*. University of Minnesota Press, 2015, pp. 11.

³⁸ MacFarlane, Colin. Learning the City: Knowledge and Translocal Assemblage. John Wiley & Sons, 2011.

audits, and manuals, and what these materials and techniques reveal about the policy process. ³⁹ It "... emphasizes the materialities and spatialities through which knowledge moves and seeks to unpack how it makes a difference to learning..." ⁴⁰ Here, the materiality of policy transfer is investigated as an important element of the process, in which the materials themselves facilitate and participate in the flow of information and formation of policy networks. This strain of scholarship attempts to construct what determines a success or a failure through the implementation of policies, and benchmarks and indicators that are used to measure them.

This thesis will utilize all three of these orientations in approaching the way that policies have traveled from Copenhagen to American cities. This work will contribute a case study to this body of work, but will focus on a specific aspect of policy transfer, which is from urban space to urban space through the medium of non-state actors. McCann and Ward suggest that urban policy mobilities literature needs more empirical accounts and case studies of the practices of global flows of policy making. This project is a contribution towards this gap in this body of work. Much of the policy mobilities literature has centered around the spread of and adoption of neoliberal practices such as deregulation and privatization in urban and global governance, but this thesis presents an attempt to trace a different type of policy, a practical and empirical one. However, the process of policy mobility of course occurs within the dominant and present frameworks of neoliberalism and global governance, and so must be acknowledged.

³⁹ Prince, Russell. "Policy Transfer as Policy Assemblage: Making Policy for the Creative Industries in New Zealand." *Environment and Planning A: Economy and Space*, vol. 42, no. 1, Jan. 2010, pp. 169–186, doi:10.1068/a4224.

⁴⁰ MacFarlane, Colin. Learning the City: Knowledge and Translocal Assemblage. John Wiley & Sons, 2011, 17.

⁴¹ McCann, Eugene., Kevin Ward, and Allan Cochrane. *Mobile Urbanism: Cities and Policymaking in the Global Age.* Minneapolis: University of Minnesota, 2011, pp. xvii.

I have not come across a work that specifically focuses on the policy mobilities of Copenhagen cycling policies, and I hope through this work to examine the ramifications of this case study of urban policy transfer and engage with this body of work.

III. Structure

In Chapter One, I will introduce the primary actors and provide an overview of their practices and motivations. Emphasis will be placed on Danish non-governmental transfer agents, such as consultants and specialists. Their ideologies and intentions will be discussed, and contextualized within the urban policy mobilities literature.

Chapter Two will center around the flows of ideas between Copenhagen and American cities, examining methods of transfer. The cycling policies unique to Copenhagen will be introduced and explained. I will investigate the different ways in which these ideas travel to the United States, both through direct and indirect means, and how they have impacted people's opinions.

Chapter Three will examine ways that policies from Copenhagen have impacted

American cities, and how they have been implemented. Various examples of both completed,
tangible projects, and statements by civic leaders displaying Copenhagen influence will be cited.

The ways in which policies have mutated in the process will be discussed.

In my Conclusion, I will sum up my findings and analyze whether I have answered my research questions. I will reflect on my research, and on the discrepancies or difficulties I faced in the process. I will discuss further research opportunities on this topic and in the field of urban policy mobilities.

Chapter One: An Overview of the Actors

Cycling as an act is not an ideological exercise. Many people have fond memories of learning to ride a bike as a child, of cycling while on vacation, of exercising on a bike. They enjoy cycling and its many benefits. Cycling as an act itself is not political or controversial. However, in changing the status of cycling in car-based cities and promoting it as a primary mode of transportation, it becomes an ideological exercise. The act of appropriating space on streets from cars for cyclists is a political act, as drivers view it as a threat to the status quo. The transformation of a city from one oriented around cars to one oriented around bicycles involves intense political standoffs and deliberations. The challenge is not the physical implementation of cycling infrastructure, which is straight-forward and simple, but the political process of making this change possible.

Thus, the role of consultants and other such actors is not only to implement policies or designs, it is to challenge the dominant mindset and provide a path forward for the development of another type of culture. Before any infrastructure can be laid out or any designs drawn up, these actors must often face a skeptical political and engineering establishment. Therefore, much of the work that these organizations do revolves around simply convincing people of the need for prioritizing bicycles in their urban areas. Much of the controversy revolves around the perceived antagony between cyclists and drivers, and the "war on cars." Irrevocably, promoting cycling as a primary mode of transportation will involve downsizing the role of the car, taking away driving and parking space from cars, and ceding it to bicycles. Supporting such proposals amounts to a

significant political risk for municipal leaders in many places, and for this reason, many shy away from the necessary adjustments it will take to transform their cities into cycling utopias.

Even when there is a desire to transform cycling in a city, local officials may not want to be held liable for such plans, and instead hire people to do the hard work of persuasion for them. Turning to seasoned experts in the field, they engage their services to shift the nature of mobility in their cities. Famous names in the field may often carry the weight of experience and recognition required to impress and influence local citizens to a particular viewpoint.

For these actors, much of their work is to show how a threat to driving is not a negative, rather a positive. Their job is to market the bicycle as an effective tool for economic, environmental and social transformation. In the process, they draw on "best practices" and successful examples from around the world, particularly Copenhagen, to demonstrate the practicality and feasibility of their proposals. Once hesitations and obstacles are overcome, only then can the real work of physically changing a city begin.

This chapter will focus on the actors that specialize in transferring this knowledge from place to place, provide an overlook of the actors, and contextualize their practices and policies geographically and culturally. For the sake of this thesis, the focus here is on non-governmental actors, those who specialize in transmitting knowledge from place to place, such as think-tanks, consulting firms, and non-governmental organizations. They are not beholden to a government or public enterprise, and so are able to act without being bound to one locality.

As there are no Danish think-tanks specifically dedicated to cycling, this thesis will consider mostly consulting firms and some other organizations. The greatest focus will be on consultants, as they play perhaps the greatest role in transmitting policies, working directly with

clients to formulate and implement policies. In this thesis, "Consultants are understood as non-state, private sector, profit-driven actors that are nevertheless involved in the policy process through contractual agreements with state agencies." These actors are engaged by city governments and local officials to guide them in developing better cycling conditions in their cities. The focus will be placed on firms and organizations working on a global scale, often with international office branches, thus eliminating firms working locally in Denmark or Scandinavia.

Copenhagenize Design Company is one of the leading voices in bringing cycling to the forefront of cities. It is an urban planning consultancy firm founded by Mikael Colville-Andersen in 2009 focused on implementing high-quality and safe bicycle infrastructure in cities around the globe. The core of the company, as stated on their website "... lies in advising and inspiring cities, governments and organisations about the re-establishment of the bicycle as a normal form of urban transport." It is the premier resource for cities specifically focused on improving their cycling infrastructure and policies, as their concentration and specialization is cycling.

Copenhagenize operates from the context and approach of "a strong Danish design tradition," which to them means, "integrating simplicity, logic and human nature into mobility networks," and "applying an anthropological and human-centred approach to bicycle planning." They apply this approach to all of their projects, bringing a dose of Copenhagen to wherever they operate. Along with their design consulting services, they offer study tours and master classes in Copenhagen for visiting delegations of policymakers and practicing professionals. These

⁴² Prince, Russell. "Policy Transfer, Consultants, and the Geographies of Governance." *Progress in Human Geography*. vol. 36, no. 2, 2012, pp. 21.

⁴³ Copenhagenize Design Co. "Copenhagenize Design Co." *Copenhagenize Design Co.*, copenhagenize.eu/#home-body-section.

⁴⁴ Copenhagenize Design Co. "Planning & Design." Copenhagenize Design Co., copenhagenize.eu/planning.

offerings immerse visitors into the cycling life of Copenhagen, and use the experience as an opportunity to draw lessons and inspiration from Copenhagen.

Copenhagenize Design company compiles the Copenhagenize Index, a list of the most bicycle-friendly cities in the world, updated every two years. The index is labeled "the most comprehensive and holistic ranking of bicycle-friendly cities on planet earth." The list is the only such ranking method of bicycle-friendly cities on a global scale. It evaluates cities and their efforts as establishing the bicycle as an important mode of transport based on thirteen parameters. These parameters are bicycle infrastructure, bicycle facilities, traffic calming, gender split, modal share for bicycles, modal share increase over the last ten years, indicators of safety, image of the bicycle, cargo bikes, advocacy, politics, bike share, and urban planning. Cities are given a score between zero and four in each category, and the index is compiled based on the resulting scores. The index is influential, proudly cited by the cities in the Top 20, often for tourism or branding means. It is cited as well in academic works and mass media circulations centered around urban cycling, as it is the only such index that rates cities on a global scale.

Copenhagenize is a firm operating on a global scale. It is based in Copenhagen, but also has offices in Montreal and Brussels. In the United States, they have worked with Atlanta, Long Beach, Akron, Glen Lennox/Chapel Hill, and Detroit on a range of projects varying in scale.

Their influence is evident in these cities through the changes in infrastructure and policies enacted.

⁴⁵"2019 Copenhagenize Index." *Copenhagenize*, copenhagenizeindex.eu/.

⁴⁶ Zayed, Mohamed Anwer. "Towards an Index of City Readiness for Cycling." *International Journal of Transportation Science and Technology*, vol. 5, no. 3, Oct. 2016, pp. 210-225.

⁴⁷ "Our Methodology." *Copenhagenize*, copenhagenizeindex.eu/about/methodology.

Another influential Danish actor on a global scale in the cycling world is Gehl Architects. Based in Copenhagen and founded by the influential Danish architect Jan Gehl, they are renowned in urbanist realms for their practical yet progressive approach. Although not specifically focused on cycling, their strategies "to create mutually beneficial relationships between people's quality of life and their built environment" often involve strengthening cycling in their client cities. They share with Copenhagenize the focus on Copenhagen as a model for other cities, after decades of work in the Danish capital.

Gehl's focus is on fostering public life in public spaces, or as they call it, "the life between buildings." By extension, the life between buildings includes sidewalks and streets, and encompasses all users of these spaces. They focus on developing general principles that will strengthen quality of life and liveability in cities, and by extension increase the amount of people cycling. Gehl's approach is a combination of social science and architecture, resting on deep analysis of behavioral patterns and scientific analysis of data, which is the starting point for any project. Every project begins with a comprehensive public life survey and data collection: they count how and how many people move throughout the space, analyze how people interact with their surroundings, and evaluate the quality of the urban environment. Their approach centers around making cities more walkable, dense, and vibrant.

They market themselves as consultants for urban livability strategies, not specifically cycling. For Gehl Architects, "The objective isn't cycling per se, but *transportation*. It's about building a network of options, with the overriding goal of creating a more livable city. The equation is fairly simple: more bikes equals fewer cars, less noise and less pollution."⁴⁸ Gehl

⁴⁸ Pedersen, Martin C. "What We Can (and Can't) Learn from Copenhagen." *Gehl Institute*, gehlinstitute.org/dialogue/can-cant-learn-copenhagen/.

views the bicycle as just one tool in the greater goal of transforming cities, and so their main mission is not to make every city a cycling city. However, because of their frequent incorporation of cycling into their projects, and the influence they've had on shaping cycling in American cities, they receive significant attention in this thesis. In a personal interview, Julia Day, an associate at Gehl, said that "...one thing we (Gehl) always push for is developing high quality lanes that actually feel safe and are part of a connected and consistent network." ⁴⁹

Like Copenhagenize, Gehl operates on a global scale, having completed projects in major cities all around the globe. They have opened two U.S. offices, one in New York City, and one in San Francisco, as bases for their projects in the Western Hemisphere. They have worked with the cities of San Francisco, CA., Lexington, KY., Denver, CO., and New York City, NY., on a wide range of projects. They have focused particularly on San Francisco and New York City, working closely with the municipal authorities on multiple projects.

Both of these companies were founded by influential and visionary figures: Mikael Colville-Andersen and Jan Gehl, respectively. They are both very well-known worldwide in the urbanist realms, and mentioned often in blogs and social media posts. Although both practitioners, they are frequently cited by working professionals and academics alike. They have arguably played the most significant role in promoting Copenhagen as a model for other cities to aspire to.

Mikael Colville-Andersen is the figure who literally wrote the book on urban cycling. His book, *Copenhagenize*, shares its name with his company, and further proclaims his mission and ideology. This book will be often referenced in this thesis both to understand the nature of

⁴⁹ Day, Julia. Personal Interview. 3 April 2020.

Copenhagen-based ideas that are transplanted to other places, and to understand the company and the author himself. Due to his prominence in the field and his devotion to advancing cycling worldwide, he is a key figure in the process of policy transfer from Copenhagen to American cities.

Colville-Andersen has been called "the rock star of urbanism" and "the modern day Jane Jacobs." An eloquent and effective public speaker, he is a popular keynote speaker at conferences organized around a variety of urban themes from sustainability to health to economic development. His TedTalks have garnered hundreds of thousands of views. He even currently hosts a global television series titled *The Life Sized City*. He is highly in demand as a consultant and a speaker.

Originally a film director, screenwriter and photographer, Mikael inadvertently entered the mobile urbanism space on November 14, 2006. He took a picture of what to him was a normal, everyday sight: a chic Copenhagener in boots and a skirt on a bike on her morning commute. He uploaded the photo to Flickr, where it went viral. People from all over the world were amazed that a woman was biking in a skirt and heeled boots rather than spandex and latex.

52 This later became known as "the photo that launched a million bicycles." 53

Colville-Andersen kept taking pictures of Copenhageners in their everyday environment and uploading them: "I started taking more photos of elegantly dressed commuters on bikes, and

⁵⁰ Meltzer, Steven. "Mikael Colville-Andersen: The Modern Day Jane Jacobs." *UrbanTimes*, 26 Aug. 2013, urbantimes.co/2013/08/mikael-colville-andersen-the-modern-day-jane-jacobs/.

⁵¹ Tedx Talks. "Bicycle Culture by Design: Mikael Colville-Andersen at TEDxZurich." *Youtube*, 28 November 2012

https://www.youtube.com/watch?v=pX8zZdLw7cs

⁵² Colville-Andersen, Mikeal. *Copenhagenize: The Definitive Guide to Global Bicycle Urbanism*. Island Press, 2018, pp. 5.

⁵³Meltzer, Steven. "Mikael Colville-Andersen: The Modern Day Jane Jacobs." *UrbanTimes*, 26 Aug. 2013, urbantimes.co/2013/08/mikael-colville-andersen-the-modern-day-jane-jacobs/.

people kept reacting to them... after 6 months I thought I'd start a blog. It just exploded."⁵⁴ His blog, *Cycle Chic*, was one of the first blogs dedicated to urban cycling. Cycling wasn't really part of the conversation for most European or North American cities in that period, but as his blog kept attracting attention, more discussions about cycling in cities started flowing. In a way, this photo can be seen as the launch of the current urban cycling renaissance.

He still writes regularly on his blog, which was his entryway into his current occupation, but he has shifted his focus onto other aspects of cycling. Although his original blog was focused on fashion, and drew significant attention from the fashion industry, he set his sights beyond matters of apparel to transforming the wider cycling culture. He transitioned to advising on planning and infrastructure matters and traveling as a speaker, and launched another blog more focused on the bicycle's larger role in society and transport, which he called *Copenhagenize*. On this blog, he promoted Copenhagen's cycling culture to urban planners, policymakers, and activists. Subsequently, he founded Copenhagenize Design Company, which has since become one of the most visible actors in the world of urban cycling.

Colville-Andersen was the originator of the term *Copenhagenize*, and from there it took off, being used by blog writers, journalists, and urbanists. He notes, "Others in my industry have hijacked the term and use it to describe all manner of urbanist influences coming from Copenhagen, but that was never my intention. I stick to my original meaning, which is the specific focus on the bicycle as transport."⁵⁵ Thus, in this essay, the term "Copenhagenize" will

⁵⁴ Ibid.

⁵⁵ Colville-Andersen, Mikeal. *Copenhagenize: The Definitive Guide to Global Bicycle Urbanism.* Island Press, 2018, pp. 6.

be applied specifically to bicycle policies, not other, broader urbanist policies that disseminate from Copenhagen.

The core of Colville-Andersen's philosophy remains using Copenhagen as a model from which to draw lessons on how to implement cycling in other cities. As journalist Steven Meltzer notes in his profile of Colville-Andersen in *Urban Times*:

To him, there's only one city that is really doing it right. Copenhagen has not become complacent as the world's greatest cycling city, it's continually striving to increase bicycle modal share and improve the experience of cyclists. Mikael's goal is to communicate this culture to the rest of us... I guess 'Copenhagenize' says it all.⁵⁶

Colville-Andersen is a key proponent of the Copenhagen principles of cycling, and has developed his theories based on its model. He has pioneered several key ideas, such as "A2Bism," the arrogance of space, and the life-sized city, that have made a significant impression on city planners and urbanists throughout the world. Much of his views stem from the idea of the arrogance of space - that cars occupy a disportionate amount of space in cities, and that this space must be reclaimed for cars and pedestrians. "A2Bism" is essentially the idea that the bicycle must be the fastest way from A to B in a city for cycling to become the mainstream mode of transport. Only a city that prioritizes pedestrians and cyclists over cars can become a life-sized city, which is reflected in walkability and lively public spaces.

Although Colville-Andersen is a planning and urban design rock star in his own right, Jan Gehl is arguably an even more famous and influential figure. Renowned globally, his writings have been published in many languages, and his work as an urban design consultant has taken

⁵⁶ Meltzer, Steven. "Mikael Colville-Andersen: The Modern Day Jane Jacobs." *UrbanTimes*, 26 Aug. 2013, urbantimes.co/2013/08/mikael-colville-andersen-the-modern-day-jane-jacobs/.

him all over the world. He has been awarded many awards and distinctions by various organizations, such as the UK Civic Trust Award and the Sir Patrick Abercrombie Prize by the International Union of Architects.

Over the course of his long career as an architect, he has advocated for the reorientation of design to prioritize people. Gehl credits his wife, a psychologist, as the most influential force in his career: she pointed him to the oft-overlooked interaction between humans and buildings, inspiring him to study the human side of architecture.⁵⁷ In his highly influential book *Life Between Buildings*, published in 1971, he originated the concept of "public life studies," the study of public space which focuses on analyzing public spaces through collecting data about how people use that space.⁵⁸ His approach involves systematically analyzing and documenting public spaces, making incremental improvements, and then documenting the results of the changes. This approach has since been adopted by numerous municipal planning departments and urban design firms around the world.

This approach was first adopted by the city of Copenhagen. The city measures the quality of its public spaces to understand how people use its public spaces: how they spend their time, what activities they are engaged in, and the demographic makeup of these people. ⁵⁹ The city has extended this method to analyze cycling within the city, conducting the Copenhagen Bicycle Account every two years to assess the quality of its bicycle infrastructure and to understand the behavior patterns of cyclists. ⁶⁰ This survey performs the important function of providing the city

⁵⁷ Gehl, Jan. Cities for People. Island Press, 2010, pp. XI.

⁵⁸ Gehl, Jan. *Life Between Buildings: Using Public Space*. Island Press. 2011, 6th edition.

⁵⁹ Risom, Jeff. "The Nordic Urban Design Model." *Nordic Ways*, edited by András Simonyi and Debra L. Cagan, Brookings Institution Press, 2016, pp. 214–222.

⁶⁰ Ibid, 217.

with information used to continually improve its cycling infrastructure, keeping it the best city in the world for cycling.

Long before Colville-Andersen, Gehl proposed the idea of reducing the amount of space given to cars in cities, and investing in pedestrian and cycling infrastructure. He was the driving force in transforming Strøget, the main shopping street of Copenhagen into a car-free zone, a process which he documented in his book *Public Spaces*, *Public Life*. ⁶¹ Strøget is now the longest pedestrian street in the world. Along with this, he supported the investment in cycling infrastructure during Copenhagen's cycling renaissance during the 1970s. In a way, he laid the groundwork for the current character of Copenhagen, the one that Colville-Andersen now uses as a model.

Gehl promotes cycling in cities, but that is not his specific focus. He advances bicycling as part of a broader agenda of creating public spaces and making the city more livable and human scaled. Within this paradigm, cycling is highly valued for increasing health and promoting human interaction with the built environment. For Gehl, planning cities for bicycles "...is handled relatively narrowly and in direct relation to a discussion on the human dimension in city planning." The role that a bicycle plays is making the city more sustainable, more safe, and more humane. Like Colville-Andersen, he uses Copenhagen as a model for cycling policies. In his book, *Cities for People*, he extols the measures that Copenhagen has taken to be a cycling

⁶¹ Gehl, Jahn and Lars Gemzoe. *Public Spaces, Public Life*. Danish Architectural Press & The Royal Danish Academy of Fine Arts, School of Architecture Publishers, 1991.

⁶²Gehl, Jan, et al. "Danish Architect Jan Gehl on Good Cities for Bicycling." *Streetsblog San Francisco*, 16 June 2011, sf.streetsblog.org/2011/06/16/danish-architect-jan-gehl-on-good-cities-for-bicycling/.

haven, such as creating a comprehensive network of bicycle lanes, integrating bicycles into the public transportation system, and downsizing car traffic.⁶³

Mikael Colville-Andersen and Jan Gehl are perhaps the two most prominent missionaries of the cycling gospel. Although they have differing goals and approaches, they have both consistently and prominently advocated the benefits of cycling as the main mode of transportation in cities. They refer to Copenhagen as a model for other cities in this respect, and facilitate the transfer of policies based on this model. These policies agree on many of the same methods of fulfilling this goal of increasing cycling in cities. This culminates in offering a concrete, direct path to reach this goal; specific measures that, once enacted, will cause an increase in cycling rates in a city: protected bike lanes, an interconnected network of bike lanes, availability of bicycling parking, and so forth. Most importantly, beneath these policies, there is the shared belief in the important principle that the built environment shapes people's behavior. Consequently, culture can be created, changed, and manipulated by changing the built environment.

Colville-Andersen and Gehl have both been outspoken critics of car-centric city planning, and have evolved their philosophies in direct opposition to this status quo. In advocating for more space allotted to cyclists and pedestrians, they directly argue for less space allotted to cars. This is one of the precursors to improving cycling conditions, and as a policy, is a departure for many cities from the dominant car-centric framework that they have been following. Although many urbanists advise cities to decrease their reliance on driving, Colville-Andersen and Gehl are more radical, and advocate for the total ban on cars, and actually put forth policies and ideas

⁶³Gehl, Jan. Cities for People, Island Press, 2010, pp. 183.

that could make this vision possible. Thus, anti-car stances are a key part of their philosophies, and are interconnected with their cycling policies.

The firms that these two men founded are an extension of their personal philosophies, and carry out the actual work of implementing their ideas. Gehl Architects focuses on improving the public realm in cities, using the quality standards that Gehl defined and using the tools that he originated to analyze and evaluate urban life. Copenhagenize concentrates on designing and implementing bicycle infrastructure based on Colville-Andersen's concrete design ideals.

Another organization that deserves mention in this discussion is the Cycling Embassy of Denmark. The CED was founded on May 12, 2009 at the Velo-city Conference in Brussels.⁶⁴ It is a network organization of over forty-five members, comprised of Danish cities, companies, and associations. It is important to note that both Copenhagenize and Gehl Architects are members of the CED.⁶⁵ Most of the other members are consulting and planning firms that work more locally in Denmark. The membership also includes city governments across Denmark that have exhibited commitment to promoting and fostering a cycling culture. These members come together to promote the Danish ideals of cycling to policy tourists from around the globe. As written in their press release, "One of the main goals for the Cycling Embassy of Denmark is to share the experiences from Denmark and facilitate the development of attractive cycling cultures around the world." ⁶⁶ They specifically work with policy makers from other cities around the

⁶⁴ "Press release: New embassy meets demand for cycling knowledge." *Cycling Embassy of Denmark*, 8 May 2009, http://674c07703d870a11572c39d534109e4046e49132.web6.temporaryurl.org/wp-content/uploads/2009/03/200905 08-press-release_cycling-embassy-of-denmark.pdf.

⁶⁵ Ibid.

⁶⁶ Ibid.

globe, and mention that it is city planners, politicians and NGOs that will benefit from the knowledge that they present.

"Cycling Embassy of Denmark gathers the best information from the private, public and non-profit sectors in an effort to be the primary source of cycling knowledge and products." The goal of the CED is to facilitate the transfer of knowledge to interested parties through the services that it offers. These services include lectures, bike tours, masterclasses, keynote speeches, and workshops. The CED also offers many learning resources on its website, and issues publications and press releases as well. Although it does not function as a consultancy on its own, it can direct customers to consultants who are its members.

Although the CED does not do the actual work of policy formation or design, it plays a role in policy transfer through the influence it wields. The function of the CED is to package and export a set of ideals shared by its members, those ideals consisting of the Danish approach to cycling policies. Through the services it offers, the CED is able to impart those ideals to visiting policy makers and planners. The CED also hosts and participates in various conferences, such as the Velo-City Conference and the Winter Cycling Conference. Through these conferences, members of the CED are able to present their views in a more high-profile way, and reach a greater audience. Every year at the Velo-City Conference, the CED gives the Leadership Award to an individual or organization for outstanding work promoting cycling. Recently, the CED has launched an online knowledge-sharing platform called *Cycling Solutions* in partnership with

⁶⁷ Ibid

⁶⁸"General Information and Prices." *Cycling Embassy of Denmark*, www.cycling-embassy.dk/general-information-and-prices/.

⁶⁹ Bondam, Klaus. "Cycling Conferences - Danish and International." *Cycling Embassy of Denmark*, 6 June 2019, cyclingsolutions.info/cycling-conferences-danish-and-international/.

the Union Cycliste Internationale. The goal of this platform is to share a wide variety of knowledge, such as best-practice examples, cost-benefit analyses, planning and implementation, and more.⁷⁰ For city leaders looking to improve their bike plans, this knowledge platform may be their first landing place in their search for policy guidelines.

Although there are other Danish organizations and firms besides Copenhagenize, Gehl Architects and the Cycling Embassy of Denmark that work in the realm of urban cycling, the others do not operate on an international level, or if they do, have not worked with American cities. In addition, the scale of their influence and fame is much smaller than these three entities. Thus, the bulk of further discussion will focus on them. However, if another organization has made a significant contribution to or had a powerful effect on American cycling policy, they will be mentioned as well.

In discussing the actors involved in the process of policy transfer from Copenhagen to the United States, it is important to understand their motivations and ideas, the context from which they operate, and the agendas that they promote. This chapter has provided an overview of the actors involved in this process of urban policy mobilities. Furthermore, it is important to conceptualize these actors and their roles within the theoretical framework and to situate this summary within the larger discussion of urban policy mobilities.

The actors investigated here may be categorized as "policy transfer entrepreneurs," as defined by Diana Stone.⁷¹ She describes policy transfer entrepreneurs in the following way:

⁷⁰ "New Cycling Solutions Platform to Benefit Cities and Regions Worldwide." *Union Cycliste Internationale (UCI)* - *Home*. 24 June 2019.

www.uci.org/news/2019/new-cycling-solutions-platform-to-benefit-cities-and-regions-worldwide.

⁷¹ Stone, Diana. "Transfer Agents and Global Networks in the 'Transnationalisation' of Policy." *Journal of European Public Policy*, vol. 11, 2004, pp. 545-66.

Ordinarily private or quasi-autonomous organizations, many have used their intellectual authority or market expertise to reinforce and legitimize certain forms of policy or normative standards as 'best practice'.... They provide essential services for decision-makers by acting as resource banks; advocating policy ideas and developing discourses of transfer; as well as spreading ideas and information through their professional networks and into the media and civil society.⁷²

Copenhagenize, Gehl Architects, and the Cycling Embassy of Denmark all fit this definition well. They are at once sources of information, advocates, and influencers. As discussed above, they promote and legitimize the Copenhagen model as the best practice example of urban cycling. The procedure of policy transfer is their day-to-day task and their speciality. In contrast to bureaucrats, they are not constrained by the daily responsibilities of the local government, and are able to focus all their time and energy into transmitting knowledge to other places and building networks and relationships.

Much of the earlier policy transfer literature placed a greater emphasis on governmental institutions and officials, overlooking the role of non-state actors in the process. Government officials are involved in the "hard transfer" of policy, participating in the legislation, implementation, and regulation. However, Stone suggests that non-state actors may be more successful at "soft transfer," which is the transmission of broad ideas and the influence of public opinion and policy agendas. ⁷³ Urban policy mobilities literature emerged out of dissatisfaction with the gaps in policy transfer studies, and has subsequently paid more attention to non-state actors. Jamie Peck and Nik Theodore highlight the significance of non-state actors, especially

⁷²Ibid, 556.

⁷³ Ibid, 556.

consultants, and differentiate between policy learning by local government officials, in which they draw lessons from other places when it is convenient, and that of policy transfer by dedicated consultants "within ideologically determined parameters."⁷⁴

The Danish organizations discussed above decidedly operate within ideologically determined parameters. These parameters consist of the belief that Copenhagen is the most superior model of urban cycling in the world, and that other cities can only benefit by adopting the same policies. Even the names speak of this attitude- Copenhagenize, Cycling Embassy of Denmark. The suffix -ize means to make or become, so the literal meaning of Copenhagenize is to make other places like Copenhagen. The Cycling Embassy of Denmark conveys the agenda of the Danish cycling community to international officials, similarly to how official embassies seek to promote the interests of their countries on foreign soil. Although the name Gehl Architects doesn't particularly fit this pattern, the name Gehl is associated with a certain set of values and agendas that align with this agenda.

The process of policy mobilities undertaken by these organizations is an ideological process, and an intentional process. Unlike bureaucrats or policymakers that might be scanning their options to find the right set of programs and ideas, and willing to consider various options, these organizations are committed to one agenda. This means that their clients or visitors will only be presented with one set of policies. In this case, policy transfer is a targeted and intentional process, rather than an organic diffusion of ideas.

Due to their emphasis on a specific set of ideas and ability to devote their time, energy, and resources solely to the spread of these ideas, consultants and other independent non-state

⁷⁴ Peck, Jamie, and Nik Theodore. *Fast Policy: Experimental Statecraft at the Thresholds of Neoliberalism*. University of Minnesota Press, 2015, pp. 11.

actors are able to influence policy making effectively. Cycling in itself is not an ideological act, but the policies behind implementing it in cities are very much ideological. Danish consultants in the urban cycling world are devoted to spreading their convictions of best practices of urban cycling to other cities, and do so through different means. The following chapters will investigate the methods through which they are able to spread their ideas and influence policies, and the extent to which their ideas have gained traction and been implemented in American cities.

Urban policy mobility is fluid by nature, hard to pinpoint and define. The flow of information around the world is an extremely complex and multifaceted process that is ever continuing and evolving. This action can take many forms and arrive through various methods, whether through conversations, literature, or observations. This chapter will focus "on the mobility of policy and associated expertise and knowledge," as phrased by Temenos and Ward, and attempt to trace the methods of flow of information from Copenhagen to American cities. Emphasis will be placed on the medium of policy travel, but we must start by defining and discussing the policies themselves.

I have mentioned "Copenhagen cycling policies" frequently so far, but have not yet defined what these policies are. They are a set of concrete principles enacted by the city of Copenhagen to promote and enable cycling for all residents. In essence, the core of the Danish approach to cycling policy and design is simple: bicycles must have high quality infrastructure consisting of tracks fully separated from vehicular traffic. The emphasis is on making cycling accessible, convenient and safe. Consequently, cycling becomes a default mode of transportation, and becomes integrated in the culture of the city.

In response to claims that Denmark has cycling ingrained in their culture as an excuse for why cycling is not widespread in other countries or cities, Collville-Andersen says that this cycling culture was intentionally created through design and policy.⁷⁶ There is nothing unique in

⁷⁵ Temenos, Cristina and Kevin Ward. "Examining Global Urban Policy Mobilities." *Doing Global Urban Research*. Edited by John Harrison and Michael Hoyler. London, Sage Publications, 2018. pp 66-80.

⁷⁶ Colville-Andersen, Mikael. *Copenhagenize: The Definitive Guide to Global Bicycle Urbanism.* Island Press, 2018, pp. 106.

the people of Denmark that makes them more prone to cycling; they are simply human beings making rational decisions about the most efficient and practical mode of transportation available to them. Indeed, when surveyed about why they choose to cycle as their main mode of transportation, 53% of Copenhagen residents said they choose to cycle because it is the fastest option. This conflicts with the narrative that some anti-cycling activists suggest, that Danish people cycle more because they care more about the environment or because it is part of their culture. In the mid-twentieth century, cycling levels in Denmark were dropping, bicycle lanes were being removed, and car use was increasing, so there was not much of a cycling culture at that time, similar to the situation in many American cities today. However, due to the global fuel shortage during the oil embargo of the 1970s, the bicycle re-emerged as a main mode of transportation, and the city began rebuilding its protected network of bicycle infrastructure. The evidence supports Colville-Andersen's statement that cycling culture is not intrinsically ingrained in Copenhagen, but is fostered through deliberate policy and design.

Thus, it can be replicated and fostered in cities around the world using these tools. This is perhaps the essence of the Copenhagen cycling gospel. A cycling city is not a magical land where all the right conditions exist and are perfect for cycling. No city is perfect for cycling, and people often use the shortcomings or challenges of their cities as excuses for not investing in cycling. Their cities are too cold, or too hot, or too hilly, or too windy, and people will not cycle in these conditions. Not so, says Colville-Andersen. Copenhagen does not have perfect cycling

⁷⁷ City of Copenhagen. 2017. Copenhagen City of Cyclists: Facts and Figures 2017. Copenhagen, Technical and Environmental Administration, 3.

⁷⁸ Colville-Andersen, Mikael. *Copenhagenize: The Definitive Guide to Global Bicycle Urbanism.* Island Press, 2018, pp. 64.

conditions either. Winters are cold and brutal, with winds reaching 22 mph. ⁷⁹ Copenhagen still has significant suburban sprawl, in response to people claiming their cities are too spread out to support a large segment of its population cycling. Indeed, Colville-Andersen has a retort for almost any excuse for why cycling wouldn't work in a specific city, based on real-world examples from Copenhagen and other cycling cities. The city of Copenhagen testifies that it is through practical interventions and policies that a cycling culture is established and promoted, and that any other city can also do this. The possibility of implementing a similar cycling culture within other nations and cities is what drives these Danish organizations to do the work that they are doing, and guides their approach.

Implementing the Danish approach to cycling in other cities involves, above all, constructing a coherent, city-wide network of bicycle infrastructure. This infrastructure consists of physically separated, unidirectional bike lanes. Physically separated lanes, whether by curbs or bollards, are well documented to be the safest solution and the most effective method of increasing cycling in cities. ⁸⁰ In Copenhagen, bicycle lanes are usually physically separated from the street by a raised curb. In some places, the lanes are not separated by a curb, but are separated from the street by a row of parked cars, so that the cars protect the bicycles from motorized traffic. ⁸¹

The principle of "build it and they will come" is often invoked in relation to dedicated bike lanes, as physically separated bike lanes are proven to increase the amount of bicycle traffic.

⁷⁹ Ibid, pp. 103.

⁸⁰ Harris Anne, Reynolds Conor, Winters Meghan, *et al.* "The Bicyclists' Injuries and the Cycling Environment Study: a Protocol to Tackle Methodological Issues Facing Studies of Bicycling Safety." *Injury Prevention*, 2011, vol. 17, no. 5.

⁸¹ Gehl, Jan. Cities for People, Island Press, 2010, pp. 183.

⁸² There is a strong correlation between the feeling of safety and cycling rates - people are more likely to cycle if they feel protected from traffic. According to the U.S. Bicycling Participation Benchmarking Study Report, 46% of adults are more likely to ride if bicycles were physically separated from cars.⁸³ In one study in Montreal, it was found that 2.5 as many cyclists rode on streets with protected infrastructure in comparison to adjacent streets without protected infrastructure.⁸⁴ In the Copenhagen model, the bike lanes must be physically separated and run one way, parallel to the flow of traffic.

In this, the Danish approach differs from the Dutch approach, which includes many bi-directional lanes. According to Colville-Andersen, bi-directional lanes pose a challenge for planning a city-wide network when it comes to configuring intersections, and for cyclists in passing one-another. There is also an increased risk of accidents on bi-directional lanes, especially at intersections. Therefore, unidirectional lanes are the gold standard for the Danish method, and bi-directional lanes are rarely used.

The bike lanes must be made of high quality materials and maintained by the municipality. The materials should be consistent throughout the city to ensure cohesion throughout the network and to make the system intuitive, especially for amateur cyclists. Colville-Andersen says that, "My own experience after cycling in scores of cities and

⁸² Dill, Jennifer, and Theresa Carr. "Bicycle commuting and facilities in major US cities: if you build them, commuters will use them." *Transportation research record*, 2003, vol. 1828, no. 1, pp. 116-123.

⁸³ Breakaway Research Group. *U.S. Bicycling Participation Benchmarking Study Report*. People for Bikes, 2015. https://b.3cdn.net/bikes/7b69b6010056525bce_ijm6vs5q1.pdf

⁸⁴ Lusk Anne, Furth Peter, Morency Patrick, *et al.* "Risk of injury for bicycling on cycle tracks versus in the street." *Injury Prevention*, 2011, vol. 17, no. 2, pp. 131-135.

⁸⁵ Colville-Andersen, Mikael. *Copenhagenize: The Definitive Guide to Global Bicycle Urbanism*. Island Press, 2018, pp. 180.

⁸⁶ Cicchino, Jessica, McCarthy, Melissa, Newgard Craig, *et al.* "Not All Protected Bike Lanes are the Same: Infrastructure and Risk of Cyclist Collisions and Falls Leading to Emergency Department Visits in Three U.S. Cities." *Insurance Institute for Highway Safety*, 2019. https://www.iihs.org/topics/bibliography/ref/2193.

participating in hundreds of conversations with visitors and colleagues in Copenhagen leads me to conclude that uniformity in bicycle infrastructure design is paramount."⁸⁷

These Copenhagen design standards contrast with the approach in Amsterdam, another influential and much-studied cycling city. Both are powerful models for urban cycling and have both been influential in shaping policies in cities elsewhere. To a degree, the two cities compete for the title of "best cycling city in the world." Although an influential model in itself, Amsterdam is not the focus of this investigation for several reasons. Firstly, there is not as targeted of a strategy for the policy transfer of cycling policies from Amsterdam as from Copenhagen. Amsterdam does not have famous urbanist figures comparable to Jan Gehl or Mikael Colville-Andersen that are figureheads of its ideas and policies. Thus, the origin or path of ideas arriving from Amsterdam is not as clear or simple to trace. Secondly, the influence of design and policy ideas from Amsterdam is harder to distinguish in practice than those from Copenhagen, for the reasons discussed below.

In Amsterdam, bi-directional lanes are common, and bike lanes are often of different materials, whether they be asphalt, bricks, or paving stones. The layouts of Amsterdam and Copenhagen differ; Amsterdam's streets are more narrow and winding to accommodate the historic buildings and canals, whereas much of Copenhagen features wide, rational, twentieth century streets. The cycling cultures in the two cities vary as well. Amsterdam cyclists are less likely to use hand signals before turning or stopping or ring bells when approaching pedestrians. Perhaps for these reasons, Copenhagen seems more approachable for beginning cyclists, referring back to Colville-Andersen's comments about systems being intuitive and uniform. In

⁸⁷ Colville-Andersen, Mikael. *Copenhagenize: The Definitive Guide to Global Bicycle Urbanism.* Island Press, 2018, pp. 243.

practice, influence on urban cycling originating from Copenhagen is easier to identify, as the result in a city under this influence would be a coherent, cohesive network of wide, curb-separated, uni-directional bike lanes.

Perhaps for these same reasons as well, the Copenhagen approach seems more practical and implementable in US cities. Colville-Andersen describes how visiting policy tourists often visit both Amsterdam and Copenhagen on their trips to learn about cycling cities. Most of them say that they cannot envision their own cities as Amsterdam, but they can as Copenhagen. Because much of Copenhagen outside of the city center was constructed following the sprawling, suburbanized, car-centric model of the mid-twentieth century, it is similar to many American urban environments. In this way, Copenhagen is uniquely situated to provide a model for retrofitting for cycling for American cities, as compared to Amsterdam, which has a much different layout that American cities do not share. This perhaps explains why there is a focus on Copenhagen specifically as a cycling model, and why it is dominant in policy and design discussions.

Copenhagen cycling policies have traveled around the world and influenced numerous cities through various methods. Whether through direct or indirect means, these ideas and principles have disseminated throughout the globe, and have established Copenhagen as a "best practice" model for urban cycling. These means may include international conferences, policy tourism, direct consultant interactions, literature, and perhaps most effectively, the internet. The internet is a crucial component of policy transfer, and the development of social media and other forms of networks across the world has only exacerbated the process of policy flows. McCann

⁸⁸ Colville-Andersen, Mikael. *Copenhagenize: The Definitive Guide to Global Bicycle Urbanism.* Island Press, 2018, pp. 242.

and Ward write that, "Global circuits of policy knowledge shape and are shaped by social connections made by actors sometimes at a distance – over email or by reading documents describing policies in other places, or by watching YouTube videos." The internet allows for cross-cultural comparison like no other platform, and has democratized the flow of information. It is now not only elites and government officials who are able to access international practices and significant amounts of data, but any person who has access to the world-wide web.

Social media plays a significant role in influencing opinions and shifting mindsets. It is due to many of these platforms that people have started looking at cycling in a new light, and considered other ways of living and functioning. Social media is instrumental in perpetuating the spread of alternate lifestyles or movements, whether it be tiny houses, zero-waste, or no cars. On social media networks, people can find a community of fellow thinkers that will support and encourage their habits. Cycling has long been a counterculture in the United States, antithetical to the dominant car-centric lifestyle. However, it is now enjoying more attention than ever before, both online and in practice. There are many influential blogs and websites dedicated to urbanism and transit bringing the topic to the forefront. Large Facebook groups, like the famous New Urbanist Memes for Transit Oriented Teens, also dedicate considerate attention to the topic. Youtube videos of planning and transportation experts have millions of views and hundreds of comments, and urbanist forums regularly discuss the issue as well.

It is impossible to state that there is one definite cause of the urban cycling renaissance, as there are many factors to consider. Although earlier I suggested that Colville-Andersen's

⁸⁹ McCann, Eugene, and Kevin Ward. "Policy Assemblages, Mobilities and Mutations: Toward a Multidisciplinary Conversation." Political Studies Review, vol. 10, no. 3, Sept. 2012, pp. 325–332, doi:10.1111/j.1478-9302.2012.00276.x.

"photo that launched a million bicycles" could be seen as the launch of the bicycle renaissance, it is not plausible to determine the causality of it. However, it is plausible to say that it was a very influential photograph, and an important moment in the resurgence of the bicycle. The photograph and the subsequent *Cycle Chic* blog launched by Colville-Andersen received widespread recognition and changed the online landscape of cycling. The blog spawned over 200 copy-cat Cycle Chic blogs worldwide. Google returns countless web articles and interviews in response to the searches "Cycle Chic," "the photo that launched a million bicycles," or "Copenhagenize." In addition, it was named one of the "Ten Best Fashion Blogs" by *The Guardian*, one of the "Top 100 Blogs Worldwide" by *The Times*, and one of the "Top 10 Hottest Fashion Websites" by *Marketing Magazine*. 91 92

The short-term effect of Cycle Chic was popularizing the image of the bicycle as fashionable and hip. The tagline of the blog is "dress for the destination, not the journey." No longer were cyclists portrayed as fringe maniacs outfitted in lycra and polyester, but as average citizens in everyday clothing, with an emphasis on style. Spreads and articles dedicated to the new trend were featured in significant publications like *The New York Times* and *Vogue*. 93 94 Paparazzi photos of celebrities riding bicycles in everyday clothing were published and circulated. 95 Soon famous brands like Chanel, Gucci, and Louis Vuitton began capitalizing off of

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⁹⁰ Colville-Andersen, Mikael. *Copenhagenize: The Definitive Guide to Global Bicycle Urbanism.* Island Press, 2018, pp. 5.

⁹¹Colville-Andersen, Mikael. Cycle Chic, www.copenhagencyclechic.com/.

⁹²Fisher, Alice. "Top 10 Best... Fashion Bloggers." *The Guardian*. 21 Feb 2010.

https://www.theguardian.com/culture/2010/feb/21/10-best-fashion-bloggers

⁹³ Ferla, Ruth La. "Bicycle Chic Gains Speed." *The New York Times*, 29 Sept. 2010, www.nytimes.com/2010/09/30/fashion/30BICYCLE.html.

⁹⁴ Kim, Monica. "Cycling Style Done the Copenhagen Way." *Vogue*, Vogue, 31 Jan. 2017, www.vogue.com/article/copenhagen-fashion-week-2015-street-style-cycling.

⁹⁵ Saltonstall, David. "Barack Obama Gets Poor Fashion Marks After Weekend Bike Ride." *NY Daily News.* 10 June 2008.

the fad - cycle chic was seen on couture runways and some fashion houses even designed their own bespoke bicycles. 96 97

IBM's Social Sentiment Index documented and analyzed the growth of *Cycle Chic* over a six year period - from 2007 to 2012 using advanced analytic software. By 2012, *Cycle Chic* was trending in major cities on all continents, displaying its global reach. ⁹⁸ Unfortunately, the link to IBM's page containing this Index has been removed, so this data was unable to be retrieved.

Far from being simply a virtual or high-fashion trend, *Cycle Chic* actually affected people's daily lives. On the 'Testimonials' section of the website, there are numerous statements from blog readers, mostly women, about how the blog empowered them to cycle and to dress for the destination, not the journey. The following is a quote from one of the testimonies:

"In my small city in Montana, I ride my bicycle(s) almost exclusively for transportation. Your Cycle Chic movement has inspired me to celebrate being a woman and celebrate bicycling by wearing skirts and dresses on my bike...I've even had a number of women approach me saying 'I make it look easy and fun to commute via bicycle.' Yes! In a few weeks I will be teaching a bicycle commuting course and I hope to mention your Cycle Chic website to interested participants."

Many other such testimonies are listed on the website, as well as comments left in the discussion forum below. The idea spread through *Cycle Chic* was the essential Danish idea that

97 Compain, Hugo. "On Your Bike: Couture Bicycles." Vogue. 19 November 2013,

https://www.vogue.fr/fashion/fashion-shopping/diaporama/designer-couture-bikes-bicycles-by-herms-martone-gucci-moynat-chanel-trussardi-louis-vuitton-shinola-marc-jacobs/13875

https://www.nydailynews.com/news/politics/barack-obama-poor-fashion-marks-weekend-bike-ride-article-1.293029 9666 The Short History of Cycle Chic." *Cyclelicious*, 19 Sept. 2012,

www.cyclelicio.us/2012/cycle-chic-birth-of-a-trend/.

^{98 &}quot;The Short History of Cycle Chic." *Cyclelicious*, 19 Sept. 2012,

www.cyclelicio.us/2012/cycle-chic-birth-of-a-trend/.

⁹⁹ A reader in Bozeman, Montana. Cycle Chic, www.copenhagencyclechic.com/.

one does not have to order their entire life or identity around being a cyclist; one can practically and simply integrate cycling into their daily life. For a long time, cycling in the United States was dominated by "vehicular cycling", a theory promoted by engineer John Forester, which is the practice of treating a bicycle as a vehicle, and mandating that they follow the rules of vehicular traffic. 100 The emphasis is on cycling fast with the flow of traffic and obeying the same rules as cars. Vehicular cycling came to be associated with a strong subculture of middle-class men with special equipment and racing bikes; they often refer to themselves as "bicycle drivers." Many of the adherents of this subculture have actually campaigned and lobbied against special bicycle infrastructure on the basis of "discrimination" against their right to ride a bike in car traffic. However, their way of cycling excludes many people from cycling: those who can't afford special equipment and expensive bikes, and those who do not feel safe cycling in the flow of traffic.

There is a large focus in the Danish method on making cycling easy and safe for the most vulnerable users, such as women and children. The approach to cycling policy and design centers around creating the safest conditions for these vulnerable users. The success of cycling infrastructure is not only measured by the total number of users, but by the amount of women and children cyclists. Therefore, it is important to empower women to cycle and increase the rates of female cyclists, a role which the *Cycle Chic* blog filled.

Blogs are just one way of spreading information online. Videos are another effective way of transmitting ideas and influencing people. Youtube is an incredibly popular and powerful video sharing platform that has global reach. From vlogs, to lectures, to short films, Youtube

¹⁰⁰ Forester, John. *John Forester*, http://www.johnforester.com/

hosts a plethora of video formats, on any subject. Searching "Copenhagen," "urban cycling," "Gehl," "Copenhagenize," or "Mikael Colville-Andersen," results in hundreds of videos.

TED Talks are extremely popular, reaching large audiences and garnering millions of views. They are recorded speeches from expert speakers specializing across a variety of fields, on many different topics. Both Jan Gehl and Mikael Colville Andersen have given TED Talks that have been posted on Youtube, in addition to other speaking engagements they have undertaken. In their talks, they cover some of their key ideas, such as the human scale, the dangers of car-centric planning, and bicycle urbanism by design.

Reading the comments below, it is clear that their talks, specifically the ideas contained in them, have had a meaningful impact on viewers. Comments are an important feature of online platforms, allowing users to interact with the material, share their impressions, and discuss with each other. The following are comments from the video of Colville-Andersen's TED Talk titled "Bicycle Culture by Design" in Zurich, posted on November 28, 2012. ¹⁰¹ One commenter, Brad Comis, wrote, "I first saw this 7 years ago when I was studying Industrial Design at university. Hearing this message was decisive in informing my choice to pivot from focusing on car design to bicycle design. I've never looked back and now I'm working as a bicycle designer with the hope to get people riding good bikes that fit into their lives." Another viewer, Erik Meyer, said, "Nice job Mikael. As a Planning Commissioner for the city of San Luis Obispo California... I often refer to Copenhagenize. We are currently redesigning our circulation plan... and your thoughts and links have been very useful. Thanks for all you do!" By reading the comments below videos, it is possible to gauge peoples' reactions and responsiveness to the message. Like

¹⁰¹ Tedx Talks. "Bicycle Culture by Design: Mikael Colville-Andersen at TedxZurich." *Youtube*, 28 Nov. 2012. https://www.youtube.com/watch?v=pX8zZdLw7cs&t=7s

with any online content, there are also negative comments from skeptics, but it is the positive comments that testify about the impact this content has actually had in changing peoples' viewpoints.

Youtube is an incredibly useful platform for the flow of ideas. A video on one topic will have recommendations for videos on similar topics listed on the side. Site users may be led to a video through a trail of links, exposing them to new topics and ideas. The likelihood of the discovery of new ideas is high, and videos are an effective and convincing method of content delivery. The audience is massive: Youtube has 2 billion monthly users watching 250 million hours of content daily. The potential viewers that can be reached, and the impact that ideas can have is massive. The Youtube-sphere of cycling, urbanism, Copenhagen, and other related searches is a broad category encompassing innumerable amounts of content.

With the rise in travel vlogging, there has been an increasing amount of attention paid to Copenhagen and its liveability. Youtubers with millions of followers have posted videos documenting their visits to and impressions of Copenhagen. Popular accounts with large audiences, such as *Rick Steves' Europe*, *Kara and Nate*, and *Lonely Planet*, have hundreds of thousands and even millions of views on their videos of Copenhagen. The large-scale exposure to Copenhagen has increased its presence on the world stage, and bolstered its reputation as a tourist destination. Copenhagen was Lonely Planet's top city to visit in 2019, and won the accolade "Lonely Planet's Best in Travel 2019." Cycling is always mentioned as a factor of the

¹⁰² Spangler, Todd. "Youtube Now Has 2 Billion Monthly Users, Who Watch 250 Million Hours on TV Screens Daily." *Variety*, 3 May 2019,

https://variety.com/2019/digital/news/youtube-2-billion-users-tv-screen-watch-time-hours-1203204267/

103 "Lonely Planet Names Copenhagen the World's Top City in 2019." *Visit Denmark*, 20 March 2019,

https://www.visitdenmark.com/travel-trade/news-traveltrade/lonely-planet-names-copenhagen-worlds-top-city-2019

"special Danish way of life," an integral part of the local culture, and used to promote

Copenhagen as a travel destination. At the same time, the exploding popularity for New Nordic

cuisine has made Copenhagen into a culinary destination as well. In an interview, Mikkel

Aarø-Hansen, CEO of Wonderful Copenhagen, the official tourism organization of the Capital

Region of Denmark, said,

In Copenhagen we enjoy our own special way of life. Cycling is our preferred mode of transport. We swim in the harbour's clean waters. We love gastronomy and great dining experiences – no matter if it's Michelin starred or street food and we are very into culture and design. The city lives and breathes these things. And this is why Lonely Planet recommends that you come to Copenhagen and join us in enjoying our way of life."¹⁰⁴

All of these factors have combined to attract record numbers of tourists in recent years. Denmark has experienced nine consecutive years of growth in tourism, culminating in 2019 with 4.2 million overnight international stays. ¹⁰⁵ In January 2020, Danish tourism experienced a growth of 3% from January 2019. ¹⁰⁶ The majority of international visitors enter Denmark through Copenhagen, which is home to the largest airport and harbor in the country. The increasing amounts of international tourists to Copenhagen are able to see and experience the cycling culture in the city, and to bring back their experiences to their homes, further disseminating these ideals.

¹⁰⁴ Ibid.

¹⁰⁵ Casey, David. "How Copenhagen's Joined-Up Tourism Approach is Paying Dividends." *Routes Online*, 22 August 2019,

https://www.routesonline.com/news/29/breaking-news/285999/how-copenhagens-joined-up-tourism-approach-is-paying-dividends/

^{106 &}quot;Knowledge Center." Visit Denmark, https://www.visitdenmark.dk/corporate/videncenter

Besides Youtube, other social media networks like Facebook, Instagram, and Twitter present powerful ways of transmitting ideas and creating global connections. Andreas Kaplan and Michael Haenlein define social media as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and allow the creation and exchange of user generated content." They are unparalleled for their reach and engagement, and for the possibilities for spreading ideas and knowledge, whether through personal posts, forums, or professional pages. The type of content social media users consume and interact with has a significant effect on their beliefs and perspectives. In one study, Facebook changed the newsfeeds of two groups of users to be more positive or more negative; the users interacting with more positive content shared more positive content, and the other group vice-versa. Exposure to certain types of content on social media has a powerful impact on people's worldview.

Many businesses or organizations have social media pages to interact with the public and to promote their work and content. All of the organizations discussed thus far in this thesis have Facebook pages which they use actively. Looking at these pages, it is easy to understand the mission and goals of these institutions based on what they post. They often share documentation about their latest projects or initiatives, articles that they have written or agree with, or best-practice examples from other places. Social media pages and profiles are an effective tool for public engagement if used actively and correctly; however, they can be limited in scope. To stay updated on the posts on an institution's page or profile, one has to be following the page. Followers are mostly people who are already familiar with the organization, or have otherwise

¹⁰⁷ Kaplan, Andreas M., and Michael Haenlein. "Users of the world, unite! The challenges and opportunities of Social Media." *Business horizons*, 2010, vol. 53, no. 1, pp. 59-68.

¹⁰⁸ Schroeder, Ralph. "Big Data and the Brave New World of Social Media Research." Big Data & Society, July 2014, doi:10.1177/2053951714563194.

arrived there by recommendations or outside links. It is difficult for a page to reach and interact with social media users that are not followers, or to attract new followers without outside action. However, sharing content to followers' personal pages or groups that they are a part of provides methods to overcome these limitations and extend the scope of the page.

Forums and groups present opportunities for people to participate in a setting where people share similar interests and mindsets. There are many Facebook groups dedicated to various urbanist issues, some containing hundreds of thousands of people. From zoning to mapping to transit, there is a group for almost every niche on Facebook. One of the most famous and influential is the *New Urbanist Memes for Transit Oriented Teens* group. It has been mentioned in various publications, such as *The Guardian, Vice News, Chicago, CityLab*, and more. 109 110 111 It has almost 200,000 members from all around the world, predominantly Millennials, posting content constantly throughout the day. The group is known for its left-leaning politics, commitment to public transportation and strong anti-car stance. Although posts are often humorous memes, often with an absurd or post-modernist bent, articles and statistics are also often shared. The comment sections often devolve into debates and discussions about complex urban planning and societal issues. The original NUMTOT group has generated

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¹⁰⁹ Hunt, Elle. "Meet the NUMTOTs: the Millenials Who Find Fixing Public Transport Sexy." *The Guardian*, 5 July 2018,

 $[\]frac{https://www.theguardian.com/cities/2018/jul/05/meet-the-numtots-the-millennials-who-find-fixing-public-transit-sex y-urbanist-memes}{} \\$

¹¹⁰ Mortice, Zach. "Meet the 61,000 Transit Nerds of Facebook's 'New Urbanist Memes for Transit Oriented Teens." *Chicago*, 29 March 2018,

https://www.chicagomag.com/city-life/March-2018/Meet-the-61000-Transit-Nerds-of-Facebooks-New-Urbanist-Memes-for-Transit-Oriented-Teens/

¹¹¹ Ongweso, Edward. "Bernie Sanders Secures Crucial Endorsement from Leftist Facebook Meme Page." *Vice News*, 16 Jan. 2020,

https://www.vice.com/en_us/article/epgxqz/bernie-sanders-secures-crucial-endorsement-from-leftist-facebook-mem_e-page

about twenty to fifty spinoffs, named in a similar vein such as *Form and Function Memes for Architectural Teens* and *Two-Wheeled Memes for Bicycle Oriented Teens*. 112

The group's influence extends beyond the internet world into real life. A significant percentage of the group's members work in planning or transit-related fields, with many citing their engagement with the group as the influence behind their career choice. Some members have gone on to run for public office. These are people who are in policy-making and decision-making positions, who align themselves with the values expressed in the NUMTOT group. They have some ability to implement transit-friendly and cycling-friendly agendas into policy, and attempt to do so.

Copenhagen is mentioned often in the group as a model of public transportation, design, and of course, cycling. First-time visitors will often post about their impressions of the city, their amazement at the feeling of safety, and their envy over the state of the cycling infrastructure. The city is often designated "peak NUMTOT". Members share articles and posts from Copenhagenize, Gehl, and the Cycling Embassy of Denmark. *The Life Between Buildings* by Jan Gehl and *Copenhagenize* by Mikael Colville-Andersen are frequently recommended as essential urbanist readings in response to book suggestion queries. In fact, Colville-Andersen is actually a member of the group and often posts and interacts with content. Copenhagen as a model for cycling is a powerful image and popularized idea in the NUMTOT group. Because of the

Mortice, Zach. "Meet the 61,000 Transit Nerds of Facebook's 'New Urbanist Memes for Transit Oriented Teens." *Chicago*, 29 March 2018,

https://www.chicagomag.com/city-life/March-2018/Meet-the-61000-Transit-Nerds-of-Facebooks-New-Urbanist-Memes-for-Transit-Oriented-Teens/

¹¹³ Bliss, Laura. "The 'Transit-Oriented Teens' Are Coming to Save Your City." *CityLab*, 30 March 2018, https://www.citylab.com/life/2018/03/new-urbanist-memes-for-transit-oriented-teens/556790/

wide-reaching influence of this particular group, this model can impact members' individual perceptions and professional goals and directions.

There are of course other Facebook groups and social media forums around the issues of cycling, transit, and urbanism, where these issues are discussed, that are not NUMTOT, and are not mentioned here. It is impossible to list them all or trace all online activity and engagement with these Danish organizations. NUMTOT stands out particularly for its large number of members, high levels of activity and engagement, and influence in the media and offline world.

In the offline world, ideas spread through firsthand accounts and personal experience. As mentioned above, the rise of Copenhagen as a tourist destination has greatly increased the amount of tourists it receives. This, in addition to the focus online on Copenhagen as a best-practice example of cycling and urbanism has given rise to a particular type of tourism: policy tourism. Policy tourism as a process involves professionals and policymakers visiting cities for the sake of learning from their policy successes.¹¹⁴

Kevin Ward defines two types of policy tourism: event-led policy tourism, in which professional and policymakers from around the world gather to listen to presentations and panels, and visit-led policy tourism, in which groups of policy actors from one city visit and tour another city and learn from their policy actors. Copenhagen participates in and hosts both types of policy tourism. Representatives of Copenhagen present at various conferences around the world, and host some in the city itself, like the Velo-City conference. Visit-led policy tourism is increasingly popular, as delegations of officials from different cities visit Copenhagen for tours

¹¹⁴ González, Sara. "Bilbao and Barcelona 'in Motion'. How Urban Regeneration 'Models' Travel and Mutate in the Global Flows of Policy Tourism." *Urban Studies*, vol. 48, no. 7, May 2011, pp. 1397–1418.

¹¹⁵Ward, Kevin. "Entrepreneurial Urbanism, Policy Tourism, and the Making Mobile of Policies." *The New Blackwell Companion to the City*, 2011, pp. 726-737.

and master classes about its cycling culture and infrastructure from professionals. Both Copenhagenize and the Cycling Embassy of Denmark offer guided study tours and masterclasses targeted at visiting policymakers and planners, focusing on different aspects of cycling, from infrastructure, to safety, to public health. The study tours are sometimes initiated and organized from the American end itself: PeopleforBikes, an American advocacy group, has launched The Green Lane Project Study Tours, bringing delegations from American cities to significant biking cities in Northern Europe. PeopleforBikes says that "The primary purpose of the tour is to elevate the perceived importance of adopting good ideas and to accelerate the speed in which these ideas are shared."

The City of Copenhagen itself also participates in the process of spreading ideas and making knowledge accessible globally. The City conducts studies of its infrastructure, as well as records statistics of the demographics of its cyclists frequently. The City makes most of its reports and studies available online in English, so that they can easily be accessed by anyone, and used as examples or citations. For information to be mobile, it must be easily accessible. This openness on the part of the City of Copenhagen provides important resources for officials from around the globe seeking information and data to use in their research and policies.

Much of the urban policy mobilities literature, and before that, the policy transfer literature, has focused on formal channels of policy learning, such as policy tourism, conferences

¹¹⁶ Andersen, Michael. "The Green Lane Project's Eye-Opening Study Tours Are Now Open to Any City." *PeopleForBikes*, 15 Sept. 2014,

peopleforbikes.org/blog/the-green-lane-projects-eye-opening-study-tours-are-now-open-to-any-city/

¹¹⁷ Vanderkooy, Zach and Meredith Glaser. "Effective Study Tours: Turning Inspiration into Action".

PeopleforBikes, 2016, https://b.3cdn.net/bikes/22a3174488300478f0 mlbr486gz.pdf

¹¹⁸ City of Copenhagen. 2017. Copenhagen City of Cyclists: Facts and Figures 2017. Copenhagen, Technical and Environmental Administration, 3.

and research.¹¹⁹ However, it is important to also pay attention to informal methods of idea diffusion, because they can have a significant effect on people's perceptions. The materials associated with the diffusion of the above ideas, formal and informal - whether they are speeches, statistics, blogs, maps, photographs, reports - are circulated around the globe increasingly through the Internet. Stone critiques the previous literature for focusing too narrowly on the activities of formal state actors, when informal actors can influence the policy process too.¹²⁰ Especially in democracies, grassroots movements of citizens can influence the adoption and implementation of policy. Therefore, it is important to consider all types of flows of ideas from Copenhagen to American cities in this discussion.

The ideas associated with Copenhagen's approach to cycling have permeated to all corners of the earth in the past few decades. The flow of information around the world is made possible through advances in technology, which eliminates many constraints of accessibility. The increasing interconnectedness of the world presents unlimited opportunities for the process of policy transfer. Through a combination of various platforms and methods, both online and offline, policymakers and practicing professionals have become familiar with these ideas and policies, and increasingly refer to them in practice. Although this knowledge may not always translate to actual policy change and action, it is no denying that it has influenced opinions and perspectives, as is evident from comments and testimonies made by those consuming online

¹¹⁹McCann, Eugene. "Expertise, Truth, and Urban Policy Mobilities: Global Circuits of Knowledge in the Development of Vancouver, Canada's 'Four Pillar' Drug Strategy." *Environment and Planning A*, 2008, vol. 40, pp. 885-904.

¹²⁰ Stone, Diana. "Transfer Agents and Global Networks in the 'Transnationalisation' of Policy." *Journal of European Public Policy*, vol. 11, 2004, pp. 545-66.

content. The next chapter will attempt to trace these policies originating from Copenhagen in practice in American cities, and to measure their degree of implementation.

At the beginning of the twenty-first century, most American cities were not thinking about cycling in the least. Now, it is difficult to find a city that hasn't at least had a conversation about the bicycle's role in urban life. Many American cities have adopted bike master plans guiding the development of a cycling network, and have committed to investing in cycling infrastructure. Although no American city is close to approaching the modal share of cycling of Copenhagen or Amsterdam, cycling rates have increased impressively in many cities, and the debut of commitment to cycling is a dramatic departure from the car-centric planning of most of the past century.

The increase in cycling facilities in U.S. cities has been meteoric. Before 2011, only 78 protected bike lanes existed in the entire country. By the summer of 2018, 550 protected bike lanes had been installed around the country. With large and powerful cities such as New York City and San Francisco leading the way and reorganizing their streets, cities and towns around the country are changing their urban fabric. There is plenty of discussion about how North American cities are attempting to improve cycling conditions and the methods through which they are doing so. There are comparative analyses of cycling conditions between different cities. However, there is not much of a discussion on what models American cities are referencing and what types of policies are influencing their attempts. This chapter will investigate American cities' cycling strategies and initiatives, and their connections to Copenhagen's cycling policies.

^{121 &}quot;Inventory of Protected Bike Lanes." *PeopleforBikes*, 2019, https://peopleforbikes.org/green-lane-project/inventory-protected-bike-lanes/

As discussed in the previous chapter, various influences have encouraged Americans to cycle more, and cycling rates across the country have increased greatly. Many shifts in the American lifestyle have factored into this change: young Americans are increasingly moving to city centers, driving less, and seeking alternative ways of living. As more and more people move to cities, it is clear that congestion and pollution will only worsen if the same method of car-centric development is continued. Many of the people that are moving to cities are moving precisely because they do not want to drive or live in a low-density suburb. Cities are trying to cater to this demographic. In his seminal book *The Rise of the Creative Class*, Richard Florida chronicled the growing role of creativity in the economy, influencing the strategies cities take to serve their shifting demographic. ¹²² In addition, growing concern over the threat of climate change has forced municipal leadership to search for ways to make their cities more sustainable and resilient. The combined factors of congestion, changing attitudes, and climate change, have forced cities to rethink their transportation strategies and consider new solutions.

In many American cities, grassroots organizing around cycling and transit issues spurs the momentum toward change, but this change is most effective when it is spearheaded and supported by the leaders of the city. Mayors and city councils have the actual authority to make decisions and implement them. Led by mayors in major American cities - New York City, San Francisco, Seattle - the tide has been turning towards investing in public transit and cycling. Colville-Andersen writes,

When I look around the world at the growing list of cities that are once again taking the bicycle seriously, I can identify one primary factor: political leadership. Advocates and

¹²²Florida, Richard. *The Rise of the Creative Class*. Tandem Library, 2003.

activists continue to do their part, pushing from the bottom upward. At the end of the day, though, it seems that policymakers exercising top-down leadership are the catalysts for real change.¹²³

It is often this progressive and visionary leadership that takes the initiative to engage the services of Danish consulting firms, think tanks, and educational organizations. Copenhagenize, Gehl Architects, and the Cycling Embassy of Denmark have all worked with various American cities around cycling initiatives. Often these mayors or city councils have already been influenced by the cycling materials available on the internet, such as blogs, books, and testimonies, or by official conferences and policy tourism. A significant number of municipal leaders cite study tours to Copenhagen as their motivation behind cycling investment and credit these tours as "eye-opening". 124

Perhaps most famously, New York City has become a cycling success story and has dramatically increased its cycling facilities, and consequently its cycling rates. As the largest and wealthiest city in the country, New York City is extremely influential, not just on a national, but on a global scale. With a municipal budget and staff larger than some states', the City of New York has the ability to implement innovative and dramatic policies. Supported by Mayor Michael Bloomberg, and spearheaded by his Transportation Commissioner Janette Sadik-Khan, the NYC DOT completed the most rapid installation of bike lanes ever executed in any city during an intense, six-year period. 125 The landmark PlaNYC plan, a long-term sustainability plan

¹²³ Colville-Andersen, Mikeal. *Copenhagenize: The Definitive Guide to Global Bicycle Urbanism.* Island Press, 2018, pp. 199.

¹²⁴ Andersen, Michael. "The Green Lane Project's Eye-Opening Study Tours are Now Open to Any City." *PeopleforBikes*, 15 Sep, 2014,

https://peopleforbikes.org/blog/the-green-lane-projects-eye-opening-study-tours-are-now-open-to-any-city/

125 Sadik-Khan, Janette and Seth Solomonow. *Streetfight: Handbook for an Urban Revolution*. Penguin Random House, 2016.

for the city, unveiled on April 27, 2007, committed to increasing cycling rates and called for the completion of the city's 1,800 mile bicycle plan, and signified the start of a new approach at DOT.¹²⁶ The plan called for 504 miles of physically separated lanes. At the start of Sadik-Khan's tenure as Commissioner in 2007, New York's bike network consisted of 220 miles of bike lanes. Two hundred miles of bike lanes were created in the first three-year period.¹²⁷ As of 2018, 1,240 miles of bike lanes had been installed in New York City, 480 miles of those being protected lanes.¹²⁸ There has been a 134% growth in daily cycling from 2007 to 2017, culminating in about 490,000 trips made by bicycle daily.¹²⁹

In its cycling strategy, the leadership of New York was definitely referencing

Copenhagen as a model. In her book, *Street Fight: Handbook for an Urban Revolution*, former

Transportation Commissioner Janette Sadik-Khan recounts the dramatic changes she oversaw during her tenure and details her approach. In the first few months of her job, she visited

Copenhagen with a delegation from the Department of Transportation, and toured the city with Jan Gehl. She described how this trip was essential in shifting the views of some of the skeptical incumbents of the department. The delegation was able to witness Danish cycling policies and practice, and brought these ideas back with them.

In continuing her initiative to reinvigorate New York City's streets, Sadik-Khan continued to refer to Gehl, and formally hired him and his team as consultants for the

¹²⁶ The City of New York. *PlaNYC: A Greener, Greater New York*. The City of New York, 2007, pp. 87.

¹²⁷ Sadik-Khan, Janette and Seth Solomonow. *Streetfight: Handbook for an Urban Revolution*. Penguin Random House, 2016, pp. 158.

¹²⁸ New York City Department of Transportation, *Cycling in the City: Cycling Trends in NYC*. The City of New York, 2019, pp. 7.

¹²⁹ Ibid.

¹³⁰ Sadik-Khan, Janette and Seth Solomonow. *Streetfight: Handbook for an Urban Revolution*. Penguin Random House, 2016, pp. 154.

department. Sadik-Khan worked in conjunction with Transportation Alternatives, a prominent local transit advocacy group, that raised money to hire Gehl as a consultant through the non-profit Mayor's Fund to Advance New York City. 131 This bypassed standard procedures that would've taken years for the department to allocate the money and get approval for its contracts. Gehl and his team were engaged in collecting data and conducting studies on some of New York's busiest streets. They conducted their Public Space surveys and recorded how people use the street. This was the first time that New York had collected data on where people walk, bike, and spend time in these streets, according to Julia Day of Gehl Architects. She said, "by doing that (collecting data), we were able to ... build a stronger case for change, also show how dramatic the situation really was in terms of there being, for example, like 90% of the space building to building was devoted to cars, whereas only 10% of the actual traffic was cars, the rest was from people walking." This data was instrumental in supporting the concept of reallocating space from cars to pedestrians and cyclists. From there, Gehl Architects were involved in creating some preliminary designs to start to create and address these issues of space inequities.

One of the most prominent ideas that New York City "copied" from Copenhagen was the design of curbside bike lanes protected by a lane of parked cars. The design fully separates the cyclists from the moving cars, reducing risk and improving traffic flow. Upon their return from Copenhagen, Sadik-Khan's team set about designing and acquiring permission for this type of bike lane design. The location for the pilot of this design was Ninth Avenue in Manhattan's Chelsea neighborhood. This became the first parking-protected bike lane in North America, a

¹³¹ Ibid, 14.

¹³² Day, Julia. Personal Interview. 3 April 2020.

direct result of influence from Copenhagen. 133 The resulting bike lane was not an exact copy of a Copenhagen bike lane - it was not on a raised curb separated from vehicular traffic - but nevertheless, the design was a dramatic departure for the department. 134 Due to budget constraints, the strategy was to create bike lanes as inexpensively as possible, meaning the DOT used paint to designate lanes instead of a raised curb. However, the resulting lane was still much safer than previous designs that had placed bike lanes next to vehicle travel lanes. The Ninth Avenue Lane received widespread recognition, receiving the accolade of "Best Program" carried out by a member in 2008 by the Transportation and Planning Council of the Institute of Transportation Engineers (ITE), an international group of transportation professionals. ¹³⁵ The successful installation of the first bike lane of this type determined the consequent course of action for the department, and led to the installation of many more such lanes throughout the city. Summing up the city's accomplishments in early 2014, Gehl asserted that New York City had done more than any other American city to "discourage commuting by car and increasing the use of subway, biking and walking to get around."136

The dramatic changes enacted in New York City drew substantial attention, and inspired other cities to shift their bicycle policies. More cities than ever before have committed to improving their cycling rates and have released bike master plans. It is easy to see the influence of the Copenhagen model in the new approach that American cities are taking to bicycle infrastructure. In the conventional approach of American cities, if they even considered cycling

¹³³ Ibid, 155.

¹³⁴ Ibid, 157.

¹³⁵ Luberoff, David. "Reimagining and Reconfiguring New York City's Streets." The President and Fellows of Harvard College, 2016, pp. 13. http://research.gsd.harvard.edu/tut/files/2016/02/NYC-Case-1-21-161.pdf ¹³⁶ Ibid. 30.

as a transportation strategy at all, bike lanes were simply painted onto the street, and placed directly next to the vehicle traveling lane, and in the way of the doors of parked cars. However, most cities are realizing this is not a viable or effective strategy, and actively trying to improve their infrastructure to be safer and more efficient. The steps taken to improve poor design is a concrete sign of changing attitudes towards alternative modes of transportation, based on the ideas and examples of "best-practice" cities.

The amount of protected bike lanes have increased every year since 2006, and are now found in 124 cities throughout the country. Large metropolitan areas such as San Francisco, Washington DC, and Boston, have led the charge, but local officials in smaller towns have started to explore similar possibilities as well. However, many, especially those in more conservative states, have been hindered by various obstacles, such as political antagonism, an unflinching engineering establishment, and budget shortfalls. Many state DOTs have rejected proposals for new bike lanes built because they are not approved by traditional road design manuals used by engineers. The liabilities associated with higher cycling rates and new road designs have also posed an issue for some states. In response, the National Association of City Transportation Officials (NACTO), a group of officials from 15 large American cities, led by Sadik-Khan, released the *Urban Bikeway Design Guide*, in 2011 as an alternative resource to the standard and outdated manuals. The Federal Highway Administration formally endorsed this

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[&]quot;Inventory of Protected Bike Lanes." *PeopleforBikes*, 2019, https://peopleforbikes.org/green-lane-project/inventory-protected-bike-lanes/

Luberoff, David. "Reimagining and Reconfiguring New York City's Streets." *The President and Fellows of Harvard College*, 2016, pp. 30. http://research.gsd.harvard.edu/tut/files/2016/02/NYC-Case-1-21-161.pdf

guide in 2014, and released their own report about protected bike lanes in 2015. This was crucial in liberating local officials to implement these designs in their cities and towns.

In formulating and implementing their bicycle strategies, American cities and towns looked elsewhere for guidance, such as New York City after its successes, and of course, Copenhagen. Both Copenhagenize and Gehl Architects have worked with numerous American clients on a variety of projects regarding cycling policies and infrastructure. In San Francisco, Gehl worked on a project on the busiest transit street in the city, Market Street, to close the street to cars, directly drawing on Jan Gehl's work on Strøget in Copenhagen, and to transform it into a space for bicyclists and pedestrians. While Gehl has integrated cycling as part of a more holistic approach to improve public life for their clients, Copenhagenize has focused more specifically on cycling infrastructure and developing designs. Copenhagenize has worked on bicycle master plans for five American cities: Detroit, MI., Glen Lennox, NC., Long Beach, CA., Akron, OH., and Dunwoody, Atlanta, GA.

Their work in American cities focuses on integrating current transportation uses and bicycle facilities into a coherent network of protected cycling lanes, along with the design of additional infrastructure, such as signage, parking, and bridges. The end result has been master plans that will guide these cities in implementing bicycle networks. Each of these plans includes parking protected and curb protected bike lanes. Although none of these plans have been completed fully yet, the amount of protected bike lanes has increased in each city.

¹³⁹ Andersen, Michael. "The Feds Jump on Board: Protected Bike Lanes are now Official Federal Policy. *PeopleforBikes*, 19 May 2015,

https://peopleforbikes.org/blog/the-feds-jump-on-board-protected-bike-lanes-are-now-official-federal-policy/
140 "Transforming San Francisco's Busiest Transit Corridor." *Gehl*,

îhttps://gehlpeople.com/projects/transforming-san-franciscos-busiest-transit-corridor/

¹⁴¹ "Projects." *Gehl*, https://gehlpeople.com/work/projects/

Investing in cycling infrastructure makes sense for struggling post-industrial cities like Detroit and Akron because of the high amounts of residents who don't have access to cars, and because of the much lower cost of investing in bicycle infrastructure rather than cars. These cities are seeking to use this new strategy to position themselves for revitalization and recognition - proudly proclaiming their partnership with a cosmopolitan firm like Copenhagenize.¹⁴²

Beyond those cities that have consulted directly with Gehl and Copenhagenize, other American cities are initiating their own bicycle strategies. Strong advocacy and leadership in other large American cities from Minneapolis to Washington D.C. to Chicago have forged the way for increased implementation of bicycle infrastructure and promotion of cycling to the population. One after another, municipal leaders have declared plans to build out their bicycle networks, a feat that would have not been possible at the beginning of the twenty-first century. Former Chicago mayor Rahm Emmanuel announced plans to build 100 miles of protected bike lanes, Minneapolis aims to add 136 miles of protected bike lanes with the goal of 60% of its trips done by transit, bike, or foot by 2030, and Boston intends to reach a network of 356 miles within 30 years. 143 144 145

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^{142 &}quot;Greater Downtown Area Bicycle Network Plan." City of Detroit,

https://detroitmi.gov/departments/planning-and-development-department/citywide-initiatives/greater-downtown-are a-bicycle-network-plan

¹⁴³ Wisniewski, Mary. "Chicago Mayor Rahm Emanuel Making Big Push for Bike Paths." *Reuters*, Thomson Reuters, 24 Sept. 2011,

 $[\]frac{https://www.reuters.com/article/us-chicago-bike-expansion/chicago-mayor-rahm-emanuel-making-big-push-for-bike-paths-idUSTRE78N25520110924$

¹⁴⁴ Hazzard, Andrew. "City Aims for 60% of Trips Made by Transit, Bike or Foot by 2030." *Southwest Journal*, 21 Mar. 2020,

 $[\]frac{https://www.southwestjournal.com/news/routes-and-roads/2020/03/city-aims-for-60-of-trips-made-by-transit-bike-or-foot-by-2030/$

¹⁴⁵ Boston Department of Transportation. "Boston Bike Network Plan." *Boston Department of Transportation*, 2013,

Portland has long been at the forefront of cycling among large American cities. It boasts the highest modal share of cycling in large American cities (with a population over 600,000), with about a 6.3% modal share of cycling for daily commuting, according to the last American Community Survey data on cycling in 2017. Although this modal share is still much higher than other American cities, this rate has stagnated in the last few years, while other cities have seen their cycling rates rapidly increase. I must also point out that even as the United States' most bicycle-friendly city, this falls remarkably short of Copenhagen's cycling modal share of 41%. Much of Portland's bicycle network was laid out in the 1980's, consisting of now outdated designs: narrow lanes simply painted onto the street next to the travel lane. As research has shown, these types of lanes are not much safer than no lanes at all, perhaps explaining why the rates remain stagnant as more risk-averse residents are hesitant to cycle in such conditions.

However, the city of Portland has more recently focused on upgrading and improving its network with physically separated bicycle lanes from vehicles, strongly influenced by Copenhagen. In a presentation for the Portland government, a transportation consultant specifically referenced cycling designs from Copenhagen, from cycle track width to signaling to left turns. In addition, a delegation from Portland visited Copenhagen in 2015 on a study tour, and came back with many takeaways that they included in the next bike plan, such as new

https://www.cityofboston.gov/images_documents/Boston%20Bike%20Network%20Plan%2C%20Fall%202013_FINAL_tcm3-40525.pdf

¹⁴⁶ US Census Bureau. "Bicycle Commuters". *The United States Census Bureau*, 2019, https://www.census.gov/content/dam/Census/library/stories/2019/05/younger-workers-in-cities-more-likely-to-bike-

to-work-infographic.pdf

147 Marshall, Wesley and Nicholas Ferenchak. "Why Cities with High Bicycling Rates are Safer for All Road

No. 167 Marshall, Wesley and Nicholas Ferenchak."

Users." *Journal of Transport & Health*, vol. 13, 2019, pp. 100539.

148 Lekach, Sasha. "Women Feel More Uncomfortable Biking to Work than Men, Strava Report Finds." *Mashable*,

Mashable, 11 Dec. 2019, mashable.com/article/bicycling-commute-strava-data-gender-parity/.

¹⁴⁹ Birk, Mia. "Copenhagen Bike Facilities". *Aalta Planning & Design Co*. https://www.portlandoregon.gov/transportation/article/228196

methods of land-use planning and an idea for a bicycle highway. The trip pushed the delegates to consider transportation from a multimodal perspective: Debbie Kitchin, president of a local district council and a participant on the trip, said, "Mobility is the key. ... In Copenhagen, the No. 1 reason for people to ride their bikes is that it is faster and more convenient. If we think in those terms and consider the safety question, we may be able to encourage more people to ride for some of the trips they make in a week." The subsequent shift in focus on improving cycling conditions and strengthening the network in Portland with protected lanes can be tied to the influence of the Copenhagen model. It is reasonable to say that the viability of cycling policies from Copenhagen have had a meaningful impact on the planning and political officials of Portland, and have shaped their approach to implementing cycling policies in their city.

Despite all of these "success stories" and strides that American cities have made in terms of cycling, it is difficult to measure the true extent and impact of these changes. One reason is because of the lack of comprehensive data about cycling in U.S. cities. The current modal share data, the main source of information about cycling, comes from the American Community Survey. The modal share is collected by one question: "How did the person usually get to work last week?" Respondents are restricted on only one mode of transportation, which they use for the longest distance. This method of collecting data chronically under-reports cycling levels. For one, many commutes are multi-modal, using multiple types of transportation, but this is left out of the data. Furthermore, by the U.S. Department of Transportation's estimate, commutes

¹⁵⁰ Anderson, Jennifer. "Portland Delegates' Wheels Turning After Copenhagen Trip." *Pamplin Media Group*, 9 Jan. 2015, pamplinmedia.com/pt/9-news/266114-139364-portland-delegates-wheels-turning-after-copenhagen-trip. ¹⁵¹ Ibid.

¹⁵² US Census Bureau. "Commuting FAQs." *The United States Census Bureau*, 8 May 2017, www.census.gov/topics/employment/commuting/about/faq.html#par_textimage_1880175746.

account for less than 20% of trips taken, and "the data showing commute mode share miss important information on other trips made throughout the day, which might include more walking and bicycling." Beyond the ACS survey, cities may collect and publish their own cycling counts and projections. However, the quality and quantity of data varies from city to city, with no standard method present of determining cycling rates. Some cities conduct their own surveys, that may vary in scope and effectiveness. Some cities, like New York and Seattle, are installing bicycle counters on key streets, similarly to Copenhagen. These contribute additional bicycle counts to the city, but there are few of them and their positioning does not provide a comprehensive view of cycling in the city.

Thus, the most effective method of measuring impact for the purposes of this investigation is through tracking shifts in policies and opinions. In investigating the changing approach to cycling that American cities are taking, one can see parallels between the Copenhagen approach. Testimonies are an important source of information because they often provide a first-person account of a shift in mindset. PeopleforBikes has published some testimonies from participants on its study tours about the effects of their experience with cycling in Copenhagen: Pittsburgh's mayor returned from a trip to Denmark in 2015 eager to position his city as a leader in street design. Boston Transportation Commissioner Gina Fiandanca integrated an "active transportation director" into its planning division. The Portland Downtown Neighborhood Association adopted a plan that "strongly supports car-free dedicated bicycle

¹⁵³ "Commute Mode Share." *U.S. Department of Transportation*, 24 Aug. 2015, www.transportation.gov/mission/health/commute-mode-share.

¹⁵⁴ Miller, Stephen, et al. "Meet the New Yorkers Building the Biggest, Brightest Bike Counter Yet." *Streetsblog New York City*, 14 Feb. 2014, nyc.streetsblog.org/2014/02/14/bright-lights-big-city-meet-the-new-yorkers-building-a-high-viz-bike-counter/.

infrastructure in the central city" after a presentation of findings from a Danish study tour by its president, Felicia Williams. 155

In tracing the impact of Copenhagen policies, one can look into the inspirations and references of American civic leaders and practicing professionals implementing similar ideas in their cities, in their speeches and presentations. One can look for first hand interactions with the Copenhagenizing establishment, whether it is attending a conference with these speakers, participating in a study tour, or directly hiring consultants. This is the direct exchange of ideas; there is also the indirect transmission of ideas that occurs online or through learning from other cities secondhand. For example, many American cities may be looking towards New York City as a model for their cycling strategy, which in turn was first influenced by Copenhagen. The indirect exchanges are difficult to track, thus making it impossible to determine the full impact.

In addition, it can be difficult to see the direct parallels between the implemented concepts in American cities and Copenhagen because of the mutation of ideas as they travel. Colville-Andersen states that "I am convinced that copy/pasting the best solutions into any city in the world is the preferable solution." Thus, in his work for American cities, the resulting designs are very similar to Copenhagen's bicycle network. However, it is not possible to completely transfer a policy fully from one place to another. As has been detailed by multiple academics, policy is a very local affair, depending on local circumstances and leadership, affecting how policy is perceived and received. Peck and Theodore write that, "While some aspects of the policymaking process, like the generation of codified institutional designs and

¹⁵⁵ Vanderkooy, Zach and Meredith Glaser. "Effective Study Tours: Turning Inspiration into Action". *PeopleforBikes*, 2016, https://b.3cdn.net/bikes/22a3174488300478f0 mlbr486gz.pdf

¹⁵⁶ Colville-Andersen, Mikeal. *Copenhagenize: The Definitive Guide to Global Bicycle Urbanism.* Island Press, 2018, pp. 241.

models seem to be built for travel, there is much that cannot be so easily bottled for export, including charismatic leadership, propitious local circumstances, and the presence of supportive partners." ¹⁵⁷ In addition, restrictions and limitations vary from place to place, and can be beyond localities' control. National guidelines and requirements for street design cannot be challenged or ignored, making new designs difficult to adopt. In addition, funding, which often comes from federal or state governments, can be difficult to access and render some projects impossible to complete, or change the way in which they can be implemented.

For example, although New York City was heavily influenced by Copenhagen's cycling infrastructure, their resulting designs did not look exactly like Copenhagen's. Due to budget constraints, New York's lanes are not on a raised curb. Due to national street design guidelines, this type of design was not in any manuals, and had to be modified and passed through bureaucratic red tape before it could be approved. The local conditions of New York City dictated what could be achieved, and the result was a design inspired by Copenhagen, rather than a direct copy. Other cities have gone through this process as well and modified ideas from Copenhagen before putting them in place. It is not reasonable to expect that American cities will look like Copenhagen, as arriving ideas pass through local restrictions and scrutiny before becoming reality. As McCann and Ward explain, "...policy is not only remoulded when it is adopted in a new setting, but the mobilising of policy, as a socio-spatial, power-laden process,

¹⁵⁷ Peck, Jamie, and Nik Theodore. *Fast Policy: Experimental Statecraft at the Thresholds of Neoliberalism*. University of Minnesota Press, 2015, pp. xvii.

often involves change along the way, as policies are interpreted and reinterpreted by various actors." ¹⁵⁸

Rather than determining the impact of the Copenhagen model from the policies implemented in American cities, it is more important to investigate the process. Several factors make it difficult to judge from the resulting design or policy: lack of data, indirect flows of information, and the process of mutation of policies as they travel. There is also the matter of time. Due to bureaucratic constraints or budget shortfalls, many ideas and projects take quite a long time to realize and bring to fruition in American cities. There may be projects and discussions in action currently that are not publicized or implemented yet. Thus, it is more effective to track references, citations, and changes in opinion attributed to Copenhagen in order to gauge its impact on American cities and civic leaders. Urban policy mobilities investigations require a comprehensive approach, a holistic examination of the process, and a diverse methodology.

McCann, Eugene, and Kevin Ward. "Policy Assemblages, Mobilities and Mutations: Toward a Multidisciplinary Conversation." *Political Studies Review*, vol. 10, no. 3, Sept. 2012, pp. 325–332, doi:10.1111/j.1478-9302.2012.00276.x.

Conclusion

Throughout this investigation, I have sought to trace the flows of policy from Copenhagen to American cities, and to determine their impact. Within this process, I have specifically focused on Danish non-governmental institutions, with the bulk of the attention to famous consultancy firms that work on a global level: Copenhagenize, Gehl Architects, and the Cycling Embassy of Denmark. I set out at the beginning to investigate the role that these organizations have played in shaping cycling policy and design in the United States, and how this process operates in the flows of urban policy mobilities. Throughout my study, I have examined the missions and practices of these enterprises, the methods of flows of ideas, and the degree to which ideas originating in Copenhagen have influenced and been adopted in American cities.

My conclusion is that Copenhagen has positioned itself as a leader in "best practice" urban cycling policies due largely to the practice of these specialized non-governmental actors. Urban design and cycling consultants have played a large role in exporting ideas from Copenhagen to the rest of the world, and in identifying Copenhagen as the "go-to" city for urban cycling expertise. They are the primary actors in much of the policy transfer process, facilitating study tours, speaking engagements, and conferences. In their work, they specifically refer to Copenhagen as a blueprint for urban cycling, and heavily reference it in their projects. They have worked with American cities to produce master plans and localized designs that implement ideas drawn from Copenhagen.

Their work has had a large impact on cycling policies in American cities, specifically through the introduction of parking-protected and curb-separated bike lanes. In influential cities like New York city, San Francisco, and Portland, this approach has been adopted and influenced other cities in turn. Leadership of many American cities have shifted their cycling strategies after direct engagement with cycling in Copenhagen, whether through a study tour on location, a Youtube video, or a professional conference. The various flows of ideas from Copenhagen to the United States are often facilitated by non-governmental agents who specialize in transporting and implementing policies, in this case, consultants and cycling ambassadors. Referred to by Diana Stone as "policy transfer entrepreneurs," these actors play the largest role in packaging and exporting cycling strategies from the Copenhagen model. 159

In this process, it is the free and widespread flow of ideas facilitated by these actors that is the most impactful. Introduction to other designs, strategies, and policies provides new solutions for problems that American cities are looking to solve. As they try to solve issues of congestion, air quality, mobility and equity, and cost-efficiency, they increasingly see higher cycling rates as the key to solve these issues, and they turn to Copenhagen for strategies because of its large presence online and in source materials. Copenhagen is referenced often as a model cycling city in blogs, social media forums and pages, and in academic scholarship. Due to the fame and influence of Mikael Colville-Andersen and Jan Gehl, who have both played an outsized role in popularizing and spreading these ideas, the Copenhagen model is now a strong policymaking concept. No doubt, this is due in part to the effective marketing and branding of

¹⁵⁹ Stone, Diana. "Transfer Agents and Global Networks in the 'Transnationalisation' of Policy." *Journal of European Public Policy*, vol. 11, 2004, pp. 545-66.

Copenhagen as a cycling ideal by these very actors, through their writings and public appearances.

It is impossible to determine the full degree of influence of this model, and to track all of its transmissions, due to the various modes of travel of policies and the various mutations and interpretations that they undergo. The methods that I used to gain an understanding of the impact of this process were to trace some of the flows of information from Copenhagen to American cities, and to note shifts in American cycling policies since this model has been popularized. These shifts are noticeable in officials' spoken and written statements and in their actions, in the changes that American cities have made to their cycling strategies.

I have determined that there has been a definite shift due to the influence of Copenhagen in American cities in the past decade and a half, as evidenced by the emergence of the parking-protected lane as an adopted design. The year 2007 can be seen as the beginning of this shift to some degree, with the global popularity of Mikael Colville-Andersen's blog *Cycle Chic*, and the rising recognition of Copenhagen as a cycling mecca in parallel. From then on, the amount of appearances and references to Copenhagen in blogs, news articles, and social media posts increased dramatically. Before this time, most American cities were not interested in investing in cycling, and few had strategies laid out to increase and promote cycling. A turning point was Jannete Sadik-Khan's tenure as the Transportation Commissioner of New York City, under which the department undertook a radical period of investing and expanding cycling facilities, heavily drawing from Copenhagen, and working with Danish consultants. Following this, many other major American cities began incorporating similar strategies, often after direct contact with Copenhagen through study tours or presentations.

However, another difficulty in determining the true impact of the Copenhagen model is due to the influence of other policy models and cities. In particular, Amsterdam is another strong cycling city and influential model in policy making, and the two cities often compete to be recognized as the best cycling city in the world. Often, American delegations visit both Amsterdam and Copenhagen on their study tours, and are influenced by both cities and implement strategies drawn from both sources. Thus, these policies are conflated and both become influences in American cities. In addition, the process of mutation makes some policies unrecognizable, making it difficult to identify the exact model that a city drew from. For the purposes of my investigation, the non-governmental organizations and consultancies in Copenhagen are more established globally and have worked on high-profile projects in the United States, making their influence relatively simple to discern. Further scholarship and research may compare Amsterdam and Copenhagen, their distinct cycling policies, and their respective roles in urban policy mobilities. This would be useful to distinguish the two models and to analyze their respective impacts on American cities, and beyond that, global policymaking.

This case study would also benefit from a wider range of methodologies, such as quantitative analysis and ethnography. As my study was constrained by time, funding, personal skills, and accessibility to various resources, I focused on a general overview using mostly books and online media as resources. Further research may consist of an in-depth quantitative analysis of the flows of policies, considering information such as number of commissions, study tours, and international appearances of these actors. This could also take into account statistics of website traffic to their websites and references to them in different articles and forums. Another

methodology that could be employed in this investigation is ethnography. Following the primary transfer agents in this process would provide a deep insight into their practices and their intentions. McCann and Ward write that, "An important consequence of the increased attention to the movement and mutation of policies is the imperative to reflect on how researchers might best move *with* or *after* transfer agents and other policy actors that produce, circulate, mediate, modify and consume policies through their daily work practices." Although I was not able to employ ethnography personally, it is an important methodology in the field of urban policy mobilities and would be a useful application to this study as well.

I suspect further scholarship will provide perspectives through the lens of critical theory on this process. My intent was not to critique this process, but to provide an example and a case study of urban policy mobilities in practice. However, I must recognize the different implications of this process. Urban policy mobility is largely a product of globalization, of increased flows of both capital and ideas. It is a product of a neoliberal world order, in which cities compete for status and capital. As I have mentioned, cycling is often employed by civic leaders as a creative strategy for the purposes of urban regeneration, or a cost-saving investment, rather than a strategy to address socio-economic inequity and public health. In many cities, cycling infrastructure is implemented primarily in upper and middle-income neighborhoods, leaving lower income neighborhoods that most lack transportation options out of the bicycle network. This exacerbates processes of gentrification and marginalization, further continuing a pattern of increasing socio-economic inequality.

¹⁶⁰ McCann, Eugene, and Kevin Ward. "Policy Assemblages, Mobilities and Mutations: Toward a Multidisciplinary Conversation." Political Studies Review, vol. 10, no. 3, Sept. 2012, pp. 325–332, doi:10.1111/j.1478-9302.2012.00276.x.

In this neoliberal world order, inequality persists on a global scale as well, with some cities exerting more political and economic power than others. These cities are overwhelmingly those of the Global North, maintaining the power that they have accumulated from centuries of imperialism. These unequal power structures between cities of the Global North and the elsewheres are exploited to impose visions of urbanity and order according to the Northern cities on Southern cities. 161 The policy transfer process from Copenhagen to other cities can therefore in many ways be critiqued as colonial, as it imposes a certain standard and ideal of urban life upon another place. Philip Lawton critiques the "European city" model, and within that, the Copenhagen model, specifically citing Jan Gehl and his strategies, as reinforcing an inequitable urban ideal. He writes, "In summary, one of the more problematic elements of this city ideal is the extent to which it has been widely perceived to embody the specific traits of 'urbanity'. The seductive image of bike lanes and consumption spaces has served to blinker a deeper reading of urban issues and association problem solving." ¹⁶² The Copenhagen strategies adopted by American cities have to some extent ignored problems of inequity and accessibility, supporting this argument. In addition, the primary transfer agents in the flows of policies from Copenhagen operate on a global scale, but they have worked mostly with other European and American cities, overlooking much of the rest of the globe. The conferences and the study tours that they organize and participate in target mostly European and North American cities, continuing a historical tradition of discounting the Global South. Although my intent was not to provide a critical

¹⁶¹ Robinson, Jennifer. Ordinary Cities. Psychology Press, 2006.

¹⁶² Lawton, Philip. "Idealizing the European City in a Neoliberal Age." *The SAGE Handbook of New Urban Studies*. Edited by John Hannigan and Greg Richards. Sage Publications, 2017, pp. 78-90.

reading of "Copenhagenization," but merely to illustrate it in practice, I would be remiss if I did not acknowledge the issues ingrained in this process.

Looking beyond, the field of urban policy mobilities has great potential to evolve and grow, as the globalized world has made referring and drawing ideas from other places a staple of policymaking. The idea of urban models of a package of policies ready for export to other cities holds considerable relevance. This field is rife with further studies and theoretical implications, and for vigorous debates among scholars. In terms of the topics touched upon in this thesis, the changing nature of American cities in their quest to be more sustainable, creative, cosmopolitan, and competitive will spur robust urban scholarship as well. Cycling in American cities can be approached from many perspectives, from sustainability to equity to grassroots mobilization.

In drawing this investigation to a close, I'd like to return to my point of departure and consider the questions that I began this study with. I set out to understand the role that Danish transfer agents have played in shaping cycling policy and design in the United States and to what extent they have been successful. As I wrote above, I think that they have been very successful in changing the paradigm of cycling in the United States through various methods. It is clear that cycling will play an increasingly important role in our cities as cities seek alternative transportation strategies, and cities will be referring to "best-practice" examples for guidance in implementing their cycling policies. This case study may be helpful to policymakers as they seek to understand and shape the future of transportation in American cities. City officials may use this work to identify the methods that Copenhagen or other American cities have used to shift their transportation paradigms, or to identify resources or specialists that they could consult to promote cycling in their cities. I anticipate Copenhagen will retain its position as the

"best-practice" model of choice for American cities due to the work of its transfer agents.

Although no American city will become Copenhagen anytime soon, the increasing prevalence of quality infrastructure and favorable policies bodes well for increasing cycling as a primary mode of transport in American cities.

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