Rethinking the Street

Politics, Processes, and Space of Pedestrian- and Bicycle-Friendly Street Transformations in New York and Berlin

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AUTHOR'S DECLARATION

I hereby declare that

- I am familiar with the current PhD regulations of the Technical University Berlin;

- I am the sole author of this thesis and that this thesis and the work presented in it are my own and have been generated by me as the result of my own original research;

- I have used no other sources and aids other than those indicated. All passages, which are quoted from publications, the empirical fieldwork, or paraphrased from these sources, are indicated as such. The audio files of the interviews are attached in the digital copy of this thesis;

- I have not submitted the thesis in the same or a substantially similar version, not even partially, to another examination board and that it was not published elsewhere.

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Annika Levels

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ACKNOWLEDGEMENTS

CONTENT

LIST OF FIGURES[1]

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[1] All photographs are my own. They are used as illustrating examples to give a better visual impression of the cities and the respective street transformations, if not otherwise framed. Moreover, all graphics are my own. They are used to visualize spatial settings and developments, if not otherwise framed. The respective data base from which they have been derived is indicated in a footnote where necessary.

LIST OF ABBREVIATIONS

ADAC	General German Automobile Club
ADFC	General German Bicycle Club
A!KMS	Action! Karl-Marx-Straße
BID	Business Improvement District
BUND	Friends of the Earth Germany
CDU	Christian Democratic Union
CEO	Chief Executive Officer
DOT	Department of Transportation in the City of New York
DPC	Department for City Planning in the City of New York
FAB	Fulton Business Alliance
FNP	Land-Use Development Plan
GDR	German Democratic Republic
L.A.W.	League of the American Wheelman
MNGMT	Management
NYCSR	New York City Streets Renaissance Campaign
OLTPS	Mayor's Office of Long-Term Planning and Sustainability
PlaNYC	PlaNYC – A Greater, Greener New York
PPS	Project for Public Spaces
Sen. Dpt.	Senate Department for Urban Development and the Environment
SPD	Social-Democratic Party
StVO	German Federal Traffic Law
TA	Transportation Alternatives
TOPP	The Open Plan Project
UDP	Urban Development Plan
UN	United Nations
USA/ US	United States of America

1   INTRODUCTION: STREETS AT STAKE

The idea for my dissertation project originated during long touristy strolls through Manhattan, when I went to New York City for the first time on vacation in autumn 2010. Particularly the most central stretch of *Broadway* between *Union Square* and *Columbus Circle* in *Midtown* had caught my attention: one lane of the famous street had been closed down for car-traffic and was lined with tables, chairs and big planters. Business women and men were sitting at tables and having their lunch, while tourists among them were taking a break, resting their tired feet or drinking a coffee from one of the many shops around. From countless movies, iconic images, books and university seminars I knew of the traffic chaos to be expected in Manhattan. But here, the congested and car-clocked streets were gone (see Fig. 1).

Fig. 1: Impressions of Broadway, 2012

At *Madison Square* at the foot of the iconic *Flatiron Building* and at *Herald's Square* in front of the well-known *Macy's* department store urban plazas provided new space for pedestrians. Further uptown, on famous *Times Square*, *Broadway* had

been closed down even entirely for cars between *42nd* and *47th Streets* and a new pedestrian space had been installed. It was packed with people. Along the way, musicians were playing songs, and people in disguise of Mickey Mouse and other famous cartoon characters were always ready to let the numerous tourists take pictures with them. Between *Broadway*, *7th Avenue*, and *47th Street*, a sculptural staircase from which the tickets for theaters and shows were sold had been built. From its top, I had an astonishing view onto the vital street life, dazzling light and masses of people where previously space had been left to motorized cars for decades.[2]

When I had returned home, I started to look for literature that would substantiate my observations in NYC and decided to analyze the transformation of *Times Square* as part of my diploma thesis that dealt with new open spaces in New York.[3] The changes on the famous "Crossroads of the World" had been mainly forwarded by two municipal documents: *PlaNYC – A Greater, Greener New York (PlaNYC),* which had been published in 2006 to foster city-wide development and growth while aiming for a more sustainable city, and the *Sustainable Streets Strategic Plan for the Department of Transportation 2008 and beyond* (The City of New York 2007; Department of Transportation of New York City 2008b). In 2008, then incumbent Mayor Michael Bloomberg had appointed a new Transportation Commissioner, Janette Sadik-Khan, who set out to quickly change the city's streetscape and promote walking and cycling as favorable modes of transportation. Within only a few years, the *Department of Transportation (DOT)* had had a remarkable spatial impact: *Public Plazas*, bike lanes, and new pedestrian-and cycling-friendly street layouts had appeared all over the city in an attempt to increase the "quality of life" and take street space from the motor-car and transfer it to cyclists and pedestrians instead (Levels 2013).

Hence, I wondered if one of the most important global metropoles in the "car-country" of the United States was reorienting its transport politics towards

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[2] The project described here is called *Green Light for Midtown*. It had been implemented by the Department of Transportation in 2009 as one of the most prominent examples of wide-spread street transformations in the city (see Ch. 3).

[3] The thesis called "Rethinking the Street!? – New Yorks neue Freiräume" was finished in February 2012 at the Chair for Landscape Architecture and Open Space Planning, Prof. Undine Giseke, TU Berlin.

sustainability, and was starting to redistribute street-space between traffic modes and creating multi-modal streets inclusive of public life: were the times of car-oriented planning and car-dependent mobility in cities about to be over? Were streets being *rethought*?

I then looked into the matter in my hometown Berlin, a city also heavily impacted by motor-cars which had been going through some major restructurings in the previous years and gaining tremendous popularity. Berlin is the "new New York" - or at least the contemporary New York of the 1970s and 80s, as some commentators have claimed.[4] After decades of division by the Berlin Wall, years of shrinking and drastic austerity politics, contemporary Berlin is an "up and coming" metropole with a lively party scene, good cultural and education infrastructure, and relatively low rents that altogether have spurred immense investment, gentrification and a start-up boom over the past decade.[5] Thereby, the city has been put into the focus of investors, developers, tourists, new residents, and urban researchers (Bernt et al. 2013). Here, the municipality had also been pursuing a new strategic direction of transport planning since the early 2000s. The first strategic *Urban Development Plan Traffic (UDP Traffic)* that aimed for economically, ecologically, and socially sustainable mobility politics which would reduce car-dependency was published in 2003, its follow-up in 2011 and the sub-ordinate *Pedestrian* and *Bicycle Strategies*, have suggested encompassing sets of measures and initiatives that should foster walking and cycling in the city (Senatsverwaltung für Stadtentwicklung Berlin 2004; Spath und Nagel 2009; Senatsverwaltung für Stadtentwicklung 2011b). Yet, in 2012, when I started the research for my dissertation project, while increasing numbers of tourists and residents, pedestrians and cyclists had been flocking the city's streets, the strategies of the municipality have had remarkably little visible spatial impact in the city's built environment.

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[4] On the history of labeling and comparing Berlin to other cities:
http://www.deutschlandradiokultur.de/berlin-spreeathen-chicago-europas-das-neue-new-york.1001.de.html?dram:article_id=300489, accessed 04/20/2017.
[5] See e.g. http://www.abendblatt-berlin.de/2016/09/09/start-up-boom-in-berlin-voruebergehender-hype-oder-investition-in-die-zukunft/, accessed 04/20/2017.

Altogether, within the overall frame and ideal of sustainable development both cities seemed to be pursuing common planning strategies and development goals. They targeted the automobile as the prime street user and instead promoted walking and cycling as alternative modes of transportation and increased the streets' spatial quality. Moreover, they were both operating within the globally applied paradigm of *Sustainable Development* and thus were pursuing universal development goals. Notwithstanding, their locally deployed planning approaches appeared to be different: while in New York, transformative planning processes and implementation of projects that created a new spatial reality seemed to be tightly linked, in Berlin, planning and implementation rather seemed to be at different ends and created a lack of new spaces. Despite the globally common agenda, the local politics, meaning the negotiation of different interests as well as the accumulation of power necessary to implement change, thus seem still to determine the production of metropolitan street space.

Based on these observations and assumptions, this research project has studied two examples of *rethinking the street* in a transatlantic perspective in two important Western metropoles. It focuses on how the local governments and administrations have politically forwarded a *rethinking of streets* within the global paradigm of *Sustainable Development* and how this has transformed metropolitan street space. By analyzing the locally distinct processes and deploying a historical perspective onto the development of streets in metropolitan contexts, this work aims to unveil the complex symbolisms, power-relations, and ideals that nowadays shape the transformation of metropolitan street space. Furthermore, by deploying a comparative perspective instead of analyzing a single case study, the dissertation will examine the complex and reciprocal dynamics that emerge between globally common planning agendas and locally distinct politics of urban street transformation.

1.1 "THE WORLD IN THE CITY"[6]: STREETS BETWEEN GLOBAL AGENDA AND LOCAL POLITICS

"By 2030, almost 60 per cent of the world's population will live in urban areas" (United Nations 2015). This sentence, quoted from the United Nation's Sustainable Development Goals (SDGs), has increasingly dominated the discourse on urban development in the past years: global urbanization is seen both as a core challenge and a core part of the solution to the world's big problems reaching from issues as different as social exclusion to environmental pollution, and from individual quality of life to societal economic well-being. On that note, sustainable urbanization is seen to be key to unfold the transformative power of cities in creating a more just, inclusive, environmentally friendly and wealthy world society (see WBGU 2016).

Within this normative frame, transportation and streets play crucial roles: the increasing relevance of walking and cycling as transport modes as well as of streets as a livable public space rather than traffic infrastructure has not only been occurring in New York and Berlin. In different cities across the globe, politics, planning and space of urban streets have been changing.[7] The goal to reduce car-traffic and instead promote alternative modes such as public transport, walking, and cycling in cities is part of the concept of *Sustainable Mobility* or *Sustainable Transport*[8] that has evolved in the course of the 1990s and since has spread within national and international politics through studies, documents, reports, and policy guidelines (Beatley 2012; Held 2007; Low 2013; United Nations Human

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[6] "The World in the City: Metropolitanism and Globalization from the 19th Century to the Present" was the title and common research theme of the DFG-funded Graduate Research Program at the Center for Metropolitan Studies, TU Berlin, within which this thesis was developed (2012-2015). For more information see http://www.kwhistu.tu-berlin.de/fachgebiet_neuere_geschichte/menue/dfg_graduate_research_program_2012_2018/.

[7] The list of examples is long. Some famous projects are: spreading bicycle lane networks in cities of different sizes and contexts from Buenos Aires to Los Angeles; the cycle super highways in London (see https://tfl.gov.uk/modes/cycling/routes-and-maps/cycle-superhighways), the growing influence of Copenhagen as the best practice for cycling policies and the so called Copenhagenize index (http://copenhagenize.eu/index/about.html: accessed 07/28/2017); furthermore, the globally spreading influence of Jan Gehl and its architecture office who has been doing policy consulting in London, Melbourne, Sydney, New York, soon probably also Berlin and others (see http://www.tagesspiegel.de/weltspiegel/sonntag/legendaerer-daenischer-architekt-im-portraet-jan-gehl-ein-architekt-kaempft-fuer-menschenfreundliche-staedte/13523210.html; accessed 07/28/2017): furthermore Paris Plage provides pedestrianized summer attractions along the Seine in Paris (see https://www.sortiraparis.com/arts-culture/walks/articles/53926-paris-plages-2017-artificial-sand-free-beaches-along-the-river-seine/lang/en, accessed 07/28/2017).

[8] For the rest of this work I will use the term *Sustainable Mobility.*

Settlements Programme 2013a). Primarily, *Sustainable Mobility* targets the global dominance of the motor-car as the backbone of the mobility system and aims to globally reduce the greenhouse-gas emissions of the transportation sector. Therefore, urban transport should minimize emissions and waste, land use and resource use; it should provide efficient, affordable transportation for people and goods with a large choice of different modes and good connectivity that supports the economy; and it should provide all inhabitants of a city equally with access to transport as well as safe and healthy mobility (Low 2013, p. 69ff.; Schiller et al. 2010, p. 2).

These basic ideas have brought walking and cycling to the attention of planners, politicians and citizens: walking and cycling both are non-motorized, zero-emission modes of transportation that depend on the human body as their propulsion and that are predominantly used for "short trips […] that are required in order to carry out everyday tasks such as going to work or school, shopping, or leisure and social activities" (Pooley 2013, p. 3). The limits of a walkable distance usually range around 1-2km; on a bicycle the pedestrian is able to expand his/her reach beyond those usual limits to an average distance of 4-5 km (Pooley 2013, p. 72). Hence, particularly in dense and growing urban areas, walking and cycling are cheap, quick and environmentally friendly modes of transport. Furthermore, walking and cycling are everyday practices that include human-centered leisure activities such as strolling, shopping, commuting or socializing. However, the amount of trips taken on foot or by bicycle as well as the time spend in streets pursuing quotidian tasks very much depends on the accessibility of everyday-destinations within these distances, on the availability of walking and cycling infrastructure and therefore on the organization of the built environment – in other words: on the distribution and organization of the physical space of the metropolitan street (Gehl 2010; Pucher, Buehler 2012b).

Therefore, within the sustainability paradigm, streets and the activities of walking and cycling take a double role: on the one hand, they are a transportation infrastructure or a mode of transport, on the other hand, streets and the sidewalks that border them are the space of everyday life that distinctly shapes residents' quality-of life, and walking and cycling are important activities that indicate what is understood as 'good' quality of life. Inasmuch as the global agenda challenges the

existing mobility system it also challenges local metropolitan streets as the spaces of traffic flows and everyday life, and hence aims at "reclaiming the street from the system to lifeworld" (Fyfe 1998b, p. 1). The abstract global goal to establish a sustainable transportation system alters the "Production of Space" (Lefebvre 1991) for metropolitan streets, as it contests and re-negotiates the existing hegemonic order of streets as a space for automobile movement and thereby has opened up the space for municipalities to *rethink* their streets.

1.1.1 CHALLENGING THE STREET: THE LOCAL POLITICS OF RETHINKING THE STREET

When the term *street* is used in this work, I am referring to the typology of the *metropolitan* street that emerged in European and North American industrial cities in the second half of the 19th century alongside the rising relevance of urban planning, the increasing need of and desire for mobility, and everyday urban practices of representation and leisure. With this, I particularly focus on metropolitan main streets in the case study cities of New York and Berlin (see Ch. 2).

In general, looking onto a city from the perspective of a plan or an aerial picture, its streets as the core structuring and connecting spatial urban element take a prominent role. Whether the strict gridiron pattern of New York City, the organic structure of small medieval towns such as Siena in Italy, whether modern utopia Brasilia, Haussmann's 19th century Paris boulevards, the winding paths of informal settlements in the growing mega-cities or the gigantic highway structures that have shaped many cities since the invention of the automobile across the global North and South: on all urban scales, streets as linear and intangible spaces form the basic network and architectural baseline that organize built urban space and that connect places inside and outside of the city (Bedarida, Sutcliffe 1980). Thus, they provide the space for people and goods to go from one place to the other, to access different city destinations, to enter, circulate and leave the city, to experience and participate in the urban while being on the move and as such are the prime urban infrastructures of movement (Lynch 1960).

Notwithstanding, metropolitan streets have always had functions that go beyond connectivity or the transport of people and goods (Lay 1992, p. 12ff.; Reblin 2012, p. 38ff.). Streets are mundane public spaces with a high relevance for

inhabitants' everyday life. Leaving one's house means entering the city's streets. Therefore, streets are accessible by everybody and used for a wide range of different activities: streets are spaces of business and consumption, e.g. of food and flea markets, street vendors, food stands, shoppers and strollers, they are spaces to display and promote goods of a local shop on the sidewalk, spaces of kiosks and sidewalk cafés, spaces for commercial advertisement on bikes, posters, signs and trucks. They are also used to hold public events, spaces of street art and performance, of protest, demonstrations and state control, of resource supply, and waste disposal. Furthermore, they are spaces of leisure, of kids play, of smoking, sitting, reading, meeting, and even sleeping; streets are spaces of living for the homeless, an extension of residents' private space; hence, they are an everyday space that can be appropriated in many different ways (Krusche 2011; Fyfe 1998a; Geschke 2009; Hohm 1997b). Streets are highly contested urban spaces which are simultaneously (1) the core form-giving space and architectural baseline of a city, a space of order; (2) a networked space of flows and connectivity, a space of transport and mobility; as well as (3) a local public space of social encounters and everyday practices, a space to live.

As a result, streets have to meet diverse, often conflicting and ambiguous demands. Especially the practices of movement and their inherent need for unhindered flow stand at odds with other activities and uses of street space that potentially block different kinds of traffic. Furthermore, different forms of movement and speeds have proven to be conflictual as well: commuters are blocked by strollers, shoppers, or baby carriages; speeding cyclists clash with pedestrians that carelessly cross the bicycle path; and particularly cars are a threat to pedestrians' and cyclists' health and life and require a lot of space both to move and to park and develop speeds that by far outreach all other traffic participants.

Therefore, street spaces are object to regulation by municipalities and governments and nowadays have been primarily regulated to foster movement: divided in lanes, organized by traffic rules and road markings, streets are a space dominated by speed and excluding non-moving actors as well as those that cannot attain a certain speed level (Blomley 2007, 2011; Jain, Moraglio 2014, p. 516ff.; Schmucki 1999). Moreover, regulations for cafes, food stalls, and window displays, policing of panhandlers, beggars, and homeless, and many more everyday laws

have determined the use of public street space in the name of traffic flow and public order (Duneier, Carter 2001; Loukaitou-Sideris, Ehrenfeucht 2012; Valverde 2012). As in the course of the 20th century car-travel has become the globally dominant form of mobility (Sheller, Urry 2000; Urry 2004), streets nowadays are primarily ordered to serve one particular vehicle, the automobile, while other forms of movement, such as walking and cycling as well as other uses of public street space have been pushed to their fringes or excluded from street space entirely. The car has acquired the hegemony on metropolitan streets that subordinates all other uses.

Thus, the global paradigm of *Sustainable Mobility* has fundamentally challenged the hegemonic order on metropolitan streets. Thereby it has also challenged planners and politicians to find ways to implement the changes necessary to transform streets into spaces of *Sustainable Mobility* and everyday life. These processes of production and the spaces produced are inherently political as transportation planning is not a mere technocratic matter, but builds upon ideologies that contain "normative visions of mobility and space" (Henderson 2013, p. 5). Therefore, this study aims to analyze both the planning processes and the spaces produced in order to unveil the complex political connotations of sustainable street planning and to partially deconstruct and critically reflect the inherently positive image of these developments. With this the thesis intends to establish an understanding of street planning and politics that is constructed by powerful actors who pursue certain interests and which is manifested through planning and negotiation processes, plans and written documents as well as built urban space.

1.1.2 State of Research, Research Gap and Research Question

This thesis is written from a planner's perspective. As was explained in the previous paragraphs, in urban planning the sustainability paradigm is widely accepted as the desirable path of development towards a 'better' urban future. Therefore, the state of planning research regarding the transformation of streets and mobility towards sustainability is widely focused on compiling good and best practices, on determining criteria for 'good' street design and concepts as well as studies that analyze impediments and possible incentives for pedestrian and

bicycle planning or successful policies and arguments that spur street transformations (see e.g. Bucksch, Schneider 2014; Gehl 2010; Meschik, Traub 2008; Pooley 2013; Pucher, Buehler 2012a; Southworth 2005; Tolley 1997). Furthermore, state-agencies and municipalities as well as researchers have published a rising number of design guidelines for inclusive and multi-modal street design (see e.g. Department of Transportation of New York City 2009; Federal Highway Administration 2003; National Association of City Transportation Officials 2014, 2016; United Nations Human Settlements Programme 2013a).

As these studies and publications are widely focused on planning processes, quantitative parameters and normative planning goals, the political impetus of these transformations and of the processes of renegotiating urban space is widely overlooked. Therefore, this work aims to develop an understanding of streets and street planning which unveils the political connotations and agendas behind the seemingly 'good' goal of promoting sustainable transport and urban development that foster these transformations. As the ideas of sustainable urban transformation have been increasingly leaving the realm of political opposition and entering the political mainstream, it appears to be important to enhance the understanding of the politics of *rethinking the street* for urban planners within contemporary, global normative planning frames. Therefore, the central research question is as follows:

Why are walking and cycling of heightened relevance for today's politics of street and mobility planning in New York and Berlin and how does this transform space and politics of the metropolitan street?

To answer this question, I deploy an interdisciplinary perspective on metropolitan streets and street planning that links planning literature with literature from different disciplines of history and the social sciences. Therein, streets are examined in regard to their socio-political constitution as well as to the practices that determine their socio-spatial setting. Within mobility studies, the hegemony of the car both in regard to mobility and space has received increasing attention. In that line, traffic has been analyzed as a form of spatial governance that orders and regulates street space and that determines exclusion and inclusion (see e.g. Conley, McLaren 2009; Hohm 1997a; Sheller, Urry 2000; Urry 2004). Moreover, historical studies have analyzed the history of the production of street

space and the evolution of urban walking and cycling. Inasmuch "authority is embedded in the material facts of a city" (Bender 2014, p. 133), in that it has shaped physical street spaces, street regulations and traffic laws, as well as planning processes and ideals, these historical processes have shaped the streets of contemporary metropolises (see e.g. Bodenschatz 2013; Lay 1992; McShane 1994; Merki 2002; Norton 2008; Schmucki 1999, 2001). Ultimately, the social practices of walking and cycling themselves are objects of scientific research. Particularly research on urban cycling has been growing in the last years, analyzing bicycling as social practice and self-experience, and the bicycle as a signifier of gentrification, as a symbol of protest against car-culture or an oppressed vehicle (see e.g. Blickstein 2010; Ebert 2010; Horton 2006; Mapes 2009; Rosen et al. 2007; Spinney 2007). Furthermore, the different social practices of walking and related social practices such as shopping or strolling have been examined through various perspectives by urban scholars (see e.g. Hass-Klau 2015; Jacobs 1961; Zukin et al. 2016a).

Hence, in bringing together historical, social science and planning literature dealing with metropolitan streets and mobility, walking and cycling, I analyze the politics and its intended order that are inherent in current street transformations. As those are wielded through planning processes within the respective municipalities, the study builds upon extensive empirical and primary qualitative research in both cities, analyzing in-depth the processes that have spurred the transformation of street planning and space.

1.2 RESEARCH PROCEDURE AND EMPIRICAL METHODOLOGY

The goal of the study is to understand local political processes of decision-making and transformation within the global paradigm of *Sustainable Development*. Therefore, the research design deploys a two-fold approach. On the one hand, the study encompasses an empirical analysis of two in-depth case studies of the processes of *rethinking the street* in New York and Berlin which enables the researcher to understand the local particularities and meaningful characteristics and to provide an exact description and reconstruction of both cases (see Flick 2007; Yin 2009). On the other hand, the cases have been brought together in a comparative gesture that aims to deduce global commonalities,

dependencies and coherences. In the past years processes of globalization and urbanization have spawned an academic debate about the need for a "comparative gesture" in urban studies (Robinson 2011; see also Kantor, Savitch 2005). Comparative urban research helps in "uncovering causal mechanisms and drivers of political, economic and social change at the urban level" (Denters, Mossberger 2006, p. 551) and thereby helps to explain similarities and differences across different systems (ibd.).

Furthermore, both practice and research of urban planning increasingly are shaped by a growing exchange of international knowledge, best practices and cooperation to learn from the innovations or experiences of others (Nadin 2012). In particular the paradigm of *Sustainability* is shaped by universally valid goals that have to be reached on locally distinct paths, thereby tightly linking global and local scales and amplifying the need to compare local planning processes and politics (WBGU 2016). Thus, by comparing systematically the New York and Berlin cases in regard to their global linkages while acknowledging their local particularities enables the researcher on the one hand to gain comparative knowledge on the (potential) effects of plans and projects and thereby further foster the international exchange of planning ideals; on the other hand, it provides deeper insights into the relation between global planning ideals and the local "production of space" (Lefebvre 1991). Here, I would like to emphasize that the comparative setting of the same (sustainability goals), yet different (processes and space) enables a more nuanced analysis of planning processes, their goals and spatial transformations, but more importantly of their politics than a single case study would. The comparative analysis of locally distinct paths and processes towards sustainable streets allows for a deeper understanding of how and why the paradigm is politically pursued and moreover, of how local politics interprets and simultaneously reshapes the global paradigm.

A first analytic comparison revealed that the case study cities of New York and Berlin display the following differences in regard to their street planning processes and spatial transformations:

- **Planning process**: While in New York the agenda has been politically initiated by the Mayor, in Berlin the transformation originated within the administration

- **Street space**: While in New York streets are rethought through the lens of spatial quality and livability, in Berlin the focus lies on mobility

Hence, in regard to both planning process and street space the comparative analysis of street politics in these particular cases allows for a critical examination of the production of street space between locally distinct challenges and the global politicization of streets through the sustainability paradigm.

I started my research in a rather explorative manner in both cities and gathered empirical evidence from very different sources: With extensive effort I achieved to collect and analyze the published plans and strategies of the municipalities, newspaper articles and blog entries. Second, I systematically and repeatedly observed and documented changes of newly built projects in the cities. Third, first exploratory interviews with planning officials allowed me to deeper enter the field. However, empirical data was primarily generated through in-depth qualitative interviews (Hopf 2008), more precise: expert interviews with systematically sampled people that had been involved in and in charge of the processes of *Rethinking the Street* (Bogner et al. 2009; Flick 2007; Gläser, Laudel 2010).

After extensive literature research (see Ch. 1.1.2 and 2) and the subsequent development of sensitizing ideas and concepts that would focus and guide my analytic lens throughout the field work, I began the inquiry in New York, as it was the city where the idea for my research project had originated. First, I accessed information available on the website of the DOT and the New York City government: the main plans and documents, in particular *PlaNYC* and the *Sustainable Streets Plan* as well as implemented projects and their location. Afterwards, I went to New York for four weeks in autumn 2012 for more exploratory research. There, I toured, photographed, and mapped street projects for a better understanding of their spatial layouts and typologies. Furthermore, with the support of the Center for Metropolitan Studies' New York-based faculty, I

accessed the field by means of exploratory interviews with academic experts at Columbia University and Hunter College, a long-standing bicycling advocate, and a lower-level employee within the bicycle and pedestrian division at DOT. This fieldwork phase provided me a solid overview about what had happened in New York and who were the most important actors within these processes. Subsequently, I developed systematically a sample of all key-actors from the DOT, the advocacy community, and the private sector, whom I then interviewed during a second research phase between December 2013 and February 2014.

Between the different phases of field work in New York, I had started my Berlin-based research in the summer of 2013 in a similar manner: the *UDP Traffic* (which had been published online) included information about its drafting procedure and the actors involved from the administration, civic society groups as well as scientific advisors in its introductory part (Senatsverwaltung für Stadtentwicklung 2011b, p. 9ff.). Thus, I assessed the field through in-depth interviews within the Traffic Division in the Senate Department from where I further explored the field through snowball sampling.

Overall, I conducted eleven expert-interviews in English in New York (four at DOT, six within advocacy groups, one at a Business Improvement District; eight of these interviews are quoted in this work) and eight in German in Berlin (four at the Senate Department, two with civic society groups, one with a member of the Academic Board, one with the person responsible for process management; they are all quoted in this work).[9] Based on a questionnaire that determined "the golden thread" rather than a standardized interview procedure, the interviews were semi-structured and covered for all interviewees in the two cities their personal background and involvement in the process, the political and planning procedure, and the role of street space/ project implementation. Depending on both the case study as well as the respective interviewee, the guidelines were partially adapted to their expertise, fields of action, responsibility and knowledge. In order to analyze the interviews I have transcribed them and translated the German quotes

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[9] The original audio files of the interviews are attached to the dissertation on a CD. The time designation after the quotes used in the text indicates the beginning of the quote in the audio file. The quotes used from the German interviews have been translated by the author.

that I have used in this work. An exemplary questionnaire for each of the cases is also attached to the thesis.

City	Name	Institution	Date	Quoted
New York	Jon Orcutt	DOT	02/18/2014	X
	Andy Wiley Schwartz	DOT	02/24/2014	X
	Ryan Russo	DOT	11/11/2014	X
	Rohit Aggarwala	OLTPS	02/21/2014	X
	Mark Gorton	NYCSR	03/02/2014	X
	Noah Budnick	TA	01/24/2014	X
	David Gurin	TA	12/20/2013	
	Ethan Kent	PPS	12/12/2013	X
	Clarence Eckerson	Streetfilms	02/06/2014	
	Philipp Kellogg	FAB	11/06/2014	X
	Bill Di Paola	Times Up	01/28/2013	
Berlin	Burkhard Horn	Sen. Dpt.	07/23/2013	X
	Horst Wohlfarth von Alm	Sen. Dpt.	07/17/2013	X
	Friedemann Kunst	Sen. Dpt.	08/21/2013	X
	Imke Steinmeyer	Sen. Dpt.	08/21/2013	X
	Diana Runge	Process Mngmt	08/19/2013	X
	Martin Schlegel	BUND	08/01/2013	X
	Jörg Becker	ADAC	08/22/2013	X
	Axel Stein	Acad. Board	08/19/2013	X

Fig. 2: Interviewees in New York and Berlin.

The interviews have been used on the one hand to reconstruct the factual processes in New York and Berlin and on the other hand to gain insights into the prevalent conceptualization and role of street space, walking, and cycling within the processes. Therefore, I have used the process of *Qualitative Content Analysis* as developed by Gläser and Laudel (2010) which is based on systematically extracting information from the interviews rather than coding them. Furthermore, the interviews indicate how the different experts frame and legitimize their work and contribution to and role in the programs and processes. Thus, I edited the results from the interview analysis in a way that they make up their own story and often quote entire passages from the interviews to let the planners unfold the logics and

particularities of the respective case study as well as their conceptualization of street space. Beyond this, I will provide interpretation and contextualization of these stories.

However, the comparative approach also provided some difficulties during the research process. Data collection in New York happened at the end of Bloomberg's mayoralty which determined the end of the investigation period for this case. Accordingly, data collection in Berlin happened around the same time. Yet, particularly in Berlin, the dynamic around bicycle and pedestrian politics significantly changed after I finished my field work when I was writing up the dissertation.[10] Indeed, it is a still on-going, highly dynamic process which might substantially change transportation politics in the city and which holds further research potential for an in-depth single-case study. Further analyzing these dynamics would have extended the feasibility of this dissertation. Therefore, I chose a similar time frame for both the New York and the Berlin case which enabled me to compare the two cases – despite their different processes and timeframes – at a specific point in time with similar data sets of interviews and other sources, but which also meant that particular evolving dynamics had to be left out.

1.3 STRUCTURE OF THE DISSERTATION

The dissertation is structured in three main parts: (1) a historical examination of street space and processes of *Rethinking the Street* in New York and Berlin; (2) a separate analysis of the empirical findings in New York and Berlin, presented along the common structure of plan – politics/ processes – space; and (3) these separate approaches to metropolitan street space will be brought together in the last chapter.

Chapter 2 first analyzes the historical development of the metropolitan street from a habitat for people in the mid-19th century, into an infrastructure for cars in the mid-20th century (Ch. 2.1 and 2.2). Thereby, it particularly focuses on how streets have been shaped on the one hand by altering ideals and decisions of

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[10] The developments in Berlin reached their preliminary peak in July 2018, when the "Berliner Mobilitätsgesetz" (Berlin Mobility Law) was passed by the Senate; see: https://www.berlin.de/senuvk/verkehr/mobilitaetsgesetz/

planners and citizens, and on the other hand by the societal symbolisms and ascriptions of the practices of walking and cycling. Afterwards, it examines how the contemporary *Rethinking the Street* emerged as a countermovement to the car-oriented planning in the 1960s and 1970s and how it has developed in urban planning and politics since then (Ch. 2.3). Although the planning ideals to reintegrate walking and cycling into urban politics have long been available, those principles have recently gained a new global political relevance and have been transforming streets in cities across the world. Thus, a particular emphasis is put on the changing political agencies of walking and cycling and the related conceptualizations of street space in the past decades. In the analysis of these historic and contemporary developments, *Chapter 2* concentrates on the developments in the two case study cities New York and Berlin as well as their respective national contexts.

In *Chapter 3* and *4*, the empirical findings from the case studies in New York and Berlin are analyzed separately within their particular local political and planning context, yet following a similar overall structure to generate comparability between the cases. First, the plans – *PlaNYC* and the *Sustainable Streets Strategic Plan* in New York and the *UDP Traffic* in Berlin – are examined in regard to their content and in particular the role streets play in these plans. Afterwards, I analyze the local political conditions and processes that fostered the passage of these plans and the implementation (or lack thereof) of new street layouts, bicycle infrastructure and the like (Ch. 3.1, 3.2, 4.1, 4.2). While in New York political agenda, administrative process, and spatial implementation are tightly related, the planning process in Berlin was initiated on the administrative level and both political support and spatial implementation have long remained absent. Therefore, *Chapter 3* mainly develops the narrative around the question of how the quick agenda setting and project implementation in New York was possible, while *Chapter 4* rather presents explanations for the enduring absence of street transformations despite the apparently existing planning strategy. In the third part of both chapters, the spatial transformation of streets in favor of pedestrians and cyclists is investigated in more detail (Ch. 3.3 and 4.3). In the end in both cities pedestrianization, inclusive street designs as well as expanded bicycle infrastructure have created new metropolitan streetscapes, yet to varying extents.

Lastly, *Chapter 5* brings the cases together in a comparative gesture. The first part of the conclusion contrasts the cases in regard to their commonalities and differences in the planning process and the produced spatial realities. In the second part, I deduce four concluding theses from the analysis for research and planning practice that illuminate the role of the metropolitan street between mobility infrastructure and public space within contemporary global and local urban development politics and that outline further research need for metropolitan streets in the 21st century.

2 METROPOLITAN STREETS: PLANNING, SPACE, AND PRACTICE FROM THE 19TH CENTURY TO THE PRESENT

The story of the metropolitan street told in this chapter is located in Western Europe and North America and begins with the reordering of cities due to their accelerated growth in the context of industrialization in the 19th century. It was then, that both a new type of street and the practices of pedestrianism and bicycling emerged within modernizing urban societies. These streets were the architectural baselines that re-arranged the built space of the growing cities. Moreover, they were an infrastructure that was meant to enhance the ever rising traffic flows. Ultimately, they were the core urban public space that became the backbone of metropolitan life.

Notwithstanding, already in the 19th century particularly the conflict between flowing traffic and other uses posed challenges to planners and governments which amplified through the invention and mass-distribution of the automobile in the course of the 20th century. Since then, the promotion and regulation of (automobile) movement as a basic constituent of modern streets has stripped them off their different functions and reduced them to being exclusive motor-thoroughfares, as Lefebvre analyzed already in 1970:

> Movement in the street, a communications space, is both obligatory and repressed. […] Although the street may have once had the meaning of a meeting place, it has since lost it, and could only have lost it, by reducing itself, through a process of necessary reduction, to nothing more than a passageway, by splitting itself into a place for the passage of pedestrians (hunted) and automobiles (privileged) (Lefebvre 2003, p. 20).

In other words, streets between the mid-19th and the mid-20th century have been remade by planners and governments from a mixed use urban habitat into a mono-functional infrastructure that accommodates movement of different kinds. The historical processes of *rethinking* which institutionalized and materialized this shift, as well as changing social and mobility practices of pedestrianism and bicycling that contributed to the formation of the automobile street order, are the subject of this chapter. Ultimately, in the 1960s and 70s, the socio-spatial deficiencies caused by modernist car-oriented urban planning were criticized by a growing number of theorists, planners, and citizens alike, which can be described as the birth of the contemporary rethinking. Since then, different processes of

"Rethinking the Street" aim to reduce car-travel in cities and re-establish metropolitan streets as a multi-modal transportation infrastructure and a habitat for people which nowadays is subsumed under the paradigm of *Sustainable Mobility.* Yet, while the planning ideals have long been around, the political pressure and relevance attributed to these issues has been shifting in the past decades both locally and globally.

Thus, before turning to the empirical analysis of the case studies in Chapters 3 and 4, I will examine the evolution of metropolitan streets and their spatial order between mobility needs and public space in three chronological steps: the time of the formation of the metropolitan street in the second half of the 19th century (Ch. 2.1), the time of automobile transformation in the 20th century (Ch. 2.2) and the processes of *Rethinking the Street* since the 1960s (Ch. 2.3). I will frequently refer to examples from the case study cities New York and Berlin to establish an understanding of the similarities and differences of their streets and street politics and their role within the global debate on both sustainable streets and mobility.

2.1 ORDER, FLOW AND STATUS: THE EMERGENCE OF THE INDUSTRIAL METROPOLITAN STREET

At the end of the 18th century, metropolitan streets were still in a condition that rather hindered than fostered movement: many streets in the growing metropolises were still unpaved; they were dirty, flooded with mud, without drainage or sewage; they were used for both private and public activities, as a place for waste disposal, a workplace for craftsmen who had no light to work inside, or for farmers to bring and sell their livestock; already existent footpaths were not elevated and frequently blocked by wagons, building materials and other street equipment. Many services such as shoe cleaning, porters and street cleaning had emerged to cope with the shortcomings of metropolitan streets. Furthermore, as streets were poorly lit at night, they were often connoted with the danger of robbery or death and prostitution which caused many cities to issue curfews at night. Hence, walking anywhere was more a necessity and a quotidian challenge than an act of pleasure. With the use of wagons or horse-drawn carriages also expanding, streets were furthermore jammed with different kinds of traffic, uses

and people, largely lacking any kind of public regulation (Amato 2004, pp. 157–161; McShane 1994, p. 7ff.; Solnit 2002, p. 175ff.).

In the course of the 19th century, the Industrial Revolution spread from England across Europe and the United States and set out to profoundly change urban economy, society, and built environment. In particular the configuration of street networks became an important matter for both expanding and reorganizing cities, while the streets themselves became the representative stage for technological progress and a new urban society. The era was characterized by an immense population growth in cities which increasingly posed challenges to urban governments: slums, shortcomings in hygiene, epidemic diseases, and congestion all threatened the functioning of cities and urban order on a previously unknown scale. Hence, the urgency of these matters encouraged governments to intervene in urban space, planning, and redefining vast areas. Furthermore, industrialization and mass urbanization demanded a more efficient circulation of flows. Both the creation of railways and the reorganization of streets were meant to allow a more efficient movement of people and goods: governments developed plans to pave, drain, light, and police metropolitan streets. Both the unprecedented spatial expansion of the city, the growth of its population and the rise of new social classes, that went along with industrial capitalism, brought new practices onto metropolitan streets which included new ways of walking and new technological vehicles such as the bicycle (see Bedarida, Sutcliffe 1980; Benevolo 1998, p. 184ff.; Harvey 2003).

Hereafter, I will analyze how the production of streets and street networks in the 19th century re-shaped urban form in New York and Berlin, how urban pedestrianism emerged as a regulated mode of transport, and how both pedestrianism and bicycling became expressions of a new urban life, class, and their desire for modernity and technological progress.

2.1.1 ORDERING STREETS, ORDERING THE METROPOLE

Both, New York and Berlin, in the 19th century grew into metropoles and their physical growth was projected by encompassing street-plans that structured the yet widely unsettled land outside of the cities' borders and have given the inner cities their characteristic shape until today. The *Commissioner's Plan* in New York,

published in 1811 after the population of the city had tripled since 1790 from 32.328 to 96.373 inhabitants, projected the city's physical growth by "laying out 'streets, roads, and public squares' in such a manner 'as to unite regularity and order with the Public convenience and benefit, and in particular to promote the health of the city,' by allowing for 'free and abundant circulation of air'" (quoted in Burrows, Wallace 1999, pp. 419–420). The proposed grid divided the land of the island north of the line along today's Houston Street, Washington Square and Greenwich Street by 12 Avenues and 155 Streets into roughly 2000 same-sized rectangular blocks, regardless of existing property lines or natural topography. It was a uniform urban structure, mostly characterized by the absence of representative squares or public spaces, of monuments or visual axes, potentially infinitely expandable to conquer unsettled land and which provided ideal conditions for what Rem Koolhaas by the end of the 20th century called *Manhattanism* (Koolhaas 1994, p. 10): a hyper-dense urban island that filled the monotonous ground-plan with three-dimensional variety in its landmark buildings and skyscrapers.

The grid itself neutralized and commodified the land within the blocks, as it was split into standardized building lots, lacking place markers and specificities that would determine its value, enabling larger development scales than before and thereby gave birth to the modern, speculative real estate market that ever since is a crucial economic base of the city (Marcuse 1987). The only structural hierarchy was defined by the different street-widths of avenues and streets, as higher buildings were allowed at the avenues and lower residential buildings along the streets. During the decade-long process of implementation, the plan was adapted to both ground conditions and shifting societal interests, which among others led to the development of Central Park in 1853, the preservation of Broadways diagonal course as the big exception within the homogenous street system, other parks and squares such as Washington Square Park as well as Madison and Union Squares, and the insertion of additional avenues to improve north-south connection and flow in the city. By 1850 the population had further grown to 515.000 and in 1860 to 813.669. In the 1890s, the grid was expanded north-wards beyond 155th Street and ultimately connected to the other boroughs as Greater New York was consolidated in 1898 (Ballon 2012).

The Hobrecht Plan in Berlin, named after its author James Hobrecht, was drafted in 1862 after the population more than doubled from 147.000 in 1786 to 329.000 in 1840 and at the beginning of the 1860s had further grown to 450.000. The plan laid ground for the "biggest tenement city of the world" (among others see Bodenschatz 2010) through a ring-shaped city-expansion that was based on a modular system of city quarters with different street typologies of varying widths and public squares. The new part of the city connected to the historic city center and - other than its counterparts in New York, Paris or Barcelona - neither did cut through the existing urban fabric nor did it change existing property lines. In conjunction with the contemporary building code (ger.: *Polizeiliche Bauordnung*), the Hobrecht Plan laid out streets that were lined by consistent building blocks of 22m height and that despite the variety in street spaces, overall formed an egalitarian framework for urban development without an identifiable class hierarchy between the different quarters. However, in the implementation process many of the planned squares in the worker districts were economized and overall the best and most attractive locations emerged at the squares and along the representative ring road that stretched from today's Zoo in *Charlottenburg* along *Tauentzienstraße*, *Wittenberg* and *Nollendorf Platz* and then further along *Yorckstraße*, *Gneisenaustraße* and *Hasenheide,* towards *Oberbaumbrücke*, *Warschauer Straße*, *Danziger Straße* and *Eberswalder Straße*. Furthermore, as the plan did not define any further regulations in regard to housing, the development of the big building lots remained the task of private developers and investors which notwithstanding led to districts of different quality: while the very dense construction of housing with several backyards and small rental units led to an unprecedented intense land-use in the workers' districts, the buildings and apartment sizes in the middle class districts were much better spaced. Thus the intended social mix only arose in some places where unskilled workers lived in the backyards and skilled workers inhabited the front houses. By 1871, the population of the city counted 932.000 people and ultimately by 1920 3.7 million. The Hobrecht Plan had laid ground to deal with this accelerated urban growth (Bodenschatz 2009, 2010; Calbet i Elias, Laura et al. 2013; Häussermann, Kapphan 2000).

Hence, both the New York City grid plan and the Berlin Hobrecht plan established a new spatial order for the growing industrial metropoles by arranging streets into a coherent system. In that regard, both provided a flexible urban structure that was able to manage accelerated urban expansion and that forms a spatial frame which can be adapted to shifting development interests of the future. Moreover, both plans have fostered private speculation over land as they defined the knots and ties of the street-network, yet not the filling of the meshes. In other words, the development of housing in both cities in the late 19th century was the business of private investors and thereby gave way to capitalist city production. The new streets in the modernized metropolises were no longer narrow, winding paths, but big, representative boulevards, ring roads, diagonal and radial streets that were straight in form, and both created and ordered the cities' public spaces. The spatial restructuring was usually accompanied by the development of public transit systems and a general increase in both traffic volumes and traffic modes in the cities (Bodenschatz 2009; Roess, Sansone 2012). The rising pressure of transport flows increased the regulation of streets through pavement, light, drainage, and policing and thereby turned them into places that were much more convenient than ever before. This further fostered the emergence of amenities such as window displays and sidewalk cafes that constituted a new urbanity which was crucially defined by its "street-oriented habitat" (Bedarida, Sutcliffe 1980, p. 387). Streets were primarily pedestrian spaces with a high variety of different uses. As the prototype of the 19th century metropolitan street, the *boulevard* shows exemplarily that most space on these streets was attributed to pedestrians, along trottoirs and sidewalks, separated from horse carriages and tramways to foster steady movement, lined by trees that provided shade and convenience. It was a recreational space for the urban middle class and a space of accelerated traffic flow (Benevolo 1998, p. 196ff.; Bodenschatz 2013, p. 28ff.; Reblin 2012, p. 46f.; Schmucki 1999; Harvey 2003, p. 89ff.).

2.1.2 REGULATING THE STREET: TRANSPORT, FLOW AND THE URBAN PEDESTRIAN

As part of the new streets and street networks, sidewalks were built along the newly built boulevards, ringroads and metropolitan main streets to

accommodate the masses of urban walkers.[11] Sidewalks characteristically are separated from the street through curbs and elevation; they lied at the edges of the roadbed and provide a network of well-connected linear spaces across the city for pedestrians to walk and residents to access street space. While ancient cities already had sidewalk-like spatial structures, they entirely disappeared in medieval cities and were only re-invented slowly in some cities from the 17th century onwards. Their first spatial manifestations were bollards, curbs and pedestrian posts that should have increased safety and comfort for the growing crowds of urban walkers. Ultimately, between the 18th and 19th centuries sidewalks evolved from a tentative separated footpath into an elevated structure made from wood, macadam and later concrete. Often they were more advanced than roadbeds in regard to pavement and cleanliness and therefore both walking comfort and modern appeal were of their core characteristics. In the quickly transforming metropolises, the sidewalk was increasingly seen as "a marker of modernity" (Blomley 2011, p. 58) that "epitomized [...] urbanity in the public imagination" (Loukaitou-Sideris, Ehrenfeucht 2012, p. 17).

Sidewalks not only transformed metropolitan street space in that they separated different traffic flows from one another, but the activity of walking in cities itself: as one of the first spatial structures that were meant to hold exclusive space to a certain user group, the sidewalk was the spatial manifestation that walking or rather pedestrian movement was being turned into a spatially separated and regulated, yet certainly desired activity. The emergence of the new types of urban pedestrians was shaped by several interconnected processes: industrialization had brought both technological progress and new temporal rhythms that restructured urban space and life. On the one hand, in the growing modern metropolises workers got dispersed all over the city and expanding

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[11] Boulevards, ring roads and radial streets are all sub-typologies of the metropolitan main street. According to Bodenschatz 2013, metropolitan main streets were an invention of the 19th century. They were wider than the old streets, functionally separated traffic in lanes and provided a representational space for the urbanization of the new urban middle class. Boulevards originated in Paris, connected important sights and destinations within the city. The most famous ring road was built in Vienna and went around the historic city center. Until today, it hosts some of the most important buildings and destinations of the city. In Berlin, the ring road could not be completed. Instead, there developed radial streets that connected the inner city to the outer boroughs and villages (see Bodenschatz 2013, p. 28ff.).

systems of public transportation connected living and work places. These systems of mass transportation turned walking into a choice rather than a necessity. The growing distance between work place and home, the massive expansion of public transportation systems in the course of processes of urban renewal as well as lowering transit fares to provide access to transport to the working classes brought people onto public transport and the walker did "ride when he chose to, or when he could. Walking, […] was no longer a destiny, a way of life, but instead a limited and chosen activity" (Amato 2004, p. 171).

Walking became modernized and fitted not only to the routes of the transportation system, but also to the clocks of capitalist production: the commuter relied on the transport system, traffic flow and punctuality and adapted his own walking rhythms to those of the urbanizing and modernizing society. Other new technologies supported the pace of the commuter who was speeding to work and back: elevators, rolling stairs, or pedestrian tunnels connected the underground transportation with the street between which the commuter was "walking, sitting and standing, descending and climbing, waiting and scurrying, jumping and leaping, pushing, squeezing, and running" (Amato 2004, p. 171). Hence, pedestrianism as a mode of transport that had to be fitted with "the routes of omnibuses, trams, cars, trucks, and buses, and the accelerated pace of the expanding urban world" (Amato 2004, p. 17) and the walker as a commuter to his work place were invented as part of the public urban transportation system that required further regulation.

In that logic, city governments increasingly framed unimpeded movement as a public interest that the state had to provide through diverse sets of restrictions, regulations or encouragements of certain uses, behaviors and objects. Therein, the conflict between users who follow traffic flow and those who 'obstruct' movement determined city politics. In the name of a newly defined public interest in movement, cities began to target street users who were blocking traffic: street merchants and informal street markets for example faced increasing regulation in regard to where they were allowed to sell their products and were even displaced from city streets. Vagrants, beggars and prostitutes increasingly were removed from the streets as well as noisy shops, sidewalk storages, signs, signposts or straying animals. Simultaneously, people were educated not to spit, litter, urinate,

drink or act drunk in the street. Hence, cities expanded their reach not only spatially on the formerly privately financed sidewalks, but also into the personal realm of behavior. In other words, the regulation of streets went along with the education of the population and therewith established a certain code of appropriate behavior and use for the metropolitan street. Following the engineers' logic and ideal of the good metropolitan street, the well-behaved and orderly pedestrian became the appropriate user of the sidewalk and part of metropolitan street life, while other users as well as unfavorable behaviors got regulated and displaced (Amato 2004, p. 181ff.; Blomley 2011, p. 58ff.; Bluestone 1997; Loukaitou-Sideris, Ehrenfeucht 2012, p. 20ff.).

Thus, while walking previously had mostly remained the only way to move forward through the jammed streets, sidewalks, public transportation systems, new streets and their attached imaginaries and regulations fundamentally affected walking as the predominant mode of urban transportation and thereby produced the urban pedestrian as both a new type of walker and a particular street user with particular social practices and status (Loukaitou-Sideris, Ehrenfeucht 2012, pp. 15–17; Amato 2004, p. 161ff.). The pedestrianization of walking meant the integration of urban residents into a spatial order that prioritized movement on metropolitan streets.

2.1.3 WEALTH, TIME, MODERNITY: WALKING, CYCLING AND THE NEW URBAN MIDDLE CLASS

Walkers in the quickly changing metropoles at the end of the 19th century took many different forms: as speeding commuters, organized promenaders or strollers, window shoppers or flâneurs. People on foot developed different social practices of walking within the evolving street code of traffic flow that went beyond utilitarian purposes of movement and often constituted highly scripted social rituals. Particularly the rising urban middle class started to claim street space as pedestrians to display their time, wealth and status on the newly ordered streets. Walking increasingly had been "transformed from being a condition of material survival into an activity of choice and self-enhancement" (Amato 2004, p. 17) that the middle and upper classes used to perform their urban identity and ideals. The newly ordered metropolitan streets provided them with a pleasurable urban environment to walk in: they were equipped with increasing numbers of

commercial attractions, such as window displays, bars, cafes, parks, gardens, and movie theatres that the middle class used in their growing leisure time (Amato 2004, p. 16; Bedarida, Sutcliffe 1980, p. 386; Solnit 2002, p. 177).

Particularly strolling and shopping became practices which stood for "a privileged and self-congratulatory ambling" that "manifested having time and money" (Amato 2004, p. 173). Middle class citizens gathered for organized strolls which became a "highly scripted ritual" of "watching and being watched" (Domosh 1998, p. 213), a social event that was "as organized an entertainment as a modern excursion to the movies" (Solnit 2002, p. 172) and which "inserted a sense of order and hierarchy within the chaotic, rapidly changing streets" (Loukaitou-Sideris, Ehrenfeucht 2012, p. 41). In the arcades, cleaned streets and the early department stores the middle class found amble space and a relaxed atmosphere that formed a stark contrast to working class markets and shifted shopping from a necessity to a leisure activity. Here, particularly women found an acceptable space for strolling that the streets otherwise only offered to men (Loukaitou-Sideris, Ehrenfeucht 2012, p. 43). That said the male figure of the stroller, Walter Benjamin's (Benjamin, Tiedemann 1983, 1982) flâneur, still is one of the most popular types of the urban pedestrian. The flâneur, though never clearly defined, can most basically be understood as "an observant and solitary man strolling about Paris" (Solnit 2002, p. 198), who was "visually consuming goods and women while resisting the speed of industrialization and the pressure to produce […] both resistant and seduced by the new commercial culture" (Solnit 2002, p. 200).

Hence, in constant movement strollers walked within the evolving norm of unobstructed movement as the appropriate use of metropolitan streets, absorbing and performing the city while walking through it. Wealthy urbanites claimed metropolitan streets in multiple ways through different forms of walking and pedestrianism, using movement and consumption as a form of social distinction and thereby performing a certain ideal of urbanity of that time that was further fostered by the above-described interventions and regulations of the state; thereby, they added the regulations of that particular social practice to metropolitan street space and hence further excluded those who contradicted the norms of movement or social status. As an expression of their wealth and status, strolling displayed the upper classes' ample time and money and their opportunity

to resist the coercions of industrial production that the working and poor classes had to obey.

In a similar way, cycling emerged around the same time as a mode of distinction for the middle class. The concept of the bicycle as a "steerable, single track, two-wheeled vehicle on which the rider could maintain balance through forward momentum" (Smethurst 2015, pp. 27–28) had already been invented in 1817. Yet, the *Draisine*, as this vehicle was called, failed as a vehicle for the masses and society's interest in further developing the concept of a two-wheeled vehicle remained absent for another half century. It was only in 1867 that a derivative of this idea was invented: the *Velocipede* was the first pedal-driven vehicle that was actually termed 'bicycle' and it marked the starting point of a much more continuous development of bicycles in Europe during the second half of the 19th century. The *Velocipede* was an instant success. The increasingly industrialized and urbanized western societies welcomed the vehicle as both a symbol of modernity and technological progress and a vehicle increasing their personal mobility. While technologically the *Velocipede* – apart from its pedal propulsion – was not so different from the *Draisine* in that it was still made from wood and hence was relatively slow and cumbersome, society's demand for individual mobility and recreational cycling, as well as for objects that represented modernity apparently had significantly shifted in previous decades and the bicycle served that need. Thenceforward, the development of the bicycle sped up: only a few years later, in 1869-70, the still well-known high-wheel bicycle called the *Ordinary,* entered the stage and in the 1880s ultimately masses of people were drawn to the bicycle when the *Safety Bicycle,* a "low-mount bicycle with two equally sized wheels and a chain drive" (Herlihy 2004, p. 225), was invented that with regard to its basic technology was a bicycle as we know it today. It was the first model to be equipped with pneumatic tires and made cycling simultaneously far easier, safer and faster than its predecessors (Radkau 1995, p. 11ff.; Smethurst 2015, p. 28ff.).

A bicycle was quite an expensive object and hence started off as a luxury good for the middle class either as sports equipment or simply as a representative fashion-vehicle. In the early years of cycling, urban elites took their expensive vehicles to the parks and the streets of cities and used the new, extra-ordinary and

somewhat eccentric vehicle as a symbol to publicly display their peculiar lifestyle, wealth and modernity. As early as in the 1860s and 70s they gathered in bicycle clubs that became an important juncture for the urban middle class as a space of distinction within urban society. In these clubs not only park-rides were organized, but also excursions to the outer parts of cities and suburbs, as well as contests (for example, for the best flower-decorated bicycle) to entertain their members (Ebert 2010; Herlihy 2004).

The invention of the modern street and the concepts of pedestrianism and urban cycling are closely related. The re-organization of street space went along with a growing governmental interest in regulating and controlling public street life and in heightening traffic flow in the growing industrial metropolises. Thereby, the newly produced urban spaces fostered both new socio-spatial practices of walking and cycling as well as new forms of and approaches to individual mobility. Both, pedestrianism and cycling emerged as social practices of distinction and representation of the middle and upper classes who used them to display their wealth, the availability of leisure time, and their cutting-edge modernity. While cycling at first rather remained a sports and leisure activity that was regulated or even banned from the street, pedestrians were created as the desired users on the newly ordered streets and were a crucial part of the rationale to transform the materiality of the metropolitan street. City governments used pedestrianism to establish an order of flow, consumption and traffic logic as the correct and primary function of the metropolitan street that in the following decades would be also demanded by cyclists and drivers.

2.2 FROM HABITAT TO INFRASTRUCTURE: THE STREET IN THE AUTOMOBILE CITY

The beginning of the car's global success story is usually dated to the invention of Ford's Model T in the United States in 1908 which also stands for the beginning of modern large-scale industrial production: assembly lines rationalized, accelerated and multiplied production to previously unknown scales and simultaneously reduced the prizes of fabricated goods. Since then, the car as a symbol of freedom, individual mobility, wealth, status, modernity, and progress has made its way from an outlandish and elite technological artifact to an

ubiquitous object of people's everyday lives for both drivers and non-drivers with a striking omnipresence and power in urban space (Sachs 1992; Norton 2015).

However, the global triumph of the car was not solely the result of a powerful technology inevitably forcing itself onto societies and space, but rather the product of a distinct car-friendly spatial politics that refitted streets and cities to the needs of the new vehicle. By the end of the 19th century, the modernizing Western society had developed a desire for a new and more individual form of mobility that was materialized first in the bicycle and then in the motor-car. It will be shown in this chapter, that this desire was increasingly forced onto streets through interest-driven politics promoted by urban elites that aimed for their individual movement in metropolitan street space (Ebert 2010; Herlihy 2004; Smethurst 2015). Consequentially, streets were physically and socially reconstructed to establish an entirely new metropolitan street order that would not only accommodate, but prioritize the new vehicle so that it was able to flock the streets in masses. Ultimately, as mass-motorization in the mid-20th century spread from the United States across Europe and then the world, the new opportunities of automobility and ideals of modernist city-planning have entirely reshaped cities and thereby created a system that would establish the car as the dominant global form of mobility (Norton 2007, 2008; Merki 2002; Schmucki 1995).

Thus, in the following sections I will analyze these political processes of increasing motorization and socio-spatial transformation in three steps that focus on: (1) how the car became relevant for urban societies at the end of the 19th century; (2) how streets were socially and spatially retrofitted for its accommodation in the early 20th century; and (3) how the transformation of urban form and mass-motorization together have shaped the car as the globally dominant form of mobility until today.

2.2.1   CYCLISTS, DRIVERS AND THEIR DEMAND FOR 'AUTOMOBILITY' ON METROPOLITAN STREETS

Both the bicycle and the car were technological inventions that by the end of the 19th century attracted increasing societal interest particularly among urban elites who could satisfy their growing interest for technology and modernity through the new, expensive vehicles. Although chronologically delayed, the socio-political processes, actor constellations, and spatial demands surrounding the

early bicycle and car discourse resemble one another and together were crucial for the success of the car and the remaking of street space according to the needs of unhindered movement. Hence, this chapter follows the basic idea that the bicycle and the car in the story of their emergence have been allies rather than antagonists in their common fight against the existing street order.

As was outlined in Chapter 2.1.3, the bicycle started to spread among wealthy urbanites in the 19th century as a symbol of a particular kind of modernity: a new, exclusive technology that created a space of distinction for the rich. Moreover, the bicycle advanced the understanding of and approach to mobility to the individual, bodily and the collective, societal experience of the nexus of speed, mobility, and freedom: beyond its usage within urban parks, it promised to expand one's space, to provide mobility that opened up the places outside of the growing and congested cities, and the freedom to move wherever and whenever one wanted, independent of rail tracks or train schedules. Yet, as bicyclists were increasingly intruding new social and physical spheres, they pushed established norms and boundaries and provoked conflicts with other, already more established road users. Therefore, new street regulations seemed necessary that would re-organize socio-spatial codes of the street and integrate the new vehicle. Yet, first initiatives to regulate bicycle use on metropolitan streets mostly were to the detriment of cyclists and rather in favor of the existent street order: cyclists were required to equip their vehicles with a bell, front and rear lights; in some cases they had to carry license plates or even pay bicycle taxes. Ultimately, in many cities at the end of the 19th century cyclists got banned from the streets and parks: in New York, cyclists were banned from Central Park and Riverside Drive – the city's greatest parks - between 1879 and 1886, in Berlin cycling on public streets was entirely forbidden between 1884 and 1891, and even in Amsterdam – today's cycling capital – bicycles were forbidden to cross certain parks (see Brüdermann 1995, pp. 34–38; Ebert 2010, pp. 48–49; Epperson 2014, pp. 25–27; Herlihy 2004, pp. 272–273; McShane 1994, pp. 115 ff; Smethurst 2015, pp. 67–68).

With conflicts and restrictions for cyclists rising, bicycle clubs increasingly became political actors and started to organize their claim for cyclists' rightful use of street space. In the 1880s, national cycling associations were formed in many countries. In the United States the League of the American Wheelman (L.A.W.) was

founded in 1883 in New York to reverse the ban for cyclists in Central Park. They started to parade in Central Park, yet it was only with increasing political engagement and lobbying of the L.A.W. that Central Park was reopened and the legal situation for cyclists improved: they guaranteed New York State Governor Hill their support and votes in the next elections when he passed their law proposal that defined a bicycle as a carriage and prohibited locally specific cycle laws, which the Governor approved and signed. Ultimately, cyclists in the US received the same legal rights and privileges as other road users in 1897, which transformed the vehicle from an 'intruder' to being part of the legal norm (Epperson 2014, pp. 26–35; Smethurst 2015, p. 80).

Also in Germany cyclists started to organize their claims, yet under quite different political conditions. The German Empire had only been founded in 1871, governments and administrations were still regionally and locally splintered, and so were the laws and regulations for cycling and traffic in general. Nevertheless, cycling and cycling clubs in the heyday of a new nationalism also pursued and contributed to an inherently national agenda: the experience of the nation on a bicycle was one of the association's core concerns. Yet, this remained a difficult endeavor: missing infrastructure and highly divergent regional or even local cycle laws and traffic rules prevented cyclists from crossing towns and villages, and warranted that the cyclists informed themselves about the respective regulations. Such arcane conditions certainly hindered the interests of cycling associations, which is why the adaption of uniform, nation-wide traffic rules for cycling were one of their core interests. The clubs however had already in the early 1880s tried to overcome their own splintered structure and formed the *Deutsche Radfahrerbund* (D.R.B., engl.: German Cyclist Association) in 1884 in Leipzig to promote cycling sport and represent cyclists' legal rights. Nevertheless, while the objectives had been nationally announced by the D.R.B. the implementation of a uniform cycling law was ensued in regionally different and consecutive steps with the regional cycling associations playing key roles. Prussia passed cycling regulations that granted cyclists the same rights as horse drawn carriages in 1896, Bavaria in 1898. Yet, it would not be until 1909, when the automobile had started to enter the streets of German cities as well, that a nation-wide traffic law was

announced and the authority to regulate street traffic was handed over from municipalities to the state (see Ebert 2010).

Hence, bicycle lobby was crucial in establishing the rightful street use of cyclists. In a similar manner, automobile clubs also emerged as elite groups that primarily were organized around sports-interests and increasingly turned towards becoming political organizations that claimed their right to drive and to the street. Both in the United States and Germany these clubs for large parts evolved from former bicycle associations; here, producers, dealers, and consumers of cars met and together formed and shaped the automobile ideology. The first auto-club in Germany was founded in 1897, the Central European Motor-Car Association (MMV); the still influential ADAC (General German Automobile Club) arose in 1911 from the German Motorbike-Association (DMV), which had been founded in 1903 and quickly grew as it recruited cyclists as members who were attracted by the advantages of the motorbike in regard to mobility, yet its relatively low price compared to the automobile. The American Automobile Association (AAA) was founded in 1902 and replaced the fading LAW as the most important advocacy group for "good roads" in the United States. Besides a secured legal status, bicycles, of all street vehicles in the 19th century, foremost needed better roads with smoother surfaces to enjoy the ride, bicycle clubs and associations started to rally for better street pavements both in cities and the countryside. Particularly in the United States, the so called *Good Roads Movement* became inherent to the L.A.W.'s agenda in the 1880s and until today has remained its most prominent and long-lasting feature. The *Good Roads Movement* claimed first the equal right for all vehicles to use urban and rural streets for their travel; and second, it demanded smoother road surfaces nation-wide that should be publicly funded. After incremental successes, the *Good Roads Movement* slowly transformed itself from a bicyclist to a motorist agenda as the US was entering the motor-age, and the cycling industry turned towards the production of automobiles around 1900 (Epperson 2014, p. 36ff.; Gutfreund 2004, p. 9ff.; Herlihy 2004, p. 278ff.; Merki 2002, p. 203ff.).

Hence, in Germany and the US cyclists and motorists were connected through both thematic and actor-related coherence: cyclists at first were organized in elite clubs and associations that only over time gained political interest and influence

and fought for the rights of way for cyclists on city streets. However, in the early days of the motor-age the developments in both countries drifted apart: while in the United States the motor-car as a transport vehicle took hold much quicker and along with a more suburban settlement structure largely prevented utilitarian cycling, in Germany, the bicycle developed into a utilitarian mass-vehicle. Until the mid-1930s, 15 million bicycles were on the streets, compared to only two to three million in the United States, which had almost double the population. The number of cyclists in traffic tremendously rose due to a strong decrease in price caused by industrial serial production and the active promotion of the bicycle by civil services such as the police or the fire departments that used it as their official vehicles. Thereby, they promoted the bicycle's utility for the transport of workers. While the middle class cycling associations had made streets accessible for bicycles, the mass-diffusion of bicycles was fostered by other political forces and shifted the political ideology of the bicycle from an elitist to an emancipatory and egalitarian agenda (Ebert 2010, p. 285ff.; Herlihy 2004, p. 309ff.).

Nevertheless, in both countries bicyclists made their way from being intruders into existing socio-spatial norms to being accepted street users through interest-driven politics that were primarily executed by wealthy and influential advocates. In a simultaneous development a few years later, early bicyclists became early motorists and organized in clubs to establish their common automobile ideology and to continue common claims for better roads. Yet, in urban areas this went neither unprotested nor conflict-free. As cars started to enter metropolitan streets in growing numbers, their inherent threat to people's safety necessitated much more comprehensive regulations for street space that would organize the integration of the new vehicle, as the following sub-chapter will show.

2.2.2 MAKE WAY FOR THE FUTURE: THE RE-SHAPING OF STREETS FOR THE AUTOMOBILE

When the motor-car entered metropolitan streets, it was not only an additional traffic mode or a modern form of mobility in the growing amounts of traffic in cities, but it fundamentally challenged the existing street order and related behavioral codes of street users. Previously, pedestrians, cyclists, horse-carriages, and street-cars had jointly used the street, but the car demanded more

regulation particularly as it was a threat to people's safety and life and largely dependent on its own unobstructed movement.

Thus, early car-politics were primarily safety politics that applied measures which concerned (a) the car, (b) the driver, and (c) the street. The technical standards for cars included steering, breaks, a reliably functioning motor and lights. Later others followed such as the rear mirror or the blinker. For the drivers, driving schools and licenses were invented. However, to increase traffic flow and reduce risk of mutual obstruction of street users, the reorganization of public street space and the regulation of the behavior of all street users was the most crucial and challenging part for city politics and increasingly shifted the requirements for adaption from the motorists to pedestrians and others. To accommodate the car, other road users had to leave the street and were forced to do so mostly in the name of safety and through comprehensive lobby work of automobile clubs.

One of the core problems that appeared in metropolitan streets was the rising crash rates, particularly between pedestrians and motorists caused by speeding cars and unwary pedestrians. Yet, as technical equipment to measure speed was still missing the control of speed limits was difficult for both the driver and the police. Through intense lobby work of automobile clubs, this conflict led to a shift in the burden of proof so that the driver no longer had to prove that he was slower, but the police had to prove that he had driven faster than was allowed. Such a shift was also forwarded in the realm of liability that was brought up by the many injured or dead pedestrians that resulted from the crashes. While previously the holder of a technology had full liability for accidents caused by this technology – be it the railway or machine within industrial production – in Germany, a law that was drafted in 1909 attributed the liability for car-crashes to the driver who had to proof his innocence, except in inevitable collisions which were caused by the behavior of the injured or the hit person or animal, which included for example sojourning on the roadway which exposed them to the risk of being hit by a car. This early on laid the ground for the loss of space for street users other than the car who had to adapt their behavior to cars and ultimately leave street space for the sake of their own safety (Holzapfel 2012, p. 30ff.).

Although regulations for cars and drivers were established, they went along from the beginning with the re-regulation of pedestrian and bicyclist behavior. The car-lobby in their publications consequently raged against bicyclists and pedestrians and their apparently wrong behavior on streets and demanded the education of non-motorized road users. As early as 1905, the first stop-signs were implemented on city streets, yet they did not address drivers, but rather pedestrians who should yield to cars. The 1917 traffic law in Berlin included walking regulations: for example it prohibited that three people could walk next to each other on the sidewalk as well as the non-rectangular crossing of the street. In the United States this was even taken further through the framing of pedestrians crossing the street in another manner were called "jaywalkers", a term that resembles a particular kind of rural backwardness and was based on the notion that pedestrians who do not obey car-oriented street codes just do not know how to appropriately behave within modern society. Thus, the prohibition of "jaywalking" became crucial in the re-education of people to an understanding that the car belongs on the street and pedestrians have to obey its rules (Norton 2007). In Germany, in the 1920s the strict education of children and teenagers for correct walking was institutionalized through obligatory traffic education. Indeed, the regulation and displacement of street users and particularly pedestrians of all kinds and the idea that the roadway is solely for cars quickly developed in the following years: pedestrians, cyclists, horse carriages, and free running animals all were to be educated to leave the streets to cars and to follow the rules of movement. Often, this was based on regulations that already existed but in the 1920s were increasingly enforced by the growing police forces (Merki 2002, p. 319ff.; Fraunholz 2002, p. 61f.).

As the advent of the motor-car in cities went along with severe restrictions for other road users, it did not go unprotested. The question of safety provoked protests from different interest groups and street users; moreover, the car was protested for its elite status as a symbol for class-distinction and by other traffic modes that were increasingly impaired by the new vehicle, such as horse-carriages as horses balked due to the cars' speed and noise; furthermore dust, noise, smell as well as the loss of space to the new powerful vehicle and the associated displacement of others caused resistance. Yet, in the face of the growing car-lobby,

the opposition was relatively weak and soon had to surrender to the car and replace protest by habituation to the new street code (Fraunholz 2002; Merki 2002; Norton 2008).

This street code was not only manifested through new laws and regulation, but furthermore through the reorganization of the streets' built environment. In both, Germany and the USA the asphaltization of streets at the beginning of the 20th century spread to provide better conditions for the new vehicles (McShane 1979). In New York, the growing congestion was to be relieved through the widening of streets at the expense of sidewalk space (Stern et al. 1987, p. 38). In the inner city of Berlin, street openings were supposed to increase traffic capacity and streets were to be re-designed in such a way that provided lanes at the center for the tram-way, next to the car roadbed, lined by bicycle paths and sidewalks (Düwel, Gutschow 2009, p. 164ff.; Kalender 2012). City streets were equipped with signage, road markings, and traffic lights and speed limits were supposed to adjust the car to the surrounding. Thus, the street in the early days of the motor-car already received signs and codes that reorganized it as a space for car-movement (Schmucki 1999).

By the end of 1920s, the adjustment of streets to the motor-car had been completed: people had left roads to cars which turned them increasingly into spaces that could be understood through signs and markings and required a certain behavior. People and traffic were subordinate to the car's movement and subject to heightened police control. As a threat to the existent street order as well as to people's safety, the car had to be adapted to its urban environment and vice versa. The metropolitan street was politicized between different interests and through the powerful position of both cars and automobile clubs was transformed into a motor-space. While up to then the street had been mostly seen as a public space open to all uses, the features of the car, its speed, the inherent danger for other road users, the need for parking space and many more, brought with them new interests and needs for regulation. Thus, early on in the motorization process the hegemony of the car was constituted by technological, jurisdictional, political, social and spatial transformations that adjusted existing spatial structures and social norms of metropolitan streets to the needs and desires of cars and their drivers.

Simultaneously, the transformation of cities and streets for the motor-car entered an entirely new dimension both politically and spatially. Starting in the 1920s, plans were drafted that along with growing motorization and car-oriented politics would ultimately reshape both New York and Berlin, and many other cities in different countries, for the automobile, thereby fundamentally expanding their urban fabric and establishing an automobile-dependent urban structure.

2.2.3 'THE SYSTEM OF AUTOMOBILITY' AND THE TRANSFORMATION OF THE METROPOLE

By the turn of the 19th century, the enormous industrial metropolises were facing amplified problems of congestion that caused shortcomings in housing, mobility, and quality of life. The inner cities showed large densities of people that shared scarce living space; streets were clocked with different kinds of traffic, and light and air hardly got to the ground level. Planners, architects and urban reformers of that time increasingly saw the solution of these problems in concepts that would foster dispersion and suburbanization and relocate people from the dense city centers to the greener, quieter, and healthier periphery where they would live and commute to the city to work. Both, New York and Berlin in the 1920s were increasingly developed towards a dispersion of their urban structure, which was at once cause and consequence of car-mobility.

In the United States the automobile quickly spread about the country: already by 1907, the US had overhauled France, Great Britain and Germany and had become the largest market for car production and consumption. Between 1900 and 1920 the number of registered motor-vehicles grew from 8.000 to approximately 8.1 million, while the number of persons per motor vehicle shrank from 9.526 to 13 (McShane 1994, p. 105). By 1923, three million American families owned a car and in New York, the city with the highest car densities, the number of vehicles rose from 125.101 in 1918, to 790.173 in 1932 (Caro 1975, pp. 144; 328f.). Furthermore, already in the late 19th century, as a consequence of New York's vertical growth land use on the Manhattan Island was significantly intensified, which fostered the demand for more effective city planning, more space for traffic and transportation as well as for light and air. In the mid-1920s, master builder Robert Moses took office as New York's Parks Commissioner and in the following more than three decades that he remained in office, he planned and

widely implemented an encompassing system of highways and other car-infrastructure that reshaped the existing city. This system was largely based on New York's first regional development plan, the Regional Plan of New York and its Environs which was published in 1928 by the Regional Plan Association (RPA) and pursued three major goals: the determination of the best use of Manhattan's Central Business District; the stimulation of transport planning to decentralize the crowded city; and the use of public funds for essential social purposes. For the first time the plan payed as much attention to highway design as to mass-transit to spur decentralization. Based on the regional plan, by 1933 555 miles of major highways had been built, re-built or were under construction, 136 miles of new parkways and boulevards had been constructed and another 130 miles were planned, providing ways out of the city to recreational facilities and the open countryside (Caro 1975; Gutfreund 2007; Stern et al. 1987, p. 35ff.).

The World's Fair in 1939 served as both a forum for automobility and another incentive to expand the city's highway system. Hence, by the end of the Second World War the highway system had already largely been put in place and would be further developed until the early 1960s, thereby becoming the main motor of suburbanization and urban sprawl. In the 1940s and 50s 1.2 million middle-class whites moved out of New York City to the suburbs while the working class and poor remained in the center. Concurrently, employment schemes functioned inversely: the suburban middle-class worked in the city center, and the urban working class at the periphery. This distribution of people and employment lead to heavy automobile movement of all classes, while the poor had difficulties to find a job due to lacking mobility. Accordingly, while Moses saw the solution to the urban problem of his time in the highway network and suburbanization, the regional growth and acceleration of traffic led to severe problems in the inner city that nevertheless depended on that traffic as it drew in workers from the suburbs. To manage traffic and improve traffic flow in Manhattan one-way traffic, parking meters, shorter red/ green light intervals and other measures were implemented. Nevertheless, in the 1950s, parking became the most ubiquitous of all problems. A lack of off-street parking space and garages forced car-owners to park their cars in the street and politicians to find ways to either discourage people from driving into the city or provide appropriate parking space. Many efforts were made in that time

to ease driving in the city, improve traffic flow and the parking situation; most of it on the expense of pedestrians and street life in general. New York had developed into a regionally connected megalopolis, suburbanized and strangled by traffic (Stern et al. 1995, p. 15ff.).

While in the United States mass-motorization was already a phenomenon in the 1920s, in Germany – as in most European countries – it was not until after the end of the Second World War that cars indeed hit a crucial number and needed more space. On the one hand, the European economies were yet too small for the mass production of cars based on the Fordist model. Towns and settlements were well connected by rail-track that provided for the mobility of people and goods; on the other hand Americans lived less densely than Europeans and hence had a higher demand for cars both in urban and suburban areas (Martin 2009). On Berlin's streets, in 1900 there were only 158 cars, which rose to 3437 in 1910 and hit 70000 by 1928 (Kalender 2012, p. 203). The German economy had suffered from the consequences of the First World War, so that the car long remained an upper class vehicle and German traffic until the end of the 1920s remained dominated by horse-carriages (Merki 2002, p. 135f.).

Thus, while in New York urban expansion was a consequence of the increasing pressure of motorization, in Berlin traffic long remained dominated by other modes. Nevertheless, dispersion in the 1920s became a favored tool of urban planning. This was manifested through a new orientation in matters of social housing. Berlin's municipal government, as new major actor in housing projects, refused the infamous 19th century scheme of the closed block and rather oriented towards street-averted residential projects that were located at the periphery. Furthermore, industrial areas were also increasingly shifted to the periphery, while the city center was reserved for office buildings, banks, and other service industries. Hence, this development heightened the need for mobility and the relevance of free flowing traffic for the functioning of the city. Therefore, transport and urban development plans of that time fundamentally built upon radial transport axes between the center and the periphery. While these axes at first were still developed as railway axes, with increasing motorization and growing interest in street infrastructure they were complemented with roadways. Hence, when by 1927 motorization in the city had further grown and the growing car

traffic demanded further expansion and connection of streets and increasingly shifted the discussion towards the necessity to plan streets for the integration of motorized vehicles. The street plan of 1927 was supposed to structure the street network into a coherent system and to establish a street hierarchy and a standard design for streets. It laid out 17 radial streets as basis and three concentric rings, and followed the idea of pooling traffic to relief other streets. Although the plan got only partially implemented due to the economic crisis in 1929, the National-socialist *Machtergreifung* in 1933 and World War II, the ideas of the 1920s have shaped transport development in Berlin until today and formed the basis for many future transport plans as well the car-oriented planning of the mid-20th century (Kalender 2012, p. 203ff.; Düwel, Gutschow 2009, p. 111ff.)

In the Second World War, Berlin had been massively destroyed and so after 1945 reconstruction became a core challenge which lasted for the following decades. Furthermore, the division of the city into West and East and the growing political tensions between the two systems that were materialized in the construction of the Berlin Wall in 1961 also were reflected in the respective urban and transportation development that followed different planning and political ideologies. However, in both parts of the city the dimensions of the street and transportation network were fundamentally altered, based on the common idea to structure the city by four expressways that cross in the city center and connect the city to its hinterland. In West-Berlin, until 1955 the focus of street development was on the reconstruction of important radial streets and east-west connections. Notwithstanding, in anticipation of increasing motorization, as it already was the case in other West-German cities like Munich or Frankfurt, the municipality began to systematically prepare the construction of an elevated street network based on the land use plan that had been drafted in 1950 and inspired by plans realized in the United States. Even though car owners were a minority (1950, 100.000 cars; 1965, 165.000 cars in the city), this project inaugurated a new phase in transportation policy, whose prime goals had become the free choice of the traffic mode, the promotion of motorized travel and ultimately a functionally separated city. The first piece of urban highway was hence implemented in the South-West of the city, demolishing grown urban structure and implementing a new scale of urban transport infrastructure. The ideal of a system of interconnecting urban

highways was manifested in the land use plan of 1965 that planned highways passing through popular and densely populated areas such as Kreuzberg, Schoeneberg or Wedding, but which were only partially implemented due to growing resistance in the city. Simultaneously to the highway plans, inner city streets were enlarged for the expected growth in motor-traffic and public transport was increasingly neglected: until 1967 the tram in West-Berlin was abolished and replaced by busses, the expansion of the subway was accompanied by expansions of the above-ground street space and increasingly placed pedestrians and public transport commuters underground (Dittfurth 2014; Kalender 2012, p. 367ff.).

Also in the East, inner city streets were expanded, although not so much for car-traffic but rather for reasons of political representation, manifestations and parades. One of the first prestigious projects in the newly found GDR was the construction of the *Stalinallee*, a street 96m wide between *Frankfurter Allee* and *Alexanderplatz*. Also, the north-eastern cross of the expressway system was implemented in the GDR, yet in a downscaled version. The seat of the state government in *Wandlitz*, a small town north of Berlin, was connected to the city center through a tunnel below *Alexanderplatz*. Nevertheless, motorization in the East remained low and the position of public transport strong: particularly to the new housing projects in the East were well-connected to the city center through *U-Bahn* and *Tram*. The different patterns of traffic planning developed in West and East Berlin cast a long shadow on today's transportation statistics, which depict a much higher use of public transport in the Eastern districts than in the Western parts of the city (Senatsverwaltung für Stadtentwicklung und Umwelt 2014a). Hence, although for different reasons and to different extends, both East and West Berlin went through fundamental changes of their urban form in the mid-20th century and thereby were prepared for the growing car-use that would follow (Düwel, Gutschow 2009, p. 134f.; Kalender 2012, p. 399ff.; Krause 2014).

Eventually, car-oriented planning and motorization have become global phenomena: while until the mid-20th century, the US remained the prime producer and consumer of cars, it was then joined by Germany and Japan as their economies had recovered from the war as the three biggest car economies. Until 1989, these

three accounted for 58% of world car-production and 50% of world-car consumption. Since the end of the global East-West divide in 1990, economic production and consumption have been increasingly globalizing and motorization rates have grown immensely (Martin 2009). Thereby, an "automobile urban fabric" (Newman et al. 2016) consisting of vast street and highway networks, tunnels and bridges, single-family homes and expanding suburbs, and an increasingly specialized infrastructure oriented around car-travel emerged far beyond the city-limits of New York and Berlin. Not only did this fundamentally expand the physical reach of a city and thereby the need for travel and mobility of its residents, but furthermore imposed a spatial order onto the existing parts of the city that re-oriented both the "walking" and the "transit fabric" (Newman et al. 2016) of the inner cities also around the car. Consequentially, metropolitan streets of different scales were transformed from multi-use public spaces into traffic spaces. They are designed by the technical, mathematical rules of engineers, standardized by regulations and by-laws to foster traffic flow and universal understandability. Streets are mastered by signs and signage that assumed control over space and guide all traffic participants through the increasingly complex spaces of automobility (see Schmucki 1999; Venturi et al. 2007). Thus, car-oriented urban ideals have transformed streets from a multi-use public space into a mono-functional transportation infrastructure and produced streets as a space of "automobile inclusion" (Hohm 1997a). This space has excluded both other forms of mobility, particularly non-motorized modes, and social practices from participating in public space and thereby has transformed and even destroyed large parts of the former urban built environment. The order of contemporary metropolitan street space is primarily shaped by and shapes different flows of traffic and hence follows and constantly reinforces a seemingly rational "traffic logic" (Blomley 2007) that codes streets as a space for movement and that is until today dominated by car-travel.

Moreover, modern society has developed a state of encompassing car-dependence, car-culture, and hyper-mobility, which is deeply inscribed into its built environment, life styles, and legal norms: auto-mobility has changed people's understanding and perception of mobility in such dramatic ways that the concept of *'free movement'*, although still relatively new, is a fundamental constituency of

the modern self and its society (Sheller, Urry 2000). In Germany, in 2012, 65% of trips to work were made by car (Bundesministerium für Verkehr und digitale Infrastruktur 2015, p. 100). In the United States, the total amount of trips to work taken by car until today ranges around 85%. Those statistics are relatively stable since 1989, when 88% of trips taken to work were made by car (Bureau of Transportation Statistics). Modern life in these countries is almost impossible without the car. It created mobility patterns as a distinct combination of "flexibility and coercion" (Sheller, Urry 2000, p. 739) which increasingly has forced people to use the automobile to maintain their access to society and space. As a socio-technical complex, the "System of Automobility" (Urry 2004) dominates mobility and urban societies on a global scale.

Thus, metropolitan streets are dedicated to the "System of Automobility" and the political struggle of rethinking streets centers on the fight against the spatial hegemony of the motor-car. Already in the 1960s, the negative impacts of infrastructure expansion, motorization, and automobile-dependence increasingly manifested in urban space: on the on hand urban spaces decayed and congestion and pollution devaluated city living, whereas on the other hand car-oriented planning did not provide a solution to growing motorization, but rather produced more traffic. It was in this time that the contemporary rethinking of streets originated along claims for livable urban spaces as well as for a more environmentally friendly and urbanely compatible form of mobility. Along with other global urban processes, these claims have reshaped the politics of metropolitan streets in the second half of the 20th century and have led to a revival of the modes of bicycling and pedestrianism in urban politics. Hence, the next chapter will analyze in three steps, how planning ideals shape the promotion of walking and cycling and how shifting political debates have brought these modes from marginalization to the center of contemporary urban politics.

2.3 RETHINKING THE STREET!? – TOWARDS NEW POLITICS OF METROPOLITAN STREET SPACE

In the 1960s began, what can be called a more than 50 years on-going process of rethinking car-oriented mobility and urban planning. In 1961, Jane Jacobs published her seminal book *The Death and Life of Great American Cities* as "[...] an attack on current city planning and rebuilding [...] [and] an attempt to

introduce new principles of city planning and rebuilding" (Jacobs 1961, p. 3). Through her book, Jacobs gave voice to a widely growing demand for a revitalization of public life on metropolitan streets. Just a few years later, in 1965, her German fellow Alexander Mitscherlich published his influential book *Die Unwirtlichkeit unserer Städte*, which also lamented the loss of public life and publicness in cities through modernist urban planning. In the following decades, other authors argued in a similar direction, altogether calling for a revaluation of metropolitan street life and livable spaces that foster social encounters (see e.g. Bahrdt 1978; Gehl 2011; Knoflacher 1996; Whyte, Underhill 2009; Whyte 2010). In these works, the writers condensed the re-growing desire for urban living and an increasing critique of the urban deficiencies caused by modernist, car-oriented planning that spread among a new generation of planners, theorists and citizens at that time.

Furthermore, in the late 1960s and early 1970s Western societies went through a pivotal moment of interrelated economic and ecological crises that marked the end of the booming post-war era and had profound consequences for planning, politics and mobility. In 1972, the publication of the report *The Limits to Growth* by the Club of Rome and the *United Nations Conference on the Human Environment* that took place in Stockholm signaled the start of an internationally increasing consciousness of the negative environmental impacts of economic growth and the start of international environmental politics. Moreover, the Oil Crisis of 1973 strikingly demonstrated the dependence of the economy on the import of fossil oil, as Western societies for the first time since the Second World War faced a stagnating world economy that fundamentally questioned their continued existence. As one of the biggest consumers of the limited resource of fossil oil, the car and car-oriented mobility came into the spotlight of political restrictions: oil-prices rose, gas shortages, speed limits and car-free Sundays were enacted to reduce oil consumption. In other words, it became clear that the existing transportation system that largely depended on the motor-car could not permanently last and fulfill society's mobility requirements. This insight is nowadays mainly framed by the concept of *Sustainable Mobility,* which has spread progressively among both governments and academia since the 1990s (Held 2007, p. 852ff.; Low 2013, p. 66ff.). On an urban scale, the paradigm in the first place has

demanded a fundamental reduction of travel by and dependence on the motor-car and a shift of urban transportation policies towards the promotion of public transport, walking, and bicycling.

Thus, in the following sub-chapters, I will analyze the shifting oppositional and mainstream politics of reclaiming streets for walking and cycling that started in the second half of the 20th century to explain their role within contemporary urban development plans. As a first step, I will outline the basic spatial concepts that planners have developed since the 1960s to promote walking and cycling in cities and how walking, cycling, and the built environment together shape the global notion of *livable streets* nowadays.

2.3.1 WALKING, CYCLING AND THE PROMOTION OF LIVABLE STREETS

Core of the new thinking about urban and transport planning that developed in the 1960s and 70s was the above described revaluation of streets as public spaces and a conceptual reframing and separation of the terms *traffic* and *mobility* within urban and transport planning. While *traffic* labeled the total of all physical movements, *mobility* was the satisfaction of individual needs to move in space which was not necessarily to be met by the car, but could be met by different modes of transport. While previously planners believed that infrastructure-expansion was the necessary reaction to a growing mobility demand, in that time the understanding grew that the expansion of infrastructure produced more traffic and that the focus on the motor-car and the production of an automobile urban fabric (see Ch. 2.2.3) had left people no choice other than to drive to reach their destinations. Hence, society had shifted its movement almost exclusively to cars (Motzkus 2009; Stopher 2016).

Since then many politicians, traffic engineers, urban planners, and activists have aimed to redefine the relation between traffic, mobility and the street, to curtail the car's right to the street, and to develop concepts for a form of mobility that is more compatible with the city. Yet, while the conceptual deficits of car-oriented mobility were recognized in both Europe and the United States, the outcome in regard to street design and the promotion of walking and cycling was rather different: in many European countries, the reorganization of street space in favor of bicyclists and pedestrians as the long disadvantaged street users in the

following years has played a crucial role: networks of bicycle paths, pedestrianization, and different ways of traffic calming were developed as key-instruments in withdrawing space from the motor-car and restoring apparently lost urban space for other uses.

A very influential and until today vividly discussed concept of traffic calming is that of *shared space*, which was invented in the 1980s in the Netherlands by Hans Mondermann and builds upon three basic principles: first, the street is designed as a space for people, not traffic; second, fewer regulations lead to more responsibility and communication and overall increases mutual courtesy; and third, the space is individually developed in a participatory planning procedure of politicians, experts, and citizens. Based on these ideas, in many cities in Germany, the Netherlands and elsewhere the 1970s and 80s were the time of traffic-calmed residential streets, *Woonerfs* and *Spielstrassen* that were meant to increase livability and the quality of the built environment for people and that were commonly based on the idea of shared street use of traffic participants so that different activities from child's play to a car slowly rolling through it could take place simultaneously (Hass-Klau 2015, p. 46ff.; Lutz 2010, p. 23).

Notwithstanding, in the United States these concepts of traffic calming could not really get a hold within transport politics until very recently. Yet, similar ideas also emerged in the 1970s: the concept of *livable streets* was coined by Donald Appleyard et al. (1980, c1979) who analyzed the impact of traffic on the quality of life on residential streets in San Francisco. As a result of this study their vision of a livable street develops around the ideas of a traffic-calmed street as a safe sanctuary for pedestrians and in particular children; a healthy environment with few noise and air pollution that provides attractive places to stay, which foster social encounters; a space that shapes the community and identification of residents with their environment, which fosters active engagement and programming of the space; and as a place where children can play and learn, which serves as a green refuge for people (Appleyard et al. 1980, c1979, pp. 243–244).

Traffic calming was even taken further by the idea to pedestrianize urban and shopping centers which already had been part of automobile concepts in the 1950s. Yet, in both West and East Germany in the 1970s the creation of pedestrian

zones developed into a favored strategy to create pedestrian environments as well as to increase the economic turn-over of abutting stores, cafes, restaurants, hotels and others. While implemented in many German cities of different sizes, Berlin remained largely unpedestrianized until reunification in 1990 (Hass-Klau 2015, p. 46ff.). Also in the US pedestrianization projects exist in several cities of different sizes, yet to a much lesser degree than in Europe. The strong suburbanization patterns in the US had not only devalued city centers, but also were accompanied by the creation of suburban indoor shopping malls that provided a pedestrianized environment. In New York the pedestrianization of shopping streets was heavily opposed by merchants and taxi-drivers and even by the iconic Jane Jacobs so that it never received pedestrianized street patterns (Hass-Klau 2015, p. 191ff.).

Furthermore, in the context of a growing ecological consciousness, rising fuel prices and the revaluation of urban living the demand for bicycles and better bicycling conditions in urban areas grew, which in Germany led to comprehensive efforts to implement bicycle paths and networks in urban areas. Between 1971 and 1986 the bicycle path network in West Berlin was expanded from 271 to 520km, accounting for one fifth of the street network plus 80km bicycle paths that were located off public streets, for example in parks and other recreational areas (Kalender 2012, p. 531). In East-Berlin, bicycles were not allowed along main streets in the city center, yet if bicycle traffic had to ride along main streets bicycle paths were required. In the 1970s, bicycle planning also became more relevant in East Berlin (Kalender 2012, p. 467f.). Also, in the US between 1970 and 1973, bicycle sales of adult bicycles of the most important American bicycle company *Schwinn* climbed from 6.9 Million to 15.2 Million. Advocacy groups emerged all over the country (Mapes 2009, p. 27ff.). However, bicycle planning remained a difficult endeavor: In New York the first bicycle lanes were installed in 1980 on 5th, 6th and 7th Avenues, as well as on Broadway, yet they were removed only a few months later as protest among drivers spread and the lanes were frequently clocked and unusable for cyclists who dodged onto the roadway (Transportation Alternatives 1999). At that time, the political debate about cycling in the US was in fact mostly characterized by a dispute about *Vehicular Cycling*, a cycling policy that relies on the use of unmodified roadways and requires that cyclists and motorized vehicles obey the same traffic regulations and rights. This included the rejection of

bicycle lanes even from cyclists who wanted to use the street together with cars and not be accommodated on separate lanes (Epperson 2014, p. 112ff.; Mapes 2009, p. 44ff.).

The street concepts of traffic calming, pedestrianization, and construction of bicycle lane networks that have emerged since the 1970s are still valid today as they have spread from Europe to the US and elsewhere. Contemporary concepts to develop streets are fundamentally based on ideals of mixed-use urban areas that provide many different amenities within short distances, which are framed by the contemporary concept of *walkability*, that despite the term includes both walking and cycling (see Tran, Schmidt 2014). It describes the extent to which the built environment supports and encourages walking and cycling by providing useful, safe, comfortable, and interesting routes and spaces that connect the street user to all areas of the city and that foster human-centered activities such as strolling, shopping, commuting or socializing (Woodworth 2011). The planning principles of *walkability* rely on the five "D" that address density, diversity, design, destination accessibility, and distance to transit within a neighborhood as its core criteria. A pedestrian-friendly environment consists of a fine grained, well mixed land-use pattern that provides people with various activities within walking distance, safety from traffic and crime, and an inviting and interesting spatial design (Bucksch, Schneider 2014; Southworth 2005; Speck 2012). Thus, *walkability* is more than just a traffic concept: it in fact is concerned with the surrounding built environment and street design, the mix of uses deployed in the area, and normative concepts of a desired atmosphere in the street that should be safe and convenient. Moreover, it is a well-established scheme in urban planning that good conditions for cycling in urban areas primarily involve advanced infrastructure in metropolitan street space: an integrated and wide-spread network of bicycle paths and bicycle parking at key destinations are of the core elements. Furthermore, to motivate more people to cycle bike-sharing programs, information and promotional events, as well as specific marketing and training for cyclists have proven to foster the use of cycling as a regular mode of transportation. The improved training of drivers to be cautious of cyclists as well as restrictions to car-use should improve street and traffic conditions for cyclists and compact, mixed-use land-use policies would

shorten daily travel distances and thereby raise the number of trips that could be taken by bicycle (Meschik, Traub 2008; see Pucher, Buehler 2012b, p. 349ff.).

The expected benefits of higher walking and cycling rates are manifold. Both walking and cycling are associated with benefits for human health and safety, the environmental condition and social justice, economic efficiency as well as access to and the quality of urban public spaces (Low 2013, p. 69). However, one of their most important benefits is that these modes of transport overall foster public street life and the *livability* of urban spaces. Danish architect, urban planner and analyst Jan Gehl, who has been working as a street and public life consultant not only in Copenhagen, but in London, New York, Sydney and elsewhere over the past years sets street life as the backbone of a functioning and "attractive" city and hence at the center of urban planning efforts. He suggests that inviting walking, cycling, and staying on metropolitan streets will not only lead to a lively and attractive city, but also creates high standards for safety, sustainability, and health. Therefore, he states that one of the core tasks of contemporary urban planning must be to support the processes that generate and reinforce street life, to plan for the 'Human Scale'[12] based on the principle of "people come where people are" (Gehl 2010, p. 63ff.).

Thus, following Gehl, a *livable street* is a street that serves mobility needs, but in such a way that the quality of space is not compromised but rather enhanced through the design of the built environment and the prevalent modes of mobility. Indeed, others have argued that the regaining of quality-of-place through the re-organization of traffic flows is one of the crucial contributions *sustainable mobility* can make to urban development:

> What happened to cities is that quality of place was subordinated to automobility [...]. The vision of sustainable transport [...] offer[s] to create or restore something of great value. That can be expressed as 'quality of place' – [...] the best that city living has to offer. [...] sustainable transport offers to make city life itself delightful. Quality of place is not reducible to sustainability or vice versa, but it is more than just a co-benefit. It is a key part of what the vision of sustainable transport offers to the public (Low 2013, p. 79).

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[12] 'Human Scale' is the title of a documentary by Andreas Dalsgaard, published in 2012, that depicts the urban planning work and ideals of Jan Gehl. See: https://vimeo.com/162029805: last accessed 08/04/2017.

Thus, within contemporary planning ideals, the reorganization of traffic flows and the reorganization of space go hand in hand. On that note, streets over the past decade have become increasingly relevant as spaces for urban development. In his introductory words to the 2013 *Global Report on Human Settlements*, titled "Planning and Design for Sustainable Urban Mobility" Under-Secretary-General and Executive Director of UN Habitat Dr. Joan Clos stated that to decrease the need for travel "[...] cities should be built around the concept of 'streets', which can serve as the focus for building livable communities" (United Nations Human Settlements Programme 2013a, pp. VII–VIII). Clos points out that this means a shift away from strict zoning regulations that have shaped much of urban planning in the 20th century and thereby separated and isolated different functions and activities of a city towards the establishment of mixed-use areas that require less travel and mix both urban functions and different social groups on metropolitan streets. In another report dated the same year, titled *Streets as Public Spaces and Drivers of Urban Prosperity* (2013b) UN Habitat developed the concept of streets even further and published analytical results on how a well-connected and well-designed street network that embraces the concepts of *livability* and *completeness* fosters the prosperity of the respective city. The UN has defined the concept of prosperity as consisting of five key-components: a prosperous city as well as a prosperous street have to promote infrastructure development to enhance connectivity, mobility, and productivity in the city; to value environmental sustainability while ensuring economic growth; to contribute to the productivity by generating income and jobs; to enhance the quality of life in public spaces; and to ensure equity and social inclusion in the redistribution of the benefits of a prosperous city (United Nations Human Settlements Programme 2013b, p. 31 ff.).

Hence, both the planning ideals and the political climate in regard to bicycle and pedestrian projects on a global scale have significantly altered: they are both favored as motors for urban development and economic growth under the banner of sustainability and for the enhancement of the quality-of-life within which bicycling and pedestrianism play crucial roles. This change has been partially

tickling down also to the state and city scales.[13] Nevertheless, conflicts remain: on a local scale the necessary renegotiation of public street space is inherently political and therefore often bears high political costs, which in the past has often prevented the comprehensive implementation of such initiatives. Therefore, the next sub-chapters will examine the local political shifts in the realms of bicycling and walking that foster and enable the implementation of the global agenda.

2.3.2 "WE ARE TRAFFIC!"[14] - THE SHIFTING POLITICAL AGENCY OF BICYCLING

In the 1960s, the bicycle re-emerged as both a potential mode of urban transport and a political symbol of the newly rising oppositional, environmentalist left. In the following years, cyclists in cities organized in advocacy groups both to reclaim street space and to demand a change of the polluting and spatially disruptive car-friendly policies. Since then, bicycling has developed a global political agency and impact that contemporarily is being integrated into local mainstream politics, transforming the vehicle's and its rider's socio-spatial power and status on city streets.

In both New York and Berlin bicycling entered the political stage as ridership grew within a rather hostile political and planning climate. In New York, cyclists in the late 1960s started to rally for better conditions on city streets and a car-free Central Park, supported by the Mayor John Lindsay, who frequently joined these actions called "*Bike-In*", when thousands of bicyclists rode down Manhattan streets to protest the hostile conditions on city streets (Stern et al. 1995, p. 29). Based on these protest, in 1973 a small group of dedicated activists founded Transportation Alternatives (TA), an advocacy group that since has rallied for more bicycle-friendly planning in New York and other modes of environmentally friendly transportation and in recent politics has become particularly influential (see Ch. 3.2.2) (Transportation Alternatives). Notwithstanding the increased desire for cycling, the early 1980s in New York were marked by rather contradictory developments in the realm of bicycle policies. Mayor Ed Koch installed and

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[13] Germany for the first time developed a national cycling agenda in 2002, the "Nationaler Radverkehrsplan", see https://nationaler-radverkehrsplan.de/de/bund/nationaler-radverkehrsplan-nrvp-2020. To the contrary, the United States are still lacking such a document.

[14] "We are not blocking traffic, we are traffic!" is the crucial message and slogan of the Critical Mass movement and is used in many different sources. Here it is quoted from Henderson 2013, p. 112.

removed bicycle lanes in 1980 (see Ch. 2.3.1) and in 1987 retreated from the promotion of bicycling to the extent that he carried out a rather contrary bicycle policy: scapegoating the bicycle messengers for traffic chaos in Manhattan, he banned bicycles from the Midtown core on weekdays between 10 a.m. and 4 p.m. To protest the ban, TA, together with bicycle messengers, who were most affected by the ban, and other bikers once again organized bike-ins on a regular basis. Eventually, what started out as a very restrictive bicycle policy, in the end turned out to be very beneficial for bicycle advocacy: for one, the bike-ban got reversed; yet, more importantly, as a result of the ban Transportation Alternatives could crucially improve its stand as an advocacy group as one result of the ban. The public campaign pooled new members and therefore financial resources into TA, which enabled them to hire Jon Orcutt as the first director in the group's history who advanced their advocacy work in the course of the 1990s, achieving incremental changes in New York's streets (Komanoff 2012; Soffer 2010, p. 211).

In Berlin, by the end of the 1970s, multiple environmental groups had been formed that focused on different local political issues and rallied against car-oriented politics, expressway plans and other initiatives that threatened to destroy urban spaces. Among them were initiatives such as the *Grüne Radler (*Green Bikers*)*, a group rallying for the creation of a park on a former rail track area on the so called *Schöneberger Südgelände*, or the *Bürgerinitiative Westtangente*[15]. In regard to transport, particularly the 1965 West-Berlin land use plan that manifested the idea to surround the center city by four expressways provoked wide-spread protest among citizens. In these protests, the bicycle was used as a demonstration vehicle. Yet, the protest itself was not directed at the improvement of cycling conditions on streets but rather was attached to larger political goals such as environmental protection or the quality of life in the city that were endangered by the car-oriented plans of the Berlin Senate. The West-Berlin expressway plans were only ultimately abolished by the end of the 1980s, crucially backed by the political work of advocacy groups and political resistance of several backgrounds. Also in East-

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[15] These initiatives exist until today, although their scope of action is largely different: see *Bürgerinitiative Westtangente* , last accessed 08/04/2017; *Grüne Radler* http://www.grueneliga.de/havel/Mitglied/GRadler.htm, last accessed 08/04/2017; the park *Schöneberger Südgelände* was created, see https://gruen-berlin.de/natur-park-suedgelaende last accessed 08/04/2017.

Berlin, the bicycle was used as a political protest vehicle and protesters bemoaned both environmental and traffic conditions while they protested highway construction and demanded more space for cyclists. Yet, due to the state repression of political discontent protest was carried out to a much lower degree (Kirchhof 2015).

Thus, while in West-Berlin the bicycle was primarily used to demand a shift in environmental politics, in both East-Berlin and New York the marginalization of the vehicle in street space and the demand for spatial conditions that would allow for safer bicycling were at the forefront of the advocacy agenda. In this respect, beyond the city borders of New York and Berlin, the bicycle became the symbol of the affirmation of a particular environmentalist identity in the 1970s, a vehicle of opposition against car-centric culture and mobility as well as the attached hydro-carbon dependent global economy and the materialization of the search for an alternative future both in mobility and environmental terms (see Horton 2006).

Since then, the standing of the bicycle within urban planning and society has changed: in the course of the 1990s its symbolism was more and more detached from the environmentalist cause and attached primarily to a spatial cause framed by the reclaiming of streets to enhance cyclists' mobility and riding experience. A pivotal point within this development was the initiation of *Critical Mass* rides that since have globally spread and in particular in the last years gained increasing popularity.

Critical Mass was initiated in San Francisco by a group of advocates in 1992 to bemoan the lack of space for cyclists, the daily threats and marginalization by drivers, and to create a convenient space and atmosphere to cycle through the city. It was organized as a seemingly spontaneous gathering of cyclists on every last Friday of the month. Big groups of cyclists would then cycle through the city, taking back street space from cars and increasing their own visibility and stake in traffic. While the early days of *Critical Mass* were an expression of San Francisco's protest against the Gulf War and related oil-dependent car culture, its emphasis quickly was shifted towards a celebration of cycling and the liberation of street space, as police started to try to tame the ride and first arrests were made in 1993. This shift included the new rule that participants should deride neither drivers nor the

police, but rather stick to traffic rules and civilized behavior to not jeopardize the ride, which is one of its core characteristics until today (Henderson 2013, p. 117f.).

Since then, *Critical Mass* has become the preferred protest for more bicycle space on metropolitan streets as an expression of a new urban bicycle culture that is primarily about "creating a feeling of empowerment and independence" (Mapes 2009, p. 90) and has attracted young urbanites in growing numbers in cities across the globe. Thereby, cyclists in the past years have developed considerable political power to claim their right to the street, which coincides with globally shifting mainstream politics in regard to the promotion of cycling that is manifested in transforming street spaces: bike lanes, parking, bike share programs have been appearing in streets in many cities across the world. As *sustainability* has become the predominant normative political paradigm, the bicycle has become the mainstream global symbol of a sustainable urban future. It has been going through a process of normalization that has increasingly turned the bicycle from an antagonistic into a legitimized vehicle within a heavily automobile urban world. Nowadays, activists and planners jointly promote the bicycle primarily as a healthy, environmentally friendly, equitable, democratic, cheap and convenient mode of transport. As environmentalism has become absorbed by governments and urban development agendas, the environmentalist claim, while certainly part of the argumentation, has been reduced to a side-effect rather than a core interest of bicycle advocacy. Contemporary bicycle advocacy primarily rallies for individual mobility, for the right to the street in competition to the motor-car to reduce daily threats and marginalization in street space – in other words advocates nowadays are busy claiming to become part of the hegemonic street order (Horton 2006; Stehlin 2014; Walks et al. 2015).

2.3.3 PEDESTRIAN COMMODITIES – LIVABILITY, WALKABILITY AND QUALITY-OF-LIFE

As was shown in section 2.3.1, the mobility concept of *walkability* on the one hand, and the spatial concept of *livability* are tightly related. They both are meant to reshape the built environment of the metropolitan street towards places that provide a high *quality-of-life*. *Livable streets* should reclaim seemingly lost public space from the motor-car for users on foot or on bicycle and thereby provide people with "good conditions to walk, stand, sit, watch, listen and talk" (Gehl 2010,

p. 118) to appropriate metropolitan street space and thereby generate public street life. These initiatives are usually framed in a positive manner by city governments and planners, drawing on the general rhetoric of reclaiming space from the automobile, establishing a higher quality-of-life and serving the overall need of creating sustainable cities. This section will take a closer look at the political and economic conditions that determine the production of walkable environments in contemporary metropolises, thereby deconstructing the underlying positivity to some extent. As a start, I will examine the shifting role of the concept of quality-of-life that particularly in New York has guided public space governance in the past decades, but has increasingly shaped urban spaces in cities across the globe.

As the major "Global City" (Sassen 1991), New York has played a leading role within the post-industrial restructuring of cities: in the 1970s, the city was nearly bankrupt, jobs were in decline, crime rates and vandalism rose, the city's international image was imperiled. To overcome the crisis Mayor Edward I. Koch, who had been elected in November 1977, chose three major strategies: first, drastic fiscal austerity measures and simultaneously large investments in urban structures were widely prioritized over other socio-political and economic actions. The post-industrial economic activity of the city became increasingly focused on the financial and real-estate sectors and was profoundly subsidized and locally concentrated in Manhattan. Second, this was accompanied by the first large media campaign to promote the image of New York as a destination for tourists and businesses; it created the illusion of a clean, safe city with unlimited shopping, entertainment and sight-seeing amenities worth visiting while its economic and social problems were deliberately left out and ignored by the city government (Greenberg 2008, p. 7). Third, to fight against the ongoing financial scarcity Mayor Koch fundamentally fostered the integration of the private sector into issues of urban development that traditionally had been the task of the city government; here, in particular the appearance and equipment of the city's streets and public spaces were transformed by businesses. In the early 1980s, Business Improvement

Districts[16] (BID) became an important actor for upgrading the local economic condition, which usually included investment in street cleaning, garbage pick-up, private security firms and other initiatives to enhance the appearance of the streetscape (Stern et al. 2006, p. 15ff.; Soffer 2010).

This approach of re-making public street spaces was taken even further during the 1990s under Mayor Rudolph Giuliani. His political agenda to fight the once again worsening economic condition of the city was distinctly based on the concept of *quality-of-life*. Giuliani had three core missions: improving safety and security in public spaces, fighting homelessness and crime as well as establishing a clean, attractive city image. He aimed to fight homelessness and the decay of public spaces by expanding police forces and presence, punitive strategies towards deviants and a criminalization of those people's everyday life, while not solving social problems, but rather evicting them from the city's streets (Vitale 2008, p. 30). By applying a *zero tolerance*[17] policy, the Giuliani administration cleared central streets of most people it considered unwanted and displaced them to other areas in the city: the homeless, squeegee-men, prostitutes, street vendors, pan handlers and many more. While displacing unwanted people from the streets, Giuliani deployed wide urban restructuring and design measures in public spaces that supported his exclusive law and order vision: the restructuring of *Times Square* from a place of prostitution, drugs and gaming into a family entertainment destination as well as the re-design of *Bryant Park*, which had been known for drug dealing and homelessness, are famous examples (see Roost 2000; Stern et al. 2006; Zukin 1997). Hence, *quality of life* as exerted by the Giuliani administration deployed policing and re-designs of physical space as a means of urban social control and as a way to design the city according to the needs of business interests, tourists and the middle and upper classes in general. By the end of his tenure, he had initiated a transformation of streets and other public places to becoming

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[16] Business Improvement Districts (BIDs) were invented in New York at the beginning of the 1980s as the municipality was no longer financially able to provide basic services. Instead, local business owners were encouraged to found a BID as their common organization and pay a fee into the BID that was used to improve the local economic condition. This often meant enhancement of the street scape, street cleaning, garbage pick-up, security personnel and others. See Stern et al. 2006, p. 15ff.

[17] *Zero Tolerance* was Giuliani's strategy to reduce crime-rates in New York. It meant strict punishment not only of criminal offence, but also of undesired behavior such as loitering, begging and panhandling or playing hooky. See Stern et al. 2006, p. 30f.

attractive, clean and enjoyable spaces for the city's desired residents and guests that would benefit the city's political economy. In other words, since the 1970s, *quality-of-life* has increasingly become a commodity for the political economy of consumerism, cultural and knowledge-based industries, and tourism which since then has heavily shaped public space governance in post-industrial metropoles (Harvey 2008, p. 31f.).

Following this argument, as quality-of-life nowadays is provided through the concepts of *walkability* and *livable streets,* it places streets within that same logic of post-industrial urban economy. Walkable streets depict a high density of people and landmarks, concentration of retail and other shopping facilities, housing as well as offices, cultural amenities, restaurants, and cafés. In other words, they depict a high density of amenities which in gentrification research are rated "agents of change" (Zukin et al. 2009). These streets create landscapes of gentrification to re-attract the white urban middle and upper-middle classes to the cities (Smith 2002). As walkable environments offer lifestyle characteristics such as gentrification, environmentalism, diversity, mixed use and the proximity of jobs and school, it was found that particularly among creative-class citizens[18] street life and walkability make up a crucial part of their "desired life-work-play urban environment" (Speck 2012, p. 17ff.) and as the demand for those lifestyles grows, it drives housing prices and increases the overall economic output of the respective area (see Gilderbloom et al. 2015).

Simultaneously, particularly – *walkable* - mixed-use shopping streets have come into focus of both state-led and market-led commercial gentrification through deploying a "global toolkit of revitalization" that fosters local entrepreneurialism and that crucially reorganizes the mix of uses in and accessibility of the relevant area. Thereby, individual actors, capital investment, state regulation, and aesthetic tastes display wide-spread similarities between different cities which are distinctly promoted by the local state to initiate change towards heightened economic production in the city (Zukin et al. 2016b, p. 20f.). As it has long been shown that pedestrianization of shopping areas increases the turn-

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[18] As analyzed by Florida 2006.

over of abutting stores (Hass-Klau 2015, p. 46ff.), walkability and public space design play a crucial role within such development projects: people need space to walk from shop to shop and elsewhere, and they need recreational and pleasurable places to stay that keep them in the area, yet are not necessarily tied to immediate consumerism such as in cafes or restaurants. Therefore, sidewalks and streets need to be designed to do both, enhance pedestrian traffic flow and provide space to stay, recreate and socialize.

In his analysis of sidewalk governance, Blomley (2011) defines the concept of pedestrianism as a form of "pervasive and widespread form of urban public space governance" which "understands the sidewalk as a finite public resource that is always threatened by multiple, competing interests and uses" and that has to be ordered and regulated by authorities in the name of upholding its primary function, that of "movement of pedestrians from point a to point b" (Blomley 2011, p. 3). Further, he states that pedestrianism as a political and planning rationale is a largely uncontroversial way of controlling street space that "serves to reconstitute public space […]. Public space is not a site for citizenship, but a transport corridor" (Blomley 2007, p. 64). Hence, *walkability*, as it concerns both pedestrian- and bicycle-friendly design of the built environment, establishes an order of mobility that governs public space through a seemingly pragmatic regime of livable space and sustainable mobility. On the one hand this integrates streets within global urban political economy and on the other hand creates places of distinction of the highly mobile urban middle class that have the money to spend in these areas. Thereby, pedestrianism once more has become located between traffic flow, consumption, and social distinction (similar dynamics unfolded in the 19th century, as was shown in Ch. 2.1.3).

All in all, as the *quality-of-life* in urban public spaces in times of global urbanism has become an important part of the cities' image to attract people and capital to the respective city and to create economic value in a particular area, *walkability* and *livability* provide important frames to create places of economic production and to integrate mobility needs with quality-of-place. Thus, *walkability* is far more than the creation of attractive, safe, walkable environments: to a greater degree, it has become tightly linked to processes of globalization,

gentrification and capitalist place-making that not only reorganize distribution of street space or traffic flows, but the overall mix of uses along the respective street towards a high degree of facilities that serve the consumerist needs of the white urban middle class. Needless to say that this leads to displacement of residents, shops as well as street users, who do not fit these logics of consumerist lifestyles, added values and pedestrian flows.

In that regard, the case study cities New York and Berlin stand for different ends of the spectrum: while New York, as has been shown earlier, has taken a leading role within post-industrial restructuring of the city and its public spaces, Berlin has only recently been opened to processes of post-industrial economic restructuring (see Ch. 4.1.2). To the contrary, Berlin has a much longer history of the rethinking of transport, as alternative planning ideas already entered the political debate in the 1970s (see Ch. 2.3.1). Thus, as streets are nowadays politicized between the poles of mobility and place, the case studies provide insight into the local political agencies of these globally shifting dynamics within urban development politics.

2.4 The Same, Yet Different, yet the Same!? - Street Politics in New York and Berlin

This chapter has told the story of *Rethinking the Street* in New York and Berlin within a wider temporal and geographical context. Thereby, it has been shown that the developments on the one hand display wide similarities, as both cities were shaped by the same global dynamics such as industrialization, motorization, and modernist urban planning; on the other hand, these dynamics manifested differently on both the political and spatial local scale and particularly since the mid-20th century drifted further apart when the contemporary rethinking towards post-automobilism started. While in both cities protest against the negative spatial and environmental effects of car-oriented planning emerged, converse policies such as traffic calming and bicycle path planning could only get a hold in Berlin, while in New York political resistance remained too strong.

However, as the paradigm of *sustainable mobility* has accumulated ever more global relevance and power in the past years, it seems to bring the developments once again closer together in that it fosters policies which promote alternative

modes and street designs that challenge the hegemony of the car. Therein, bicycling, pedestrianism, and quality-of-life jointly occupy a central position that links formerly separated issues of both mobility and place in post-industrial metropoles. Contemporary street concepts incorporate a mix of different users and traffic modes that are integrated into the street design through the appropriate distribution and design of space which is supposed to create more spatial quality while also sustaining traffic flow and thereby enhance the prosperity of the respective street and city. As the preferred users of these street spaces, bicyclists and pedestrians are leaving the realm of political marginalization of the car-era and increasingly entering the political mainstream and the spatial hegemonic order. Thereby, contemporary politics of *rethinking the street* not only build upon the globally increasing environmental consciousness that has spurred sustainability policies in cities, but moreover upon dynamics of globally and locally shifting politics and governance of public space in cities and shifting political agencies of powerful environmentalist materialities, symbols, and interest groups.

In the following chapters, the empirical findings from both New York and Berlin will be analyzed to illuminate the local processes that led to *rethinking the street* and their relevance for the production of street spaces within the global paradigm shift.

3 CASE STUDY I: NEW YORK CITY

New York City's streets are iconic: long, straight street canyons lined by enormous sky-scrapers, filled with masses of hustling people, clocked by trucks, cars, and yellow cabs that fill the air with their noise and exhaust fumes. Yet, in the years of the mayoralty of Michael R. Bloomberg, which lasted from January 2002 until December 2013, the appearance and image of many inner city streets in New York was changed. The most apparent showcase project of that era today stretches along Broadway in Midtown, Manhattan, between Union Square and Columbus Circle. In 2009, the *New York City Department of Transportation* (DOT) decided to remove motor-vehicle traffic from Broadway and instead implemented the project *Green Light for Midtown,* which closed parts of the street as well as of Madison, Herald, and Times squares for car traffic and instead established pedestrian and bicycle spaces "to simultaneously improve mobility and safety in the Midtown core, and ultimately to make the area a better place to live, work and visit" (Department of Transportation of New York City 2010, p. 1). According to the DOT, prior to the redesign Broadway had long been a major issue for traffic in Manhattan: its diagonal pathway had created complex six-way intersections with the regular structure of the grid and thus was causing congestion and higher crash rates at these locations compared to other avenue intersections which caused the comprehensive intervention in that area (Department of Transportation of New York City 2010, p. 4f.).

Green Light for Midtown was part of the city's agenda of sustainable street and transportation politics that started in the mid-2000s and was supposed "[…] to treat streets as valuable public places rather than utilitarian corridors" (Sadik Khan 2008). Since then, the city's streets have been rapidly changing, not only in midtown: the bike lane network has been constantly growing with a total of 524.6miles (844.3km) built between 2006 and 2015 that reach all five boroughs (Department of Transportation of New York City 2015). *Public plazas* have been popping up all over the city on former car space, providing spaces to recreate and interact. *Complete street* designs have transformed major avenues in Manhattan and programs such as *Safe Routes to School*, *Safe Routes for Seniors* and *Neighborhood Slow Zones* have been expanded to increase pedestrian safety on New

York's streets.[19] Several of these projects were implemented almost overnight and thereby remade urban space with an unprecedented pace. These quick and visible transformations were the starting point of my investigations into this case which bring up not only the question how and why these were possible, how the Bloomberg administration gained the necessary power and political support for such a transformation, but rather why this direction was chosen and why then.

New York's new street policies have been condensed in *PlaNYC – A Greater, Greener New York (PlaNYC)* and the *Sustainable Streets Strategic Plan* and therewith have been brought to the forefront of urban development politics in the city. In what follows, this chapter will analyze the processes and strategies behind these plans that led to their draft, their political validity and the implementation of their proposed initiatives within the local political and spatial context. In other words: I will trace the processes how New York was transformed from a city associated with cars and significant traffic problems that never really had a strategic development plan neither for the city nor for transportation, to the self-appointed global role model of creating sustainable metropolitan streets.

3.1 GOING GREEN: (STREET) POLITICS FOR A 'GREATER, GREENER NEW YORK'

The changes in the metropolitan street scape have politically and administratively been forwarded by two municipal documents: the city-wide development plan *PlaNYC* and the *Sustainable Streets Strategic Plan for the Department of Transportation 2008 and beyond.*

PlaNYC was written in the newly established *Mayor's Office of Long-Term Planning and Sustainability (OLTPS)* and was released by Mayor Michael Bloomberg on April 22, 2007. It is a strategic sustainability plan that projects New York's long-term development until 2030 by focusing on the physical city to protect and support the economy and improve the residents' quality of life, while the city would be growing (The City of New York 2007, p. 3). The general goal of further economic growth in mind, the plan's authors outlined three major challenges in its introduction: New York is expecting (1) a population growth of an additional

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[19] For more information on the programs, see http://www.nyc.gov/html/dot/html/home/home.shtml; accessed 03/10/2017.

million people until 2030 that has to be accommodated in the city. The rising number of residents and visitors would not only increase the pressure on land and housing, but also on the city's (2) aging infrastructure systems of which some (e.g. water and transportation) in parts had already been at or even beyond the edge of their capacities. Those need to be maintained and expanded to reliably fulfill their supply. Further, the plan demands a higher awareness of and action against (3) the city's precarious environmental situation: the potential to green the city and thus make it more sustainable and resilient to environmental threats has remained underutilized in previous decades. The plan emphasized that New York, being a coastal city, is directly facing environmental risks like rising sea level and increasingly frequent extreme weather conditions. Finally, as the cross-cutting issue of the whole agenda, the plan addresses global climate change: by implementing all initiatives named in the plan, New York's global warming emissions should be reduced by 30% by 2030 (The City of New York 2007, p. 4ff).

To meet these challenges, *PlaNYC* defined 127 initiatives within six categories that were focused on different aspects of its overall sustainability agenda: *Land*, *Water*, *Transportation*, *Energy*, *Air* and *Climate Change*. The initiatives described in these sections have included measures to create new housing, enhance open space accessibility, clean up contaminated land, improve water and air quality, utility supply, provide cleaner energy and reduce greenhouse gas emissions. As a very crucial part of this program, streets are addressed in their functions as transportation infrastructure as well as public space in the plan's categories *Transportation* and *Land* (The City of New York 2007, p. 12f.).

3.1.1 RE-IMAGINING THE PUBLIC REALM AND CREATING WORLD CLASS STREETS

As the "greatest potential barrier to growth" (The City of New York 2007, p. 13), overall transportation capacity, congestion on the city's streets and a gap of good repair are described in *PlaNYC* to delay travel times, cause air pollution, and cost a lot of money "in higher store prices, because freight deliveries take longer; in higher costs for services and repairs, because delays mean repairmen visit fewer clients each day; in taxi fares, in wasted fuel, in lost revenue" (The City of New York 2007, p. 76). Given the economic ambition of the plan and the here-stated enormous economic consequences of too much traffic, the core goal of the

Transportation plan is to relief congestion, reduce motor-vehicle traffic and to shift customers onto public transport and other green modes of transportation. Therefore, transit infrastructure should be built and expanded, existing transit service should be improved, and alternative modes of transportation should be promoted. The proposed network of 1800 miles of bike lanes from the 1997 bicycle master plan should be implemented and cycling should be promoted as a regular mode of transport in the city. Further, bus service should be improved and expanded, including the implementation of *Bus Rapid Transit (BRT)* and the enhancement of conditions for pedestrians at crowded bus stops. Studies in congested areas are meant to come up with significant changes in the street, its design and the organization of road users (The City of New York 2007, p. 80ff.).

Furthermore, streets are addressed as a public space with demands for use and design that go beyond their traffic function. The initiatives listed in the category *Land,* and therein within the sub-category *Open Space* under the banner "Re- imagine the public realm" (The City of New York 2007, p. 36ff.), particularly emphasize currently and prospectively underused street space and barely sufficient street design and thereby convert the transformation of space from a by-product of infrastructure measures to being a central purpose of the plan. In its introductory comment to this set of initiatives, the plan's authors point to a fundamental lack of quality open space in the city and the negative consequences this has on neighborhood and street life. Streets are described as having an enormous potential to function as enjoyable, recreational public spaces for people

who have bought a slice of pizza and wished to eat it outdoors when the weather was warm; or bought a book and had nowhere to read outside until getting home; or just wanted to sit down for a moment and watch the street life of our city (The City of New York 2007, p. 36f.).

Further, it is pointed out that each trip taken in New York "begins and ends as a pedestrian" (The City of New York 2007, p. 36), and that streets therefore should be designed according to their needs:

That means creating new plazas in every community where sidewalks in commercial areas allow for more neighborhood life, and where empty spaces could be converted into public plazas. It means filling out the remaining barren streets with trees that will add shade, color, cleaner air and higher property values; and it means encouraging an active, vibrant public realm as essential to the life of our city (The City of New York 2007, p. 37).

Hence, *PlaNYC* demanded a renunciation from auto-centric transportation policies towards those that foster alternative modes and above all inclusive street design.

About a year later, in April 2008 Transportation Commissioner Janette Sadik-Khan launched the *Sustainable Streets Strategic Plan for the Department of Transportation 2008 and beyond*, the first strategic plan in the department's history. Already the title expresses the particular focus on street space, rather than on the more abstract issues of traffic flows and transportation networks. The plan complements the strategies from PlaNYC for the realm of streets and transportation and sets overall goals and strategies for their future development structured by the themes *Safety*, *Mobility*, *World Class Streets*, *Infrastructure*, *Greening*, *Global Leadership* and *Customer Service* (Department of Transportation of New York City 2008b).

Based on New York's "huge mass transit system" and its "incredible foot-traffic" the *Sustainable Streets Plan* is "going to provide safer travel and better infrastructure to everyone", therewith aims to "treat streets as valuable public places rather than utilitarian corridors" and to turn them "into vibrant public spaces" (all quotes taken from Sadik Khan 2008). Summing up its major objectives, the plan aims to improve street safety and cut annual traffic fatalities by at least 50% until 2030; further it wants to increase the city's mobility, especially by improving bus services, implementing *Bus Rapid Transit*, and expanding the bicycle network; streets should be designed as great destinations and infrastructure maintenance and improvements remain a core task for the agency; the Department of Transportation (DOT) aims to undertake major greening efforts both in terms of greener infrastructure as well as reducing its emissions; and ultimately, the DOT wants to improve its customer service and claims Global Leadership in the realms of transportation and street planning and management by creating "*World Class Streets for a World Class City*" (Department of Transportation of New York City 2008b, p. 19). Considering New York as one of "the best cities in the world" with "some of the densest development in the world", the city aims to join its global competitors, which "approach streets as vital public places that foster social and economic activity". Moreover, New York's street life is being described as a

constitutive part of the city's past and present, today's residents' "front yards" with "great recreational, social, and economic potential" and many if not most of the suggested policies and actions are dedicated exclusively to the local physical space and design of New York's streets, to "rolling out the red carpet for the City's transit riders, pedestrians, and cyclists" (all quotes taken from Department of Transportation of New York City 2008b, p. 19).

Hence, both *PlaNYC* and the *Sustainable Streets Plan* postulate a turn away from traditional, car-oriented transportation planning, towards an approach labeled 'sustainable' that fosters cycling, walking, and transit ridership; further, they have proclaimed a vision that very much fosters the streets' qualities as livable public spaces to increase the city's economic potential. This transformation happened in the context of Mayor Bloomberg's economic and urban growth imperative. Hence, before turning to the processes at the DOT, I will shortly introduce the larger political context of New York in the first decades of the 21st century.

3.1.2 REBUILDING THE CITY, DRAFTING *PLANYC* AND GREENING THE 'BLOOMBERG WAY'

Michael R. Bloomberg had been elected the 108th Mayor of the City of New York in November 2001, only two months after the 9/11-attacks on the World Trade Center, when terrorists had flown hijacked airplanes into the Twin Towers in Lower Manhattan and thereby destroyed the iconic buildings and killed thousands of people. Mollenkopf has argued that the locally and globally fateful incident of 9/11 "provided […] political actors with the chance to reframe the local […] political debate in ways that favored Republican officeholders" (Mollenkopf 2005, p. 206) over their Democrat opponents. Furthermore, in New York the attacks strengthened existing concerns about the city's economy: at the end of the 1990s, New York had been facing another economic recession. Notwithstanding Giuliani's law and order campaigns that established New York as a safe place to do business (see Ch. 2.3.3), the economic policies of his administration had largely lacked coordinated and comprehensive planning efforts and remained ineffective so that many businesses were fleeing the Manhattan core towards New Jersey or New York State and left the business elites worried that the city's economy would not last (Brash 2011, p. 106f.). Hence, Bloomberg's core tasks that would help him

to his victory were to restore the urban economy and to lead the city out of a poignant crisis.

The remains of the destroyed *World Trade Center* with the large gap it left in Downtown Manhattan powerfully symbolized not only the need for reconstruction but above all the need for someone able to lead the way out of the current destruction. Julian Brash in his book *"Bloomberg's New York"* (2011) argued that Bloomberg in his time in office established a particular way of city governance which has fundamentally shaped his political agenda and that ultimately led to the greening of his politics.

In his campaign, Michael Bloomberg promised leadership, unity, the end of "politics as usual" and "to get things done". He had held out the prospect that he would govern like a CEO and had almost exclusively relied on his experience as a successful businessman rather than policy positions to justify his mayoral aspirations (Brash 2011, p. 65ff.). This corporate rationality established his particular neoliberal, business-like kind of urban governance that would turn out to be decisive for all three of Bloomberg's terms in office and which Brash has analyzed as the *Bloomberg Way*: "the mayor as a CEO, the city government as a corporation, valued businesses as clients, citizens as customers, and the city itself as a product" (Brash 2011, p. 130). The here-used contemporary figure of the "charismatic CEO" entails "everyday people, who care about the world and want to see a better future for all, and as super-persons able to address the world's most intractable problems through their beneficence" (Brash 2011, p. 64). This further implies that a CEO knows what is best for his corporation, or in the case of Bloomberg's New York the CEO Mayor knows what is best for the city and thereby is able to identify an overarching, desirable image of how the city should be and that in his view would benefit the whole urban society.

Consequentially, from the beginning of his time in office, Michael R. Bloomberg pursued a private-sector-inspired economic growth agenda. While the administration of Mayor Rudolph Giuliani already in the 1990s had undertaken first analyzes and attempts towards a more strategic economic planning approach, they were yet not fully embraced until Bloomberg took office. In spring 2002, he assigned the consulting group McKinsey & Company to conduct a study of the city's

market position. It was "aimed to measure perceptions of the city as a place to do business, to evaluate its competitive strengths and weaknesses, and ultimately to formulate a strategy to enhance the city's ability to attract and retain business" (Brash 2011, p. 107). One of the key selling points found in the study was urbanism itself: culture, diversity, density, and cosmopolitanism. To further strengthen this image and address certain target groups of businesses that were anticipated to value New York as their location because of its urban characteristics, Bloomberg started to re-build the city both economically and physically to "produce an environment appropriate to the needs and desires of well-educated professionals and those businesses in the financial, media, and business services sectors that employed them" (Brash 2011, p. 121). The city as a whole was to be rebuilt, branded and sold to an elite business class as a luxury product designed for employees of the high-value-added postindustrial sectors (Brash 2011, p. 100ff.).

In his 2003 State of the City address Bloomberg announced major urban development projects and re-zonings in all five boroughs that went far beyond the reconstruction of the destroyed area in Downtown Manhattan: the rezoning of the *Hudson Yards* area to accommodate more housing as well as the new *West Side Stadium*, the developments of Downtown Brooklyn and Long Island City in Queens into cultural and business districts, the construction of *Brooklyn Bridge Park* and a waterfront path around Manhattan for cyclists and walkers as well as other open space improvements (Bloomberg 2003). In other words, Bloomberg in his economic development policies emphasized the development of high-quality residential and recreational environments, building more housing and open up waterfronts, parks, bike paths and other open spaces to residents and tourists and thereby tightly linked economic development policies and physical rebuilding of the cityscape and highlighted that they would be jointly measured under the new administration.

However, to achieve this ambitious goal, a CEO-mayor fundamentally relies on three core elements that guarantee his political success: firstly, he needs a large extend of autonomy to make the right decisions, secondly, he provides transparency about his achievements towards the public to be judged and trusted, and thirdly, his reign builds upon governmental capacity, in other words he needs

an administrative team that would be able to realize his ideas (Brash 2011, p. 80). One of the key-figures in this administration became the *Deputy Mayor for Economic Development and Rebuilding* Daniel Doctoroff. Early on Bloomberg placed the *Department for City Planning (DPC)* under his command, instead of under the command of the *Deputy Mayor for Planning and Community* relations. Thereby, he assigned an enormous amount of organizational capacity and power to his Deputy Mayor and again highlighted the tight link between economic development policies and physical rebuilding of the cityscape under the new administration. Under Doctoroff's command, the city in 2005 undertook the first coordinated, city-wide planning effort in preparation of New York's 2012 Olympic Bid, in which land-use development became a particularly important issue (Brash 2011, p. 84ff.).

In the following years, the agencies under Doctoroff's command dutifully pursued Bloomberg's economic growth and urban development agenda. To foster the Olympic bid, Doctoroff led the city agency staff under his command to comprehensively analyze land-use and infrastructure issues for the whole city under the prospect of further population growth in the years to come. As a result, he "identified the need to coordinate land-use planning and infrastructure investments citywide and to plan for population growth comprehensively" (ICLEI - Local Governments for Sustainability 2010, p. 15). He decided to develop a *Strategic Land Use Plan* in collaboration with the respective agencies which should analyze the impact of further population growth onto their operations and to research Best Practices and implementation challenges. After an initial research phase, it became clear that the challenges on the one hand were much broader than expected and on the other hand many cross-cutting issues were identified that had remained uncoordinated between the agencies. It was Doctoroff's and his Commissioners' decision to develop a packaged and overarching strategy that would coordinate city-wide urban development and inter-agency cooperation to optimize their goals and development efforts (ICLEI - Local Governments for Sustainability 2010, p. 16). Thus, with the planning challenge growing in early 2006 Doctoroff facilitated the foundation of a separate office that would be entirely dedicated to "shepherd the development of [a long-term future development] plan and manage its implementation" (ICLEI - Local Governments for Sustainability 2010, p. 17).

In June 2006, a few months into Bloomberg's second term, the *Office for Long-term Planning and Sustainability* (OLTPS) and the *Sustainability Advisory Board* that consisted of local and national experts in the realm of planning and sustainability were founded to foster the coherent strategic planning process. Headed by Rohit Aggarwala, a transportation expert who had previously worked at the consulting firm McKinsey, OLTPS set out to coordinate and bundle the many different goals and initiatives at stake. Soon, Aggarwala and his team found that the buzzword of sustainability should function as "the common theme that would tie all of the issues and initiatives together" (ICLEI - Local Governments for Sustainability 2010, p. 19) and turned the land-use plan into a sustainability plan:

> we came by sustainability honestly in a sense that we didn't set out to be reached. We set out to develop a long-term strategy for New York so that it could grow both in population and in economic activity and we can improve the overall quality of life [...] So, we kind of learned that efficiency and sustainability really are the same thing and in a city as dense as New York you have no choice but to be efficient (Aggarwala, OLTPS, Interview on 2/21/2014, #00:17.56).

Here, Aggarwala clearly states that the paradigm of sustainability is nothing but a frame for economic growth and efficient management of urban development that further improves the *quality of life* (see Ch. 2.3.3) in the city. Thus, the concept of sustainability for *PlaNYC* became an equivalent for efficient government performance and urban development rather than a comprehensive long-term environmental, economic and social strategy for urban politics. Further, as was outlined in an ICLEI report that Aggarwala co-authored, sustainability was meant to be instrumentalized as the relevant framing of *PlaNYC* that not only "tied all the initiatives together" but that foremost made the argument "to the public why some major infrastructure investments would be necessary" (ICLEI - Local Governments for Sustainability 2010, p. 18) and ensured that "the public supported the plan so they could begin implementation immediately" (ICLEI - Local Governments for Sustainability 2010, p. 25). Hence, sustainability and project implementation undertook a deep commitment. While for Rohit Aggarwala, as the strategic head of the plan, it is on the one hand obvious to integrate transportation into a sustainability plan, he was also very aware of the political problems and opposition this might cause:

> In a city like New York it's impossible not to think about transportation as a core
> [theme] of a sustainability plan. [...] no matter what we do about transportation [...] it
> will be the most controversial part of the plan [...] It is one of the most politically
> visible and sensitive topics [...].We also joke about the fact that, you know, New York
> has 8.4 million transportation experts and I'm sure, [from] talking to people from
> other cities, it seems clear to me that that's true about many cities [...] you change
> where the bus stop is located and you get a protest, right? (Aggarwala, OLTPS,
> Interview on 2/21/2014, #00:02.52).

Thus, from the beginning the transportation agenda was also very much about how to ease, get around, and even avoid political conflict to ensure the implementation of the plan.

Drafting *PlaNYC* for the Bloomberg administration meant to publicly announce strategic goals that the government would be able to achieve and thereby laid the ground for its very own measurable performance as a crucial element of the *Bloomberg Way*. When it got launched, *PlaNYC* consisted of 127 initiatives in six sub-categories ready to be implemented. The framework of sustainability that was used to label the already existent agenda of urban and economic development greened and thereby justified Bloomberg's particular approach to urban governance rather than really shifting or even turning around urban politics and policies: already years before the launch of PlaNYC, in Bloomberg's State of the City Address 2003, open public space, bicycle infrastructure, and walkable areas had been playing a crucial role within his economic development agenda. That said transportation and streets became integral parts of the sustainability plan which thereby strategically and publicly assigned sustainable transportation, street design and public space a central political role for urban development and fostered their physical transformation. *PlaNYC* suggests an agenda that shifts car-adapted street planning and design towards a more balanced approach that also integrates cycling, bus transport, transit and other sustainable modes of transport. Therefore, the agenda for streets in the sustainability plan is divided into two major groups: on the one hand there are initiatives that regulate and impact transportation and traffic flows; on the other hand there are initiatives that rather address street design and streets' role as livable urban space.

However, announced as the core piece of the sustainability plan, the transportation agenda was mainly focused around one central, particularly

controversial initiative: *congestion pricing.*[20] According to *PlaNYC,* congestion had fundamental economic consequences of loss in revenues of 13 billion dollars a year (The City of New York 2007, p. 76). Taking the successful examples of London and Stockholm as best practices, it suggested raising a toll for cars entering the Central Business District in Manhattan below 89th Street, thereby reducing the number of vehicles in the CBD and simultaneously generating revenue that could be invested in cost-intensive transit developments and fill major budget shortfalls of the DOT (The City of New York 2007, p. 88ff.). The implementation of *Congestion Pricing* was a high priority in the months after *PlaNYC* was launched: Bloomberg and the OLTPS rallied for months to gather the necessary support from advocacy groups and other stakeholders but were ultimately defeated by the New York State Senate and Legislature in 2008, losing both a political as well as economic core piece of the freshly launched environmental plan (Office of the Mayor, 4/7/2008). Yet, while *congestion pricing* failed, many other of the plan's initiatives were on their way and should be further pursued by the different agencies and the DOT had already started its work to transform the city's street space.

3.2 TOWARDS A LIVABLE CITY: CHANGING THE STREET AGENDA

The detailed elaboration and implementation of the sustainability vision into New York City's streets in the years after the publication of *PlaNYC* is largely attributed to a change in administrative transportation leadership: Janette Sadik-Khan was appointed Transportation Commissioner by Mayor Michael Bloomberg on April 27, 2007 only a few days after *PlaNYC* had been published (Office of the Mayor, 4/27/2007). Her predecessor Iris Weinshall, a long-standing civil servant who had been in office since the 1990s, had resigned from her position a couple of months earlier (Naparstek 2007c). While her predecessor Iris Wineshall was rather a political than a professionally qualified appointee, Sadik-Khan had a profound amount of experience in working in the public and private transportation sector: she had been the transportation adviser to Mayor David Dinkins in New York in the early 1990s, afterwards she joined the Federal Transit Administration under President Bill Clinton and was involved in transit developments at Parsons

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[20] Congestion Pricing is a policy that charges drivers for entering a particular part of the city. In New York that would have been the Central Business District of Manhattan, south of 60th Street.

Brinckerhoff, a major transportation engineering firm. Her vision of "good" urban transportation and streets contained well-functioning public transport services, expanded and safe bicycle infrastructure, *congestion pricing* to increase the budget for cost-intensive transportation and transit projects (Sadik-Khan, Solomonow 2016, p. XIIf.). In other words: her ideals perfectly matched Mayor Bloomberg's agenda, who apparently needed someone who was experienced in and dedicated to the realm of sustainable urban transportation and would be able to lead the agency towards the new paradigm.

Today, much of the change in New York's transportation policies is being attributed to Sadik-Khan's leadership and the new direction she brought to the Department of Transportation. In the course of her tenure she evolved into the main representative of New York's street agenda and one of the chief advocates of Bloomberg's sustainability and transportation plan far beyond New York City: she spoke in other cities about her success in New York and advised people in how to turn streets in their own cities into pedestrian and cycle friendly areas[21]; she has been compared to both legendary figures of New York's history in the 20th century master-builder Robert Moses and activist Jane Jacobs (Crowly 2009); in 2013 she gave a talk about the street transformations in New York that has been viewed via TED more than 900.000[22] times since; and in March 2016 she published her own book "Streetfight. Handbook to an Urban Revolution"[23] that tells the story of her time and work as Transportation Commissioner and how she managed to transform the DOT and the city's streets. When the agency published its own strategic plan "Sustainable Streets" in 2008 Janette Sadik-Khan had put sustainable transportation, transit, cycling and pedestrianism to the forefront of the agency's mission within only a year. She had installed the new vision and direction of action

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[21] Videos of such events are available online. For a Q&A in Los Angeles in 2010, see
https://www.youtube.com/watch?v=HxYyQKirsR8, accessed 04/19/2017; another one, dated after she had
left office, from Medellin in Colombia 2015: https://www.youtube.com/watch?v=3w1lZBavytI, accessed
04/19/2017.
[22] As of 04/19/2017, the video had 908.341 total views. For the TED-talk, see
https://www.ted.com/talks/janette_sadik_khan_new_york_s_streets_not_so_mean_any_more, accessed
04/19/2017.
[23] Viking Publishers, New York.

into her department, as Ryan Russo[24], who had been the Director of DOT's Bicycle and Pedestrian Programs since 2006, explained:

> I think there are some real keys that she [Janette Sadik-Khan] brought. One is by believing so strongly in the vision laid out in PlaNYC. There were a lot of people like myself, we built a lot of talent, we had really good sort of capabilities in our Traffic Operations division at DOT, but we needed the cooperation of the rest of DOT. So, the people who repave the streets, the people who build concrete islands, and the bridges division, and the policy people [...]. And really by communicating that vision so strongly, by doing the agency's strategic plan, she got the entire agency behind us [...]. So we could [...] up our game, which is one of her favorite phrases, in terms of the quality, the volume, [...] [and] just execute better projects. [...] And you know, these projects might have been seen as a distraction to the prior management of the department, but the Commissioner had made it clear that these were part of our core mission (Russo, DOT, Interview on 11/11/2014, #00:17.50).

Thus, when she had taken office, Janette Sadik-Khan initiated a series of changes that would speed up the process to implement *PlaNYC's* transportation agenda. The *Sustainable Streets Plan* was published one year later, in spring 2008, and the DOT started implementing its agenda in the very same year, closing down streets, taking out car-lanes, creating new public plazas and painting bike lanes. With hardly any history of bicycle or pedestrian planning, projects were implemented that quickly changed the streetscape in the city. In the following months and years, the DOT performed with an unprecedented pace, effort and scope to fulfill the Mayor's mission, as will be shown in the following section.

3.2.1 Transforming the DOT: New Staff and Processes of Strategic Planning

To quickly achieve results within the agency, meaning to find ways and strategies to implement the goals laid out in *PlaNYC*, Transportation Commissioner Janette Sadik-Khan built a team that was dedicated to the new mission as a first step. As she writes in her book, she started by assembling "the talent already within the agency" and by bringing in "a cadre of people from outside the agency [...] [who] would help expand the capabilities of the entire team and push the bureaucracy to act with a nimbleness it had never seen [...] and change the very nature of the business and how [...] things [got] done" (Sadik-Khan, Solomonow 2016, p. 37). The new Transportation Commissioner went fast on this issue: within one month after

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[24] In 2009, Russo became the Assistant Commissioner for Traffic Management, and since 2014 has been serving as the Deputy Commissioner for Transportation Planning & Management at DOT. See http://www.nyc.gov/html/dot/html/about/bio-russo.shtml, accessed 04/19/2017.

she had officially taken office, she had already appointed many members of her "Dreamteam" (see e.g. Fried 2008) that came from different ranges of streets and transportation advocacy and shared her "brand of strategic thought and impatience with government dithering" (Sadik-Khan, Solomonow 2016, p. 37); hence, although she "might have hired a half a dozen people" (Wiley-Schwartz, DOT, Interview on 2/24/2014, #00:03.44), many of them took key-positions within the agency and therefore had a decisive impact on the procedures within the agency. Some examples: Bruce Schaller, owner of an urban consulting firm who had executed varied research on transportation in New York City, became the Deputy Commissioner of the newly found Office for Sustainability and Planning and was assigned to "help manage the plan to inaugurate five new bus rapid transit lines and meet the biggest goal of all: congestion pricing" (Sadik-Khan, Solomonow 2016, p. 38). Andy Wiley-Schwartz, long-time member and a vice-president of the Project for Public Spaces in the realm of transportation, was hired to "head DOT's fledging new office for public space" (ibd.). And Jon Orcutt, one of the founders of Transportation Alternatives in the 1970s and long-experienced in the realm of transportation through his work as executive director at the Tri-State Transportation Campaign, an advocacy organization dedicated to reducing car-dependency in the New York-New Jersey-Connecticut metropolitan region (Tri-State Transportation Campaign 2016), became the new head of the Commissioner's policy office. Hence, although she hired only a few new people, she chose them strategically in line with the agenda from *PlaNYC* and assigned them positions that were created to exclusively fulfill the Mayor's agenda.

With the new staff in office, the DOT started a strategic planning process to develop its first ever strategic plan for its long-term future development, "a conversion of PlaNYC at the transportation level" (Sadik-Khan, Solomonow 2016, p. 38). This process was on the one hand meant to find ways to reach the goals that had been outlined in PlaNYC and on the other hand to unify the agency behind its new leaders and the new vision. Jon Orcutt[25], Policy Director at DOT, along with the Deputy Commissioners oversaw and led the strategic planning process:

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[25] Jon Orcutt helped to rebuild Transportation Alternatives after a period of inactivity in the late 1980s. He joined DOT in 2007 and stayed in office until 2014, when he moved on to TransitCenter, a foundation that

> We did a strategic planning process within the department and the Sustainable Streets Plan is what came out of it. But that [the process] was basically how she [Janette Sadik-Khan] melded the new people with the old people. We [...] basically got the top 200 people of the department and held a bunch of workshops, saying: here are the goals [of PlaNYC], how can we get there? And while we are talking about this, talk about everything you thought about doing in this job and you never were allowed to do, or, you know, someone wouldn't let you do it, or just things you thought about (Orcutt, DOT, Interview on 2/18/2014, #00:06.52).

Hence, the process was based on both already existing ideas as well as those that came out of the collective conversation. This was thus also a process of knowledge-production and knowledge-transfer. The 200 people from the administrative part of the agency were brought together in workshops "just to create a conversation, so that everybody was talking about how we gonna get to these big goals, and to get to these big goals we [...] started saying: ok, look, these are the action steps to get to those big goals, so this division is gonna have to do, you know, these 10 things by the end of the year and so forth" (Orcutt, DOT, Interview on 2/18/2014, #00:08.39). Hence, these workshops created not only a conversation but rather also the action steps and benchmarks registered in *PlaNYC*. These were as such a crucial part for the later quick implementation and early on in the process were anchored in the many heads of the agency. As the DOT went along the process it "just sort of reached a lot of creativity and Janette had a lot of ideas, where she wanted to go, like, I would never thought to have an assistant commissioner for public art [...]" (Orcutt, DOT, Interview on 2/18/2014, #00:11.13). Hence, both leadership and the strategic planning process guaranteed the creative input necessary for the development and success of the plan.

Furthermore, the process at DOT changed the way of working and thinking at the agency that upgraded it from a business-as-usual to a fast-working, innovative department and therefore increased its relevance as a working place for young, talented urban and transportation planners:

> And within a few years, it also set, the fact that there was something happening here, sort of attracting really good new young people, who wanted to come here. [...] the dynamic changed dramatically. And a lot of the people sitting around here, doing policy development, especially projects and communications, you know, never

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promotes urban mobility, as Director of Communications and Advocacy. See http://transitcenter.org/2016/01/11/jonorcutt/, accessed 04/19/2017.

thought they would work here in a million years, like in 2004 (Orcutt, DOT, Interview on 2/18/2014, #00:07.53).

Thus, the strategic planning process not only developed a plan but unified the agency and fostered the individual and joint creativity to find ways how to implement *PlaNYC's* vision. In other words, DOT afterwards collectively supported the new agenda. The knowledge-production on the one hand relied on internal knowledge and ideas that had remained unused in the previous years and on the other hand on external knowledge that got to the agency through Janette Sadik-Khan's staffing decisions and new staff applications provoked by the new innovative way of working at the DOT.

As a city heavily dependent on the financial and real estate sectors (see Sassen 1991), New York is a competitor for global capital with other cities, which also influenced urban development and street politics:

> I think there is a global side to it, which is, that you saw Ken Livingstone in London that we regard as a peer, like we don't look and see what's happening in Dallas, we don't care. We look and see what's happening in London, it's a financial capital, it's a city roughly the same size. So those are places that have influence. So, Ken Livingstone implemented a congestion charge in 2003, and it cleared out a lot of space in central London as a result, so there was, you know, the congestion charge is the big story, but a lot of things are happening with big increases in bus service, big increases in bicycle commuting, because of the space that had been freed out. And, you know, they had people like Jan Gehl in town talking about stuff even though they didn't do much with that. And then you saw like the […] administration in Paris, who was doing some more things. They decided to re-make their street-network for buses and bikes. […] So there were things happening, that influenced people in New York to think about (Orcutt, DOT, Interview on 2/18/2014, #00:04.10).

Clearly, New York's sustainable transport and street politics from *PlaNYC* have been influenced by transformations in other global cities that functioned as models for the projects and implementation strategies in New York. In the further procedure of detailing and implementing ideas, in particular Danish architect and street advocate Jan Gehl[26] proved to be very influential on multiple scales: Janette Sadik-Khan as well as her fellow Commissioner of the *Department for City Planning* Amanda Burden went on a "spectacular" and "inspiring" (Sadik-Khan in Naparstek 2007d) trip to Copenhagen in the summer of 2007 to study the city's bicycle and pedestrian infrastructure and to meet with Jan Gehl who would show them around

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[26] See more detailed info on Gehl and his agenda in Chapter 2.3.1.

and explain how the city of Copenhagen had "reclaimed public space bit by bit, one street at a time" (ibd.). Sadik-Khan even took some of her employees with her to make them see her vision in another urban context and have the built environment speak for itself:

> I worked for a Deputy Commissioner, who had been at the agency a long time and was more of a traditional traffic engineer and Janette and the City Planning Director Amanda Burden went to Copenhagen on a study trip and then she brought him there to walk and ride around and see the city and their infrastructure, in particular the protected bike lanes, and that was an effective way for her to communicate her vision and make it clear what she wanted the agency to deliver (Russo, DOT, Interview on 11/11/2014, #00:20.35).

Thus, it seems that street layouts and images had a very profound impact on DOT projects. When she returned from the trip to Copenhagen, Sadik-Khan was "hoping to bring Gehl over at the end of next month to help us work on a pedestrian and public space strategy much like what he did for London" (Sadik-Khan in Naparstek 2007d). Indeed, Jan Gehl and a team from his architecture office came to New York in September 2007 to conduct a *Public Space, Public Life* survey that investigated the quality of the city's streets and public spaces and which subsequently served as the basis for DOT's *World Class Streets* program that would be launched in 2008 and outlined a program to increase streets' public space quality (Aaron 2007; Department of Transportation of New York City 2008a).

Gehl was not the only inspiration. In the chapter "Stealing Good Ideas" of her book "Streetfight", Janette Sadik-Khan explains that also in the summer of 2007 on a trip to the Colombian cities of Medellin and Bogota, she was impressed how the Mayor of Medellin had perfected "the practice of transformative transportation – investing in people by investing in the networks they use to get around" (Sadik-Khan, Solomonow 2016, p. 112) and thereby increasing accessibility to transport and quality public spaces. In Bogota, she saw a *Ciclovia* – a day of car-free and open streets in the city – that inspired her to introduce the Summer Streets event in New York, an annual event that on three consecutive Sundays in August closes down several streets in Lower Manhattan for cars (Sadik-Khan, Solomonow 2016, pp. 116–123).

Hence, in her early days in office, Janette Sadik-Khan collected international experiences and ideas on how to transform streets that she brought back to New

York. Those ideas helped to convince her staff of her vision and also helped to sell the projects to the broader public. However, the development in the city administration was paralleled by changes in the advocacy community that further strongly supported her mission, as will be outlined in the next section.

3.2.2   UPGRADING ADVOCACY: THE NEW YORK CITY STREETS RENAISSANCE CAMPAIGN

In February 2006, more than a year before *PlaNYC* would be released, the exhibition *'Livable Streets – From an Auto-Centric Policy to a City of Great Streets'* was opened at the Urban Center of the Municipal Art Society in Manhattan. Proceeding from the idea that New York City's streets "are the soul of its neighborhoods and the pathways to some of the world's most in-demand destinations" (NYC Streets Renaissance 2006, p. 3) and therefore need to be designed for people, not for cars, the exhibition and the workshops and lectures that were held as part of its program brought livable street visions and policies to the city. It displayed new studies, best-practices of pedestrian- and bike-friendly metropolitan streets, efficient transit systems, and campaigns to reduce car-traffic from other cities in the world. It showed famous examples such as Congestion Pricing in London, Paris Plage as a new public space next to the Seine in Paris, and the pedestrianized City Center in Copenhagen; further, it displayed examples from US cities like Chicago and Philadelphia that had initiated first programs to improve their streets and transportation systems (NYC Streets Renaissance 2006). In other words: the exhibition developed an image of streets that were safe, accessible, sociable, even recreational, pedestrian- and bicycle-friendly, offered a multitude of uses and were at least partially car-free. In the two months it was on display, the exhibit drew over 1500 people, among them several directors of Business Improvement Districts (BIDs) as well as government officials. As Transportation Alternatives put it in its magazine, the exhibition "stimulated debate about how to best use New York City's public spaces, and how to more equitably distribute street space" (Transportation Alternatives 2006, p. 10).

The exhibition publicly launched the *New York City Streets Renaissance Campaign (NYCSR)* that had been established a few months before. In 2005, entrepreneur Mark Gorton had brought together three not-for-profit organizations to jointly advocate for their common goal of more livable streets and

sustainable modes of transportation: cycling advocates *Transportation Alternatives (TA)*, placemaking activists the *Project for Public Spaces (PPS)*, and his own software developing company *The Open Plan Project (TOPP)* (Project for Public Spaces n.d.). Mark Gorton had become privately interested in issues of urban transportation and street use during bike-rides to his workplace in the 1990s:

> [...] one nice day I said 'OK, maybe I just ride my bike to work' [...] and rode through Central Park and it was a beautiful day and I ended up liking it. And so I started to riding my bike to work more often and then I started becoming more like a cyclist. [...] And if you ride your bike on the streets of NY enough you almost get killed a few times and realize just how crazy the whole system is (Gorton, NYCSR, Interview on 2/3/2014, #00:00.52).

Thus, Gorton's – like many urbanites' - experience of cycling consisted of the contradictory perception of the pleasurable activity itself on the one hand and the inappropriate urban environment as well as the associated danger he was put in on the other. Unlike most city-cyclists however, Gorton disposed of the financial and social means to turn his dissatisfaction into action that would ultimately have an impact onto the city's street politics. Being what Mapes has analyzed as "[...] a privileged, well-educated white guy who wasn't used to being treated shabbily until he tried to ride a bicycle on the street" (Mapes 2009, p. 12), he started to become active in bicycle advocacy to fight the "crazy" and "completely wrong" (Gorton, NYCSR, Interview on 2/3/2014, #00.01.33) system of car-friendly streets. He aimed for a completely new and different vision of New York's street and transportation system; one of "a city with 90% less traffic than it has today [...] where the norm is that streets are safe enough for kids to ride their bike and play ball and things like that" (Gorton, NYCSR, Interview on 2/3/2014, #00:33.13). In the early 2000s, Mark Gorton joined TA in their fight for a car-free Central Park and increasingly became more active in the fight against the automobile and therefore steadily expanded his influence within the advocacy community. However, he quickly realized that TA's way of working was not very satisfying to him and that it would not help to achieve the street vision he imagined for the city:

> I sort of came and I looked around and I said we're not going to accomplish very much, unless you are saying there is a fundamental problem here 'cause those people you're talking to just think cars are supposed to dominate the system, bikes are supposed to be marginalized, and so you're asking for marginal things [...] but if the system is fundamentally screwed up, you don't do yourself any favor by basically kind of accepting this paradigm that is completely wrong and then asking for minor

changes about that. And I basically said [...] you couldn't expect people to change [...] if you weren't starting off and saying: 'Our transportation policies are fundamentally flawed.' Like we're completely misusing the automobile, we're completely (.) wrong. Like, you can't expect them to change was sort of my thesis (Gorton, NYCSR, Interview on 2/3/2014, #00:05.12).

The critique and ideas in mind, Gorton set out to change street advocacy. Both TA and PPS had been active in the city since the 1970s and particularly TA since then has constantly expanded its work and knowledge about transportation issues in the city and has evolved from grassroots-protest into influential advocacy groups (see Ch. 2.3.2). Yet, instead of small-scale successes and increasing numbers of incremental improvements on New York's streets especially during the 1990s, the influence of TA and PPS had remained relatively marginal. Hence, Gorton started to look for ways how to increase the groups' influence on urban politics and planning and how to shift the strategic focus of transportation and street advocacy from incremental improvements to demanding a holistic change of the system. In other words: on how to forward his vision of New York City streets into city politics.

From the beginning of his activist career, Gorton's wealth and associated funding capacities were of his most effective contributions to advocacy work. When he had started donating money to TA he fundamentally contributed to the work of the organization by "[...] giving them a little bit of money, which for them was like a bunch, and I think I very quickly became their largest donor by not giving them – I mean – a huge amount of money" (Gorton, NYCSR, Interview on 2/3/2014, #00:04.00). Clearly Gorton's grasp of "a little bit of money" profoundly exceeds that of the advocacy community. Hence, his money early on lent him a powerful position within the organization: in the early 2000s he was the single most important funder of TA's projects and as of 2010 still provided one fifth of their annual budget (Frassica 2010) which gave him an extensive capacity to act and an influence quite unusual for an individual cycling advocate. However, Gorton was happy to invest and do more for cycling and in the NYCSR found a way not only to fund cycling advocacy but rather also to shape its content-related direction and thereby accelerated advocacy work in New York, as Ethan Kent, Senior Vice President at PPS, pointed out:

> Mark Gorton came to us to help develop a different type of campaign, to change in the conversation about streets in New York. TA understandably had been focused on incremental shifts, advocating for bikes etc.. Mark Gorton saw us as able to make the conversation about how do we create great places, great streets. We also brought in international examples and then led about ten demonstration projects with engaged communities on how to plan streets in a better community-led processes, and have a new visions for what the streets could be that are more holistic transformation of our public spaces. (Kent, Project for Public Spaces, Interview on 12/12/2013, #00:00.56).

Thus, by joining a bicycle advocacy group with an organization for placemaking they had to compromise their agendas in their common issue of appropriate street space design and through the new funding opportunities they changed their outreach strategies and started to address leading politicians and business elites who should adopt their ideas into city politics and urban space. Noah Budnick, Deputy Director at Transportation Alternatives:

> we first started with small guerilla tactics like taking over parking spots for a day, you know, Parking Day. And, you know, rallying communities to ask for protected bike-lanes, doing demonstrations where we did a line of people to demonstrate a protected bike-lane on a big street. And so, taking best-practices and talking to communities about [...] people who would be open to these ideas, and wanted to see change, and agreeing that it was not impossible anymore; and that was coupled with some higher profile initiatives to inject ideas into key-political classes around the city, like the business-community, the real-estate-community, which have a lot of political influence;[...] [and to] talk to business leaders, and the local chambers of commerce around the city and even to people inside City Hall that were receptive to these ideas (Budnick, Transportation Alternatives, Interview on 1/24/2014, #00:25.13) .

Hence, sponsored by Gorton the livable streets advocacy went through a process of professionalization which not only covered the above described outreach strategies into political and business classes, but also their media presence: At a cycling event, TA's executive director Paul Steely White introduced Mark Gorton to Aaron Naparstek, an activist and writer from Brooklyn who was editing a weekly column about traffic for the New York Press. They got together to discuss the publication of a book about New York City streets but came to the conclusion "that a book really wouldn't change anything"; instead, Naparstek "said a blog would be a better way to move this set of issues higher up on the civic agenda and asked him to fund it [...] and Mark was like 'Good. I'm in. How much do you need?'" (The Bicycle Story 2014). Together with TOPP they launched the blog that became known as *Streetsblog* and together with *Streetsfilms* – a platform that

launches videos on street issues - is one of the most important and successful features that came out of the New York City Streets Renaissance campaign.[27] At a time just when blogging became a fully acknowledged and valuable news resource, the blog with daily news entirely dedicated to their streets and sustainable transportation agenda provided media coverage for these issues and created a platform that expanded the outreach of the campaign's ideas in New York and ultimately far beyond the city's borders, as Gorton claimed during the interview:

> I mean, transportation in NYC was a non-issue. Like, you couldn't get any of the newspapers to write about it. I mean, it was basically the sense of the city, that NY is a big city, it's got a lot of traffic, but what you gonna do about it? That's not news. We couldn't beg any of the newspapers to write stories on any of this stuff. [...] And so, in this sort of media vacuum our little voices were the loudest ones out there. They weren't like particularly loud, like we had a blog, and you know a guy making videos, but it did provide this platform (Gorton, NYCSR, Interview on 2/3/2014, #00:06.56)

Thus, in his perspective *Streetsblog* and *Streetfilms* were an important contribution to turn advocacy towards Gorton's new strategic vision, to pool the energy of like-minded advocates with the goal to get a city-wide conversation going that the old paradigm that streets belong to cars needed to be changed and that the shift towards new transportation policies is possible, that "the curbs can move" (Budnick, Transportation Alternatives, Interview on 1/24/2014, #00:25.04).

Ultimately, when the above mentioned 'Livable Streets' exhibition opened, it "looked like kind of an art opening with [...] big, well produced graphics; and when people walked in it didn't seem like a bunch of amateur bicyclist" (Gorton, NYCSR, Interview on 2/3/2014, #00:18.11). Hence, at this point it seems that cycling and streets advocacy had been upgraded from a "small community, [...] a freakish community [...] a very small group of marginalized people" (Gorton, NYCSR, Interview on 2/3/2014, #00:16.25) to a professional, high-profile political organization. Gorton, his money and the NYCSR had bundled, channeled and ultimately professionalized advocacy efforts from different groups and fostered a wide–spread networking and bundling of energy among advocates as well as a publication and media strategy that created a forum for a city- and even nation-

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[27] See http://www.streetsblog.org/ and http://www.streetfilms.org/, last accessed 08/04/2017.

wide debate about street issues that was particularly addressed to the political and business elites. When *PlaNYC* was drafted it ultimately created the political climate that would be receptive of their ideas and the groups from the NYCSR very actively fostered the infusion of their ideas into city government:

> We would always offer our suggestions and during the development of PlaNYC we very pro-actively sent ideas and there was a lot of public forums around PlaNYC around the city, and we made sure that our supporters went to those, and similarly with Sustainable Streets and other projects since then, we're just constantly offering what we think are best practices, and new ideas (Budnick, Transportation Alternatives, Interview on 1/24/2014, #00:37.08).

Thus, while on the one hand building upon their large amount of knowledge and experience in street advocacy, the campaign on the other hand also shifted their focus: their vision and goal in the first place would and should be 'Livable Streets' rather than for example increasing cycling rates, participation or vital communities. That said, they developed an agenda that very much built upon a certain spatial image and that later would turn out to be very consensual with governmental street politics. Indeed, one of the greatest successes of the campaign certainly was the staffing of both higher and lower positions at DOT with former advocates that Janette Sadik-Khan initiated once she had taken office (see Ch. 3.2.1). That way street advocacy joined the city administration and could immediately infuse its ideas into municipal policies.

3.3   NEW STREET SPACES: THE IMPLEMENTATION OF BICYCLE AND PEDESTRIAN PROJECTS

When Janette Sadik-Khan left office in 2014 after a new Mayor had been elected, she had largely expanded the support from and cooperation with the cycling and livable spaces advocacy, transformed the way the agency was organized and worked, and by an extended and innovative implementation program she had re-designed large parts of New York's street scape both politically and spatially in favor of cycling, walking, and a general approach to streets as public spaces.

As was explained in previous chapters Mayor Bloomberg's business-like approach to urban governance and the newly launched *PlaNYC* very much depended upon visible results and performance. Furthermore, Bloomberg's second term would only last another 32 months after *PlaNYC* had been published and

many if not most of his first-term projects had failed. Consequentially, the Janette Sadik-Khan-led DOT saw as its task to find ways how to make the vision an urban reality, how to reach the goals of the plan. In other words, the strategic planning process conducted within the agency was not so much about developing ideas anymore, but rather about how to implement ideas that were already there as fast and widespread as possible.

Hence, the planning process within the agency needed to be fast, effective, and outcome-oriented. To achieve visible results as part of Mayor Bloomberg's performance the DOT had to move quickly from developing the plan to implementation. Therefore, this chapter takes a look at how the widespread implementation of bicycle and pedestrian projects was processed within the agency and into metropolitan street space.

3.3.1   200 MILES IN THREE YEARS – EXPANDING THE BICYCLE NETWORK

The new role of cycling within the transportation system had been clearly announced in *PlaNYC*: "[T]he goal was to prove that cycling can be a legitimate choice as a transportation mode for regular New Yorkers" (Russo, DOT, Interview on 11/11/2014, #00:16.32) and therefore the cycle lane network should be dramatically expanded. 200 miles of new bike lanes in three years was the ambitious short-term goal announced by *PlaNYC*. One of the key-figures for the implementation of this agenda was Ryan Russo, an urban planner who had joined the DOT in 2003 and therefore saw the evolution of the DOT "the before and after" (Russo, DOT, Interview on 11/11/2014, #00:01.28). In his first position at the department he was assigned to help develop the *Downtown Brooklyn Plan*, a development project that would up-zone the area between the Brooklyn and Manhattan Bridges in the North-West and Atlantic Terminal in the South East and was meant to add significant density in terms of office and residential buildings to the district. Russo was assigned to improve the relations between DOT and the local community that had been suffering under traffic and bad maintenance for years:

> And there was a long history of the brownstone communities surrounding Downtown Brooklyn that were frustrated with DOT's street management and the traffic impacts of the bridges to Manhattan. And DOT was frustrated with the redevelopment agencies adding more density where they had such difficult political and operational

issues. So my first role was to help shape the Downtown Brooklyn Plan, help shepherd it through by improving the relations between DOT and the local communities. And I did that by focusing on livability and safety through street projects. A lot of the early improvements such as the Tillary Street two-lane protected bicycle path to the Brooklyn Bridge came out of that work. (Russo, DOT, Interview on 11/11/2014, #00:03.48).

Consequentially, Russo and his team announced a few bicycle paths in Brooklyn, among them the Sand Street and Tillary Street paths that lead up onto the Manhattan and Brooklyn Bridges to cross the East River into Manhattan. Hence, the transformation of streets in Downtown Brooklyn had already started and Russo was one of the planners within the agency that pushed the bicycle and pedestrian agendas before the major political turn. In this time period between 2003 and 2006, Bloomberg was still quoted saying "We like traffic, it means economic activity, it means people coming here" (Bloomberg in Naparstek 2006a). Further, it has been argued that the regulatory practices of the New York City Police Department against cyclists who were taking part in a *Critical Mass* ride in 2004 that resulted in many arrests of cyclists and confiscated bicycles reinforced the local system of automobility in that they were intended "to maintain the flow of motorized traffic at all costs, by privileging the use of public streets for commerce over free expression, and by reinforcing the perception that bicycling as an alternative mobility is inherently unsafe and disorderly" (Blickstein 2010, p. 901).

Notwithstanding, when Deputy Mayor for Economic Development and Rebuilding Dan Doctoroff really got engaged in the process to draft *PlaNYC* and found in particular bicycle and pedestrian planning an important part of his economic development agenda, he "basically [...] asked DOT [...] to significantly up their game around bike and ped; [...] So [...] because of City Hall's interest we got new resources and we got new staff [...]" (Russo, DOT, Interview on 11/11/2014, #00:06.30) and Russo moved on from the Downtown Brooklyn Plan to become DOT's Director of Bicycle and Pedestrian Programs in 2006.

> And that 2006 planning resulted in the 2007-release of PlaNYC, the hiring of Janette Sadik-Khan as Transportation Commissioner, and we had been preparing and building up our capacity (Russo, DOT, Interview on 11/11/2014, #00:07.26).

Hence, the DOT had started "moving that way" (Russo, DOT, Interview on 11/11/2014, #00:08.56), putting together the necessary human and financial

resources to achieve *PlaNYC's* goals. However, when *PlaNYC* had been published, planning and implementation of bicycle lanes had to speed up.

In 2006, New York had only a few bicycle lanes that were spread all over the city. The most coherent were the Greenways through *Central Park*, *Prospect Park* and *Flushing Meadows*, along *Hudson River Park* on Manhattans Westside, where the former West Side Highway had been transformed from an elevated to a ground-level street as well as the above mentioned East River Crossings. Some on-street paths had been established in all five boroughs but connections and networks between them were largely missing (see Fig. 3). The *200-miles-in-Three-Years* program was to be based on the 1997 Bicycle Master Plan that suggested bicycle infrastructure on 1.800 miles of New York's total of roughly 6.000 miles of streets. The plan "laid out a pretty good network, but [...] didn't have a lot of the details, didn't have the street configurations proposed in any way and didn't have some of the nuanced things around real connectivity" (Russo, DOT, Interview on 11/11/2014, #00:10.04). Therefore, Russo explained during the interview, DOT had "to choose where would be our priorities and how we would go about it" (ibd.). The approach how to expand the bicycle network depended on five basic guiding principles:

> One is network, of course, we wanted to create connections and network connectivity. [...] We didn't just want to do a little bit everywhere. And we wanted to [...] build off the back-bone of the East River Bridges, the four bridges offer a mile-long traffic-free soaring commutes with great views and there was a significant market in Brooklyn and Queens for cycling, so we needed connectivity to those bridges.

> We wanted to support the economic development agenda, so neighborhoods that were rapidly changing or that had a lot of development and support local business. We wanted to prove that cycling sort of goes hand in hand with economic development and it doesn't kill businesses but supports it. There was an Open Space connection aspect to it. [...]. And then Safety, of course. Concurrently with the PlaNYC planning we had completed in mid-2006 a Bicycle Fatality Serious Injury study, [...] and the recommendations of that study were to build out the bike network (Russo, DOT, Interview on 11/11/2014, #00:10.47).

Creating a well-connected network from center to periphery with the East River bridges at the heart of it, fostering economic development, connecting open spaces in the city and enhancing the safety of cyclists in the city were the determining criteria to establish the bicycle lanes. Following these principles the network was quickly expanding: by 2010, when the 200-miles-in-three-years

project was completed, the bicycle lane network had particularly connected Lower Manhattan to the neighborhoods in Brooklyn that are located near the East River bridges (see Fig. 3) [28]. As of 2014, when Bloomberg had left office, these connections were even denser, yet the expansion towards the other boroughs remained comparatively little (see Fig. 3). Hence, the economic heart of the city, Lower Manhattan and the neighborhoods of Brooklyn adjacent to the East River had been even better connected, while the rest of the city received only little new bicycle infrastructure.

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[28] Figure 3 is based on data provided within the NYC Bicycle Maps 2006, 2010 and 2014, issued by the City of New York and the Department of Transportation. They are available in the NYC Bike Maps Archive, online: http://www.nycbikemaps.com/spokes/nyc-gov-bike-map-archive/; last accessed: 09/14/2018.
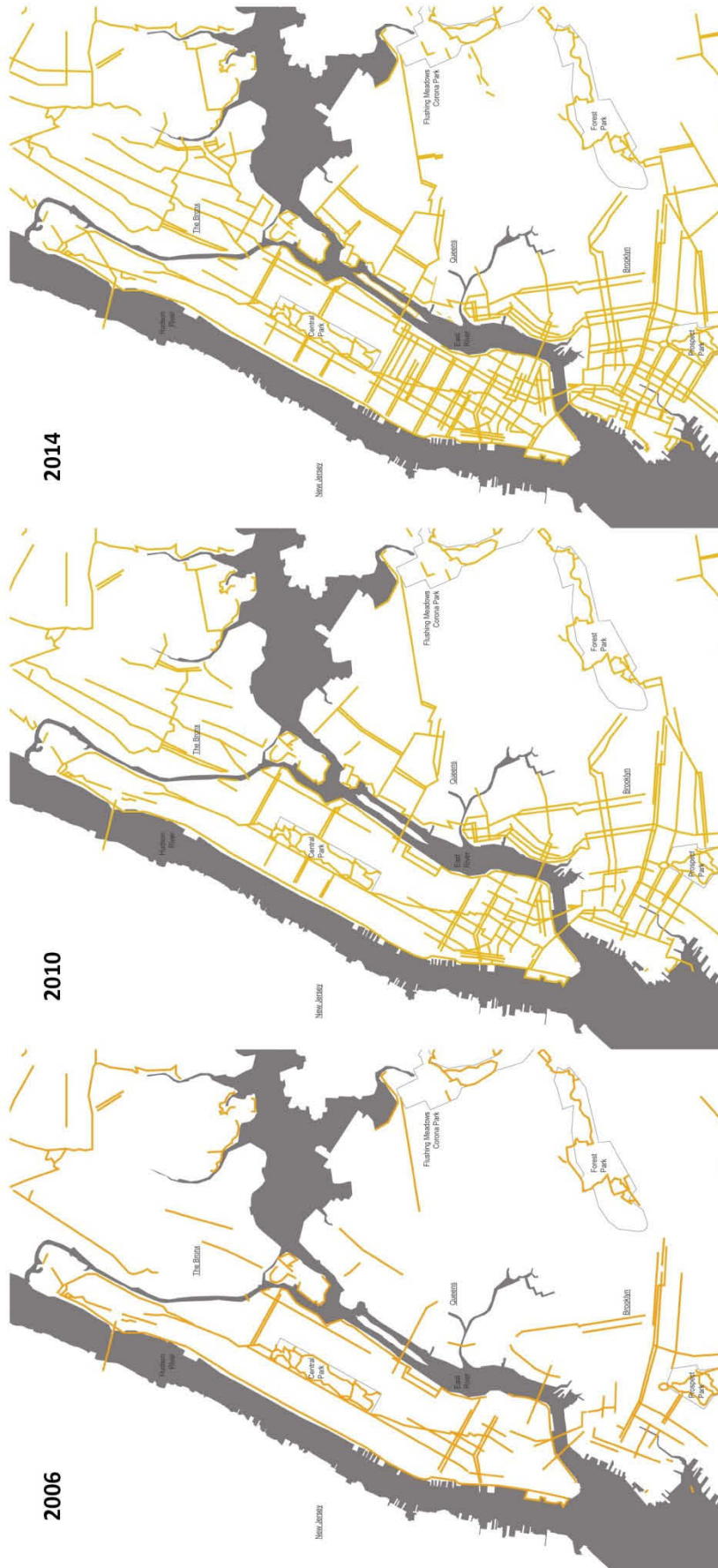
Fig. 3: Development of the Bike-Lane Network, 2006-2014, by author.

The actual design of the bicycle lane was a matter of local context, negotiation and experiment. In general, the DOT has deployed mainly three types of bicycle lanes: the first are *Protected Bicycle Paths* that are separated from the traffic-lanes by a buffer, which is e.g. parked cars or greenery; those are mainly in place along scenic routes such as the waterfronts in Manhattan and Brooklyn, across the East River Bridges and in the city's parks as well as along parts of some major streets such as 1st, 2nd, 8th and 9th Avenues in Manhattan as well as Ocean and Eastern Parkway in Brooklyn; the second type are on-street *Bicycle Lanes* that are marked either on the left or right side of the street next to flowing traffic of which some are colored in bright green, while others are made simply of white lines that mark their margins; the on-street lanes make up for the largest portion of the network reorganizing street space with relatively little expenses; lastly, *Shared Lanes* that are not marked as a separate lane but a bicycle symbol and two arrows painted in regular distances on the roadway indicate that drivers and cyclists are supposed to share the road in mutual respect; those types of infrastructure fill out many gaps in the network between the streets with more formalized lanes (see Fig. 4).

Fig. 4: Bike Lane Typologies in New York.

The typologies differ both in their safety for the cyclist as well as to the extent that they change the streetscape. In 2014, the majority of bicycle lanes consisted of painted on-street and shared lanes that did not require any other intervention in the built environment of the street. When in 2006 the political pressure to speed up project implementation increased, the bicycle divisions at DOT profoundly changed their implementation strategies, as Russo explained:

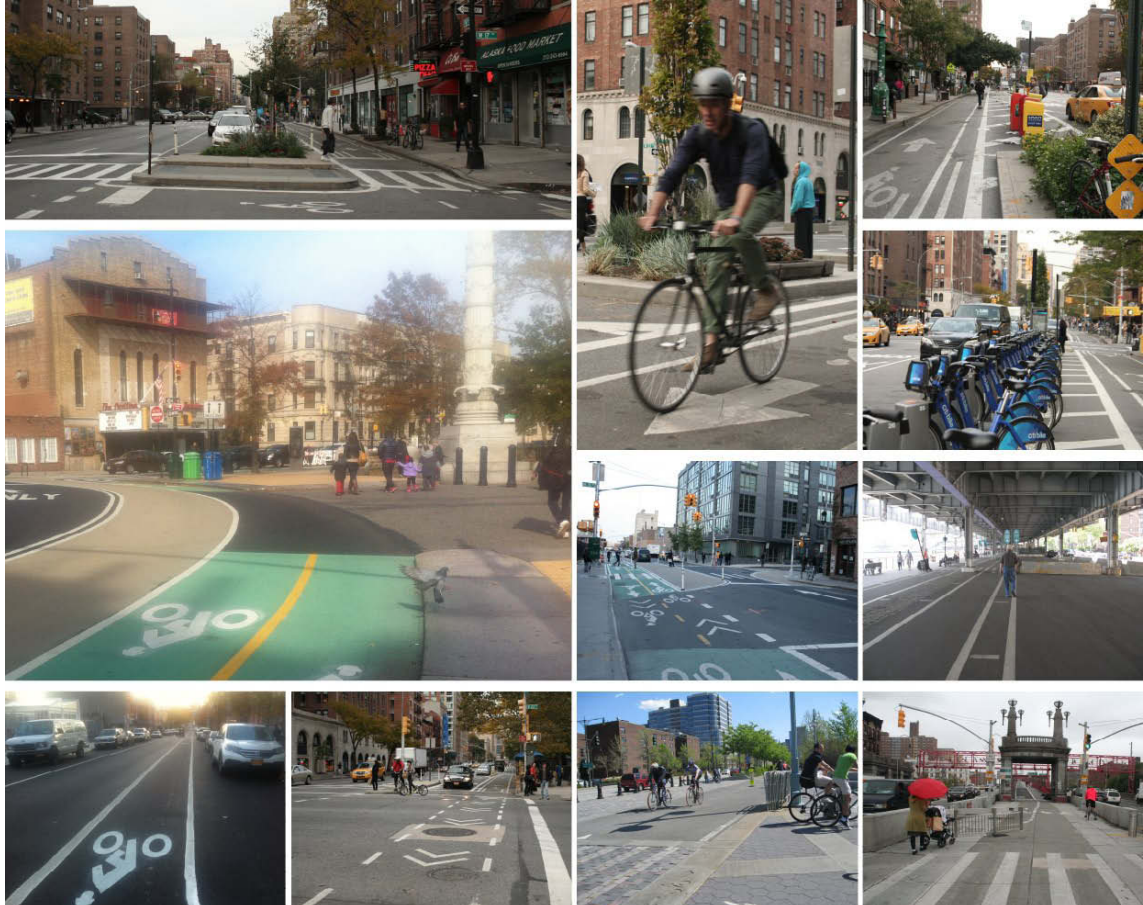> So, [...] internally we weren't as bad as we were made out to be at DOT. We had actually been developing and some pretty good projects but they were the typical projects that planners would draw up, where the curbs moved, and new trees were put in, and neckdowns built and that had to go through an incredibly complicated process that involves funding, budgetary review, Utility coordination and relocation, maintenance partners, Parks Department, etc. The projects needed to be passed on to the Department of Design and Construction, equivalent to our public works department, to finalize the design and build it. It all took so long that if political wind shifted, or the community board objected or some complex utility coordination issue came up, the projects would die under their own weight. [...]

> So we developed, building on some prior experiments, a robust palette of what we call operational projects, in which we could use - what Janette would say in the TED talk - "just a can of paint." It was actually more robust than that. We cobbled together all of our maintenance and operational tools – signs, traffic signals, plastic posts, roadway markings and concrete repair to deliver change without having to go through that same budgetary-other-agency-long-utility-relocation-process.

> As we did these projects that didn't affect drainage or sewers and so on, we learned and continued to make those projects better and better; more aesthetically pleasing, as good as you could possibly do without spending millions on full reconstruction. And we realized that it was really important both to generate excitement and to prove the concept. If you're doing it cheaply and quickly, you can do it this way and then learn from it and change it before you spend the millions of dollars. So the debates about whether the project will work or not doesn't have to be something that kills the project (Russo, DOT, Interview on 11/11/2014, #00:05.38).

Hence, the quick implementation of bicycle lanes on the one hand built upon the avoidance of long planning processes and reconciliation within DOT and with other agencies and on the other hand it built upon experiment and provisional and temporal design that could be implemented by the executive power of the bicycle and pedestrian divisions of the department. This strategy enabled not only the implementation of on-street bicycle lanes and shared lanes but also of more complex Protected Bicycle Path projects: the 9th Avenue bicycle path and Complete Street design, the first section of which was implemented in the fall 2007, "was executed with operational measures under the purview of NYCDOT rather than initiating a costly and time consuming capital reconstruction project which would

need to be effectuated by NYC's Department of Design and Construction" (Russo et al. 2008). The 9th Avenue project reduced the four-lane street with parking on both sides to a three-lane street plus one lane of parking and implemented a bicycle path between the parked cars and the sidewalk on the street's West-side. By reorganizing the street surface the DOT not only created a "highly safe and enjoyable cycling environment" (ibd.) but also "dramatically improved conditions for pedestrians, by narrowing the effective crossing distance of Ninth Avenue by almost 30 feet" (ibd.) and adding greenery and planters at certain points to separate the different modes of traffic.

Thus, the reorganization of the street created a much more livable environment and a street that accommodates much more users than just cars. However, not all of DOT's bicycle projects were implemented immediately in their most advanced status. Russo later in the interview continued to explain that some bicycle lanes were enhanced over time to avoid political conflict and convince more people of DOT's agenda and thereby develop and slowly improve the bicycle network:

> the work we do is often enhancement of an existing bicycle facility. The network actually evolves. And we want our projects to be practical and accepted, and so often on a busy street, people have a hard time imagining bike lanes on, so our initial reconfiguration includes a traditional bike lane or shared lane and then the more hearty cyclists will come, and once we have more cyclists, we can then justify a much more robust design and we can go back and take a bike lane and make it a protected lane, which is a much more dramatic change for that street, in terms of loss of parking and the parking lane further out onto the street, etc. So, many of the projects we do are upgrades and enhancements to facilities we built a few years earlier. (Russo, DOT, Interview on 11/11/2014, #00:15.17).

Thus, the political support and pressure of the first three years after PlaNYC had been launched were used to quickly expand the spatial presence of bicycle infrastructure by provisional means and thereby create a network that in the first place spanned and linked the central business districts of Manhattan and Brooklyn. With the new spatial designs in place, the DOT gained a strong argument and justification for additional, permanent and stronger changes of the streetscape.

Although Janette Sadik-Khan and the DOT had to survive some political backlash in the early years, according to DOT's policy director Jon Orcutt the conflict over bicycle lanes remained relatively low in that the DOT hardly ever had

to change or even take back a design once it was on the street. There is one famous exception, however, where the bike-lane on Bedford Avenue in Williamsburg, Brooklyn that had been installed in 2007, got partially removed in 2009 after a conflict had come up between the cycling "hipster-community" and the non-cycling, abutting community of ultra-orthodox Hasidic Jews. "The Clash of the Bearded Ones" the *New York Magazine* titled the enduring conflict and negotiation between these interests groups (see Idov 2010). In another occasion, also in Williamsburg, the bicycle path on *Kent Avenue* along the East River waterfront was overworked after functional deficiencies had caused opposition and went along with an overall transition of the area from a rather industrial to a mixed-use neighborhood:

> [We had this case of] Kent Avenue in Brooklyn, in Williamsburg. The first version of the bike lanes in that street didn't really work; they took a lot of parking off, and caused some problems for some industrial businesses, and some other things. So the actually, the more radical step of creating that big bike path on one side of the street, and moving the parking, we were able to bring parking back in and create a better bike path in the second version. Instead of just kicking all the parking off and putting the bike lanes on the curbs. And it slowed the traffic down a lot, too. We had to make the street one-way; instead of it used to be both directions. It's a much calmer street now, and it's good, because there's all that development there, a lot more people walking around there, those people didn't exist at all, 4, 5, or 6 years ago. It was pretty much an industrial warehouse corridor (Orcutt, DOT, Interview on 2/18/2014, #00:24.54).

The massive expansion of the bicycle network can be seen as a great planning success: not only did the DOT achieve the ambitious three year goal, but since then it has expanded the bicycle network each year by roughly 50 miles.

Thus, New York certainly evolved from a city with hardly any cycling infrastructure into a bikeable city – at least in its central parts. Yet, the share of trips taken by bicycle has remained comparably low, even in North American standards. Although since 2002, cycling in New York has been starkly growing and between 1990 and 2009 the amount of commuter cycling has doubled from 0.3% to 0.6% according to a *New York Times* poll, in the same year Portland, Oregon had 5.8%, San Francisco 3.0%, and Chicago still 1.2% (Bruni, 9/10/2011). The reasons usually named for this lack of development are for once hostile police tactics that on the one hand ticket cyclists for nuisances and on the other do not enforce offenses of drivers, such as parking on the bicycle lane or dooring of cyclists.

Further, while the DOT drastically expanded the bicycle lane infrastructure in the city center, it did hardly anything for bicycle parking, the integration of cycling and public transport or the establishment of infrastructure that encourages people who do not live but work in the central districts to cycle or take public transport instead of driving (Bruni, 9/10/2011).

Hence, despite the large-scale and quick implementation of bicycle lanes, to establish cycling as a viable mode of transport the DOT still had lots to do. To promote cycling, the bike lane program was complemented by an extensive Bike Share program sponsored by Citibank and called 'CitiBike' that started in May 2013 and quickly went beyond DOT's expectations in regard to its use (Gay 2013).

In 2014, the newly elected Mayor Bill de Blasio took on Transportation Alternative's demand for a *Vision Zero* that goal for policies that reduce the number of pedestrian and bicycle fatalities in traffic to zero. For now, bicycle-friendly politics in New York have not come to an end and it seems that the built bicycle network provides a rather stable base for further development.

3.3.2 'CREATE OR ENHANCE A PUBLIC PLAZA IN EVERY COMMUNITY'[29] – THE NYC PLAZA PROGRAM

Creating more livable and attractive urban spaces, as well as transforming streets from motor thoroughfares into such spaces was another key-objective of both *PlaNYC* and the *Sustainable Streets Strategic Plan*. To "re-imagine the public realm", for instance Initiative 6 in the category *Land* of *PlaNYC* aimed to *"create or enhance a Public Plaza in every community"* (The City of New York 2007, p. 37) to overall improve the accessibility of public space in the city. Therefore, the *Sustainable Streets Plan* adapted the goal within its *World Class Streets* policies.

However, already before any of these plans were published, in March 2006, the DOT had opened its first Public Plaza on Willoughby Street in Downtown Brooklyn: a small two-block stretch that had been hardly used by motorized traffic but rather as an illegal parking spot, was transformed into a pedestrian area with tables, chairs, sunshades, planters and bicycle racks; further, the adjacent building was to be developed to host ground-floor retail (Naparstek 2006b). A second one

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[29] Quote taken from *PlaNYC*, The City of New York 2007, p. 37.

was announced in May 2007 for the parking lot on Pearl Street in the DUMBO neighborhood in Brooklyn that was officially opened by Commissioner Sadik-Khan in August 2007, only three months after she had taken office. It was at this occasion that the DOT also launched its *Public Plaza Program* that would systematize the efforts undertaken to create public spaces on underused street space and spread plazas with chairs and tables on underused street space all over the city (Varone 2007b; Naparstek 2007b) (see Fig. 5).
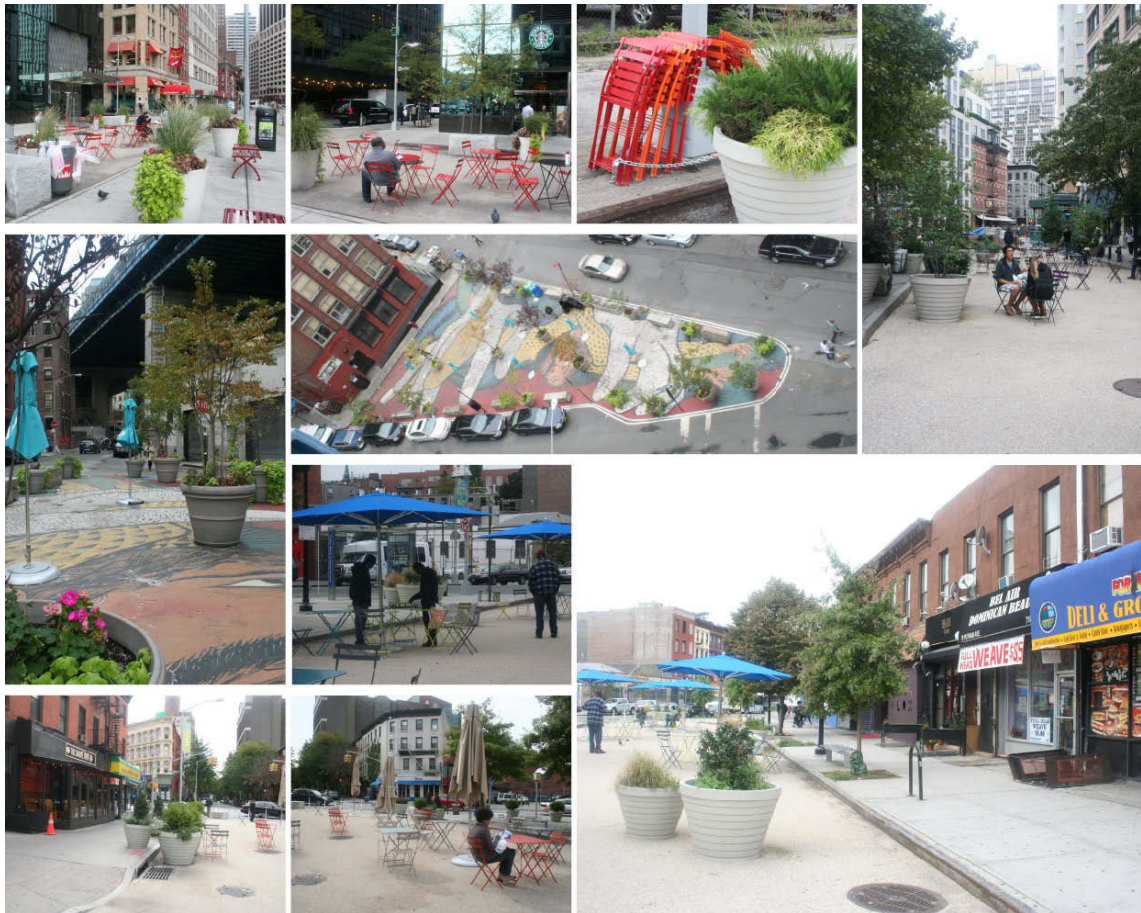
Fig. 5: Public Plazas in Brooklyn and Manhattan, 2012-2014.

The *Public Plaza Program* in its first version was an initiative based on public-private partnership between the DOT and business-neighborhood organizations. In a competitive application process, the neighborhood organization has to propose a site for the installation of a new plaza. In the selection process, DOT prioritizes sites that are in neighborhoods that lack open space, and partners with community groups that commit to operate, maintain, and manage these spaces so they can develop into vibrant, well-used pedestrian plazas. Applications are accepted annually and in case DOT selects a plaza, it will go through a cooperative

planning process with shared responsibilities with the applicant. On the one hand DOT takes care of the funding and construction of the project and with community participation helps to develop a conceptual design that is rated as appropriate to the neighborhood which will then be further developed by professional designers who create formal plans. The applicant on the other hand has to conduct community outreach to ensure the support of residents and business-owners, develop a funding plan for the project that also outlines how the plaza will be managed and maintained in the long term; furthermore, the organization has to provide insurance on the plaza as well as its maintenance which for example includes daily sweeping, watering of plants, removing stickers and graffiti as well as shoveling snow; lastly, the community partner is responsible for the programming of the plaza and the organization of events taking place there which may include holiday events, food or craft markets, temporary public art installations or exhibits, and music and dancing. The plazas will be equipped with amenities such as tables and seating, trees and plants, lighting, bike racks, public art, and drinking fountains by the DOT. [30]

The program had been developed by Andy Wiley-Schwartz[31], a former Vice-President of the place-making organization *Project for Public Spaces* where he had mainly been dealing with the management and programming of streets. Therefore, he was long experienced in public space and community planning when he was hired to the DOT by Janette Sadik-Khan in June 2007 to head the development of the public spaces program and systematically develop it into a city initiative (Naparstek 2007a). While the agenda was clearly laid out in PlaNYC, the procedure of getting there still had to be developed: "[...] what the plazas were like, what the entire structure was like, it was completely up to us" (Wiley-Schwartz, DOT, Interview on 2/24/2014, #00:03.00). The solution that Wiley-Schwartz and his new team at the DOT developed partially built upon his experience with public-private partnership he could gather at PPS as well as on planning, design, and research that had been conducted at DOT before he got into office. From the

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[30] For more information on the Plaza Program see http://www.nyc.gov/html/dot/html/pedestrians/nyc-plaza-program.shtml; accessed 16/06/09.
[31] When Michael Bloomberg and Janette Sadik-Khan left office, Andy Wiley-Schwartz also got employed at Bloomberg Associates, where he has been working in the realm of strategic transportation and street consulting; see https://www.bloombergassociates.org/team/andy-wiley-schwartz/, accessed 04/22/2017.

beginning, his top-priority was the cooperation of DOT with the local community to guarantee maintenance, acceptance and success of the plazas. Instead of keeping the responsibility for maintenance at DOT or the Parks Department, he aimed for shared obligations and saw as his main challenge to figure out how to arrange that. When Wiley-Schwartz got to DOT he built a small team that helped him to process the program and he could already built upon a set of analyses, ideas and innovations that he could fit with his community-partnership model. Yet, he had to change the prevalent planning perspective from the bird's-eye to street-level:

> You know, one of the stories I usually tell is when I got to DOT there were a group of planners, who were smart, who had been working on that project, right, for a few months. And they came and they say: 'Ok, here's the work we've been doing, here are all the low - here are all the neighborhoods that, you know, have a low open space ratio to population, right? So we're plotting out where the places are that need these plazas and, you know, you can look at this map and figure out where to put them. And I said: I'm not looking at that map to figure out where to put them. [...] I mean, we can't make public spaces from 30.000 feet up, that's ridiculous. So we get the map back out once we have a bunch of applications and we can decide which ones are in the most strategic location, but we're gonna start with the neighborhoods and the communities and figure out what the demand is for the program and where they wanna see their public spaces and then we'll worry about the map (Wiley-Schwartz, DOT, Interview on 2/24/2014, #00:16.52).

Thus, Wiley-Schwartz and his team decided on the competitive model of public-private partnership that was described above. However, the design of the plazas has been developed at the DOT, already before the *Public Plaza Program* got officially drafted and which had already been implemented on Willoughby Plaza as well as on a former parking-space in DUMBO, Brooklyn. While those plazas did not go through the official, competitive procedure, they nevertheless provided a bold advertising foil for DOT's projects. The standard design of the plazas had already been created and tested for the Willoughby Plaza that had been put in place a year earlier. The base for the plazas usually is a new surface that is put on the street that "is just basically an epoxy, squeegee down on the street, and gravel distributed over it" which changes "the asphalt into something a little softer" (Wiley-Schwartz, DOT, Interview on 2/24/2014, #00:24.30) and thereby creates a more inviting space, rather dissociated from its traffic function. Secondly, there are the big heavy planters that Wiley-Schwartz calls the key-innovation:

> It was heavy enough to - no one could move it, and it more or less stops a vehicle. But it wasn't made out of a material that would shatter or break when a vehicle hit it, and potentially hurt pedestrians. Then, engineers, there is a rule about objects in a

roadway. So it's dangerous to not have a curb, separating the car from the objects that could hit it, right? And so, then they came up with this idea that you would paint 2 white lines, and then the planter would go inside the white lines, so that the white line means vehicles should not cross, so from an engineer's perspective, this is a curb. And so they put the planters behind these. So this was the key innovation, because you got the greening and some protection, but you could just put it right on the street (Wiley-Schwartz, DOT, Interview on 2/24/2014, #00:23.15).

Thus, the redesign not only up-graded spatial quality, but explored a grey space of the traffic regime to create new urban places. Based on these design strategies to gain back and secure street space for pedestrians, additional chairs, tables and sunshades would turn former street space into recreational areas.
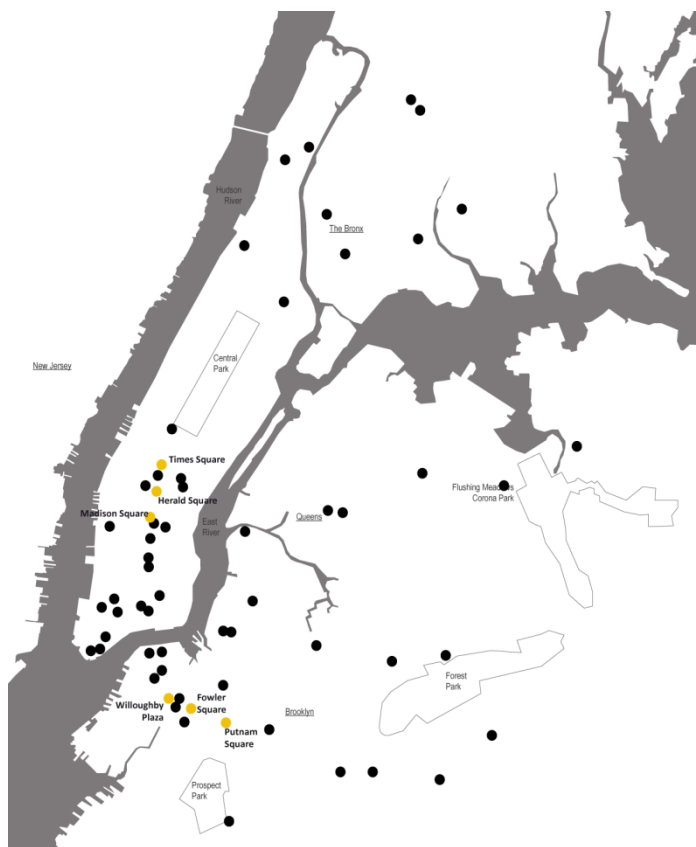
Fig. 6: Public Plaza distribution in New York, 2016, by author.[32]

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[32] Figure 6 is based on data provided within the "List of Plazas" of the Department of Transportation. The up-do-date version can be accessed online: http://www.nyc.gov/html/dot/downloads/pdf/list-of-plazas.pdf
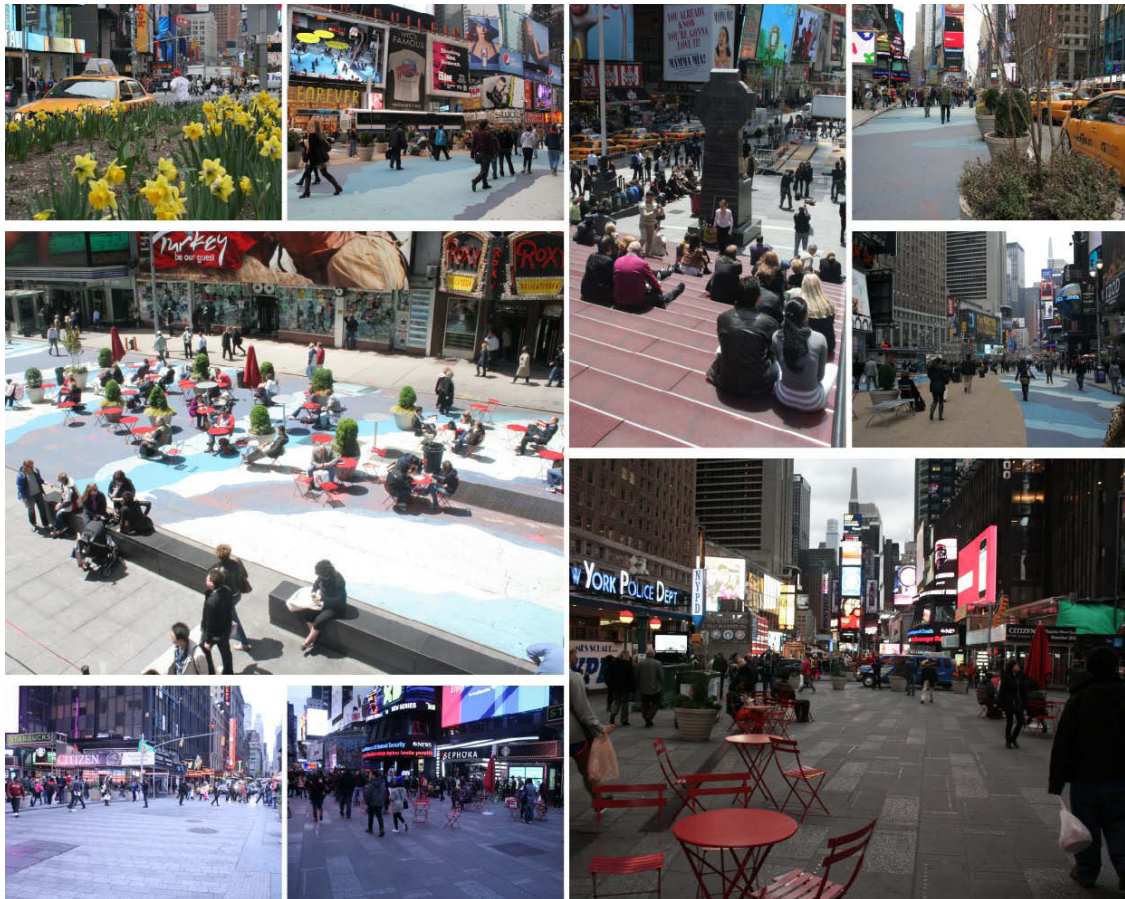
Fig. 7: Transformation of Times Square, 2011-2014.

The temporal, low-key approach to the installation and design of the plazas enabled the DOT to quickly implement the project and thereby spread new plazas all over the city (see Fig. 6). Moreover, they could test the site and enhance or adjust their design over time before a capital-reconstruction project would be developed. One of the biggest and most catching projects became the redesign of *Herald*, *Madison* and *Times Squares* in the larger context of the *Green Light for Midtown* project which I have introduced in the introduction to this chapter. In spring 2009, the DOT closed down Broadway for car-traffic between 42nd and 47th Streets, simply by separating the areas for cars and pedestrians with movable, orange bollards and instead installed sun chairs all over the asphalt (see e.g. Vanderbilt, 9/16/2009). This was the beginning of the transformation of Times Square from a traffic hub into a large pedestrianized shopping and entertainment zone that since then has undergone several stages of transitory design before it was ultimately rebuilt as a capital project with permanent materials in 2014 (see Fig. 7).

The temporal initiative of the DOT helped solve the conflict with the Times Square BID about the amount of pedestrian space that should be attributed on the square:

> Times Square had capital reconstruction money in it for a decade. And basically Times Square BID and the city, DOT, had been kind of fighting over how much pedestrian space they could expand to. And that, it sort of held up the planning of the project. When we came in and decided to do it this other way, we put the capital project on hold for a couple of years, did the temporary project, saw that that was successful, then brought the capital money back in, then we had to raise three times more capital money to actually build it, than we actually had in the program. And now they're building it up, yes (Wiley-Schwartz, DOT, Interview on 2/24/2014, #00:19.38).

Hence, trying-it-out temporarily, changing the space towards the new vision and have people see and experience the result became itself one of the strongest arguments the DOT had for its plazas. The temporal design solutions not only enabled a quick implementation, but also allowed for test phases, adjustments, and in a few cases also deconstruction:

> Well, what we've done is - we never built one and then ripped it up. But we have experimented a little bit with trying it out in temporary materials, more temporary even, or we had a community group that really wanted a plaza, but there was a large apartment building next to it and that was mixed with retail, and the property owners and residents in this buildings were sort of split whether they like the plaza or not, so we agreed to let them try it for three months. And the partner managed the space as best as they could, but some people who didn't like it kind of sabotaged it a little bit and it didn't go that well. And then the property owner came out and said: 'We're against this, we don't want this'. And then I just said: 'Well, there's no point.' I mean, I'm not gonna build a plaza where the adjacent property owner doesn't support the public space, it will be a failure, you know (Wiley-Schwartz, DOT, Interview on 2/24/2014, #00:28.43).

However, in many cases, the community-initiative to establish a plaza is led by the local Business Improvement District or another business organization that aim for better business conditions in the neighborhood. In the case of *Putnam Square*, a small street-triangle that lies in front of a laundry service and a deli at the intersection of *Fulton Street*, *Grand* and *Putnam Avenues*, in the neighborhood of *Clinton Hill* in Brooklyn, the *Fulton Business Alliance (FAB)* applied for a redesign of the square within their area that stretches along Fulton Street in *Fort Greene* and *Clinton Hill* and that holds another Public Plaza at Fowler Square, a few blocks further west. In the context of a development agenda called the *Fulton Street Vision*

Plan that aims to upgrade the experience, business activity and public spaces along the street, the re-design of underused street space was a core mission:

> Because we do look at the whole thing. It's been part of our broader strategy to just trying to make Fulton Street more appealing and attractive and welcoming for people to come out. So that goes, you know, we've stop lights with crosswalk signals installed at dangerous corners and the reason for that was safety and people feel more comfortable walking on Fulton Street that maybe they would be coming back and shopping at the businesses. Fulton Street in particular cuts through the street grid at an angle and one of the first things we observed when we started - we've been in business now for 5 years - were just these interesting spaces and some of them just sit in dormant. A car park there and maybe a car every three minutes goes through. So there will be underutilized spaces and a lot of concrete is there, like a lot of concrete. So there we saw the opportunity so that creating these plazas, these public spaces people would come out, we've got positive activities happening and in the case of one of the plazas that has been known for less than positive activities for decades (Kellogg, FAB, Interview on 11/6/2014, #00:02.00).

Putnam Square had long been known for being an open-air drug market, yet as the whole street is developing, vacant lots are being filled with new buildings, new businesses have been moving in and so forth, the redesign not only turned Putnam Plaza into an enjoyable outdoor-space and displaced the drug-market, but also prices of abutting lots and houses rose. Similar trends have been reported around *Times Square* where the rent of office space doubled within the first year of pedestrianizing it (Kimmelman, 6/2/2013).

Overall, where the plazas had been implemented, they were usually enthusiastically welcomed at places as different as Madison Square on the one hand and New Lots Avenue in Eastern Brooklyn on the other, increasing quality-of-place and the conditions for local businesses, often decreasing crime-rates and car-traffic [ibd.]. However, despite its large success, the program was also object of critique which partially also led to its readjustment which particularly addressed its concentration on competitive and business-led initiatives because that is to the disadvantage of lower-profile neighborhoods.

From a historic perspective, the Public Plaza Program on the one hand established a new category of public space in the city that has long been marked by privately owned public plazas in or around the Manhattan skyscrapers that are heavily regulated in their use, opening hours and accessibility (Pegels 2004); on the other hand, as the plazas often also have certain behavior rules that for example prohibit to lie down on the floor, it is contingent with changes in the

metropolitan streetscape that started as a response to the 1970s urban crisis and in the general context of urban neoliberal, post-industrial restructuring between the late 1970s and early 1980s. The increasing responsibilities of the private sector through public private partnerships and here in particular the increasing influence of BIDs changed the appearance and programming of streets particularly in economically relevant areas that simultaneously often became important tourist and entertainment destinations. The cleaner and safer image of streets and other public spaces in the city soon became an important tool for city marketing in a growing international urban competition for global capital. Later in the 1990s, the Giuliani administration re-enforced and even amplified these policies through its notorious law and order, zero-tolerance campaigns: intense policing, safety and quality of life became core issues of street politics heightening the exclusive character and the fact that streets were for some and not for others.

3.4 CONCLUSIONS OF THE CASE I

Since the launch of *PlaNYC* in April 2007 until the end of Bloomberg's Mayoralty in December 2013, the streets of New York have changed immensely: a network of bicycle lanes as well as new public spaces and pedestrian areas appeared particularly in Lower Manhattan and North-Western Brooklyn, but also slowly stretching beyond these precious and prominent business areas. *PlaNYC's* and the *Sustainable Streets Plan's* vision was clear: streets were to be treated as public spaces rather than utilitarian corridors, cycling and walking should be promoted as viable modes of transport through the reorganization of street space and the planning at DOT should turn away from its old habit to just think in transportation and traffic flow parameters towards an innovative and fast-working agency with a transforming impact on urban space.

When Mayor Giuliani left office in 2001, New York's streets and other public spaces had been transformed by his law and order policies from spaces associated with crime, decay and homelessness to clean spaces of control and consumption, as was laid out in Ch. 2.3.3. On the one hand based on these recent historical developments that had already started to shift the focus onto the spatial quality of streets, on the other hand following his own economic development imperative, Mayor Michael Bloomberg and the newly found Office for Long-Term Planning and

Sustainability assigned the city's streets in *PlaNYC* to become pleasurable and recreational public spaces and therefore for the first time in years addressed the city's transportation and congestion problems under the buzzword of sustainability. Thus, the street agenda was a politically promoted, top-down initiative that had high political priority and support from the Mayor from the beginning. In Section 3.1.2, I have explained that both *PlaNYC* and the *Sustainable Streets Plan* were part of Bloomberg's economic growth agenda, which he had already proclaimed years before either of the plans was published and that built upon the physical restructuring of the city to sell and brand it as a luxury consumer good to certain business elites. Thus, streets were deemed to represent the public space imaginaries of the urban business elites. Moreover, the sustainability agenda was not so much developed out of environmental, social, or economic ideologies, but was rather a product of the pursuit of government efficiency both in regard to planning and implementation: to trace Bloomberg's success as Mayor and to justify his administration's initiatives to the public, the sustainability agenda was tightly linked to the prevalent understanding that the people in power get done what is best for the city and therefore to the implementation of projects. *PlaNYC's* draft alone would not be enough to mark its success, but its visible implementation within the limits of Bloomberg's second term in office was an obligatory performance.

Notwithstanding, the ambitious political agenda of urban and economic renewal could not be effectively pursued without major organizational restructuring of urban governance and the city's administration. Under the command of Deputy Mayor Dan Doctoroff, Bloomberg early on in his mayoralty had joined the departments for economic development and urban planning under one joint authority (see Ch. 3.1.2). In regard to streets, Chapter 3.2.1 showed that the launch of *PlaNYC* came along with the appointment of a new Transportation Commissioner: Janet Sadik-Khan, a transportation expert who was long-experienced in policy work, was to lead the agency towards the new agenda and in the following years became the face of the transformation of New York's street. When she took office in spring 2007, she hired a few new people into key-positions who had been working in the large fields of consulting and advocacy for sustainable transportation and established a new sub-department called *Office for*

Sustainability and Planning that merged the tasks for bicycle, pedestrian and public space planning. While the goals of the agency were clear, as they had been laid out in *PlaNYC*, Janet Sadik-Khan's prime tasks were to unify her staff behind the new agenda and to have them figure out how to get to these goals. To convince her employees of the new transportation and street agenda, she took some of them on a trip to Copenhagen to experience successful bicycle and pedestrian planning together with the leading planner Jan Gehl. She imported best-practices from other cities and she had her agency run a strategic planning process. Ultimately, this led to the launch of the *Sustainable Streets Plan*, and unified the agency, fostered innovation and found ways how to achieve the goals laid out in *PlaNYC*. Her leadership and staffing decisions, her policy ideas that stemmed from years of experience in working in this realm, as well as her private-sector inspired approach to governance were quintessential to anchor the new vision in the agency. Hence, she followed Bloomberg particularly in his outcome-oriented, private-sector inspired approach to governance.

Simultaneously, a significant professionalization of the streets and bicycling advocacy under the leadership and funding of entrepreneur Marc Gorton generated an even larger public for these issues (see Ch. 3.2.2). Gorton, who had privately become interested in transportation and street issues a couple of years earlier, funded an advocacy campaign dedicated to street design and quality-of-space with particular consideration of walking and cycling as modes of transportation. The *New York City Street Renaissance Campaign* pooled different existing advocacy groups in the city and professionalized their actions and public-relations through an exhibition, two weblogs called *streetsblog* and *streetfilms* that were dedicated to street planning issues and news which fostered not only the dialogue within the community but also between advocates and the Janet-Sadik-Khan-led DOT, who had already hired people from their midst.

However, Janette Sadik- Khan did not miraculously turn the agency's paradigm, but took over the department as it had already started to move towards new overarching political goals and also made efficient use of ideas that had already been developed: the political stake of cycling in the context of larger urban development projects had been forwarded within the *Downtown Brooklyn Plan*

between 2003 and 2006, when Bloomberg was still favoring car-oriented traffic policies (see Ch. 3.3.1). Also the first *Public Plaza* was opened in that larger context already in March 2006 and projects such as the *Green Light for Midtown* idea had been internally around for years yet were lacking strategic political support (see Ch. 3.3.2). When the preparations for the draft of *PlaNYC* started, the DOT had started to build up its capacities for this shift in policy both in regard to funding as well as staff and was already receiving extended resources. When *PlaNYC* was published and Janet Sadik-Khan became Transportation Commissioner, these initiatives were systematized to guarantee a quick implementation of projects. Therefore, the DOT used its very own power over large amounts of public street land under its control. Many of the initiatives do not require the DOT to coordinate a formal and participative planning process but rather just depends on its own decision. Both, the *Bicycle* and the Public Plaza Program rely on temporary materials, a trying-it-out approach and framing, and the opportunity of upgrading and enhancements over time not only to achieve a quick implementation, but also to generate acceptance among local residents and business owners and thereby to avoid political conflict. Indeed, the quantity of implemented projects itself attributes the DOT some success: not only did it achieve the *200-miles-in-three-years* goal, but ever since has continuously created and expanded a coherent bicycling network that connects central areas but also stretches to neighborhoods further off the center and that previously did not exist in any comparable way. Also, *Public Plazas* have quickly been installed all over the city. Both initiatives concentrate in the *Central Business Districts* of Manhattan and Brooklyn, but have been slowly spreading to other areas in recent years. With these landmarks set, the DOT majorly concentrates on enhancement: on-street bike-lanes are being up-graded for even better cycling conditions, and many plazas have entered the process of capital reconstruction which includes a longer process of communication, participation, budgeting and so forth as well as a more careful approach to questions of design and which would fix the reorganization of street-space in a more permanent materiality. Hence, political negotiation about space is still on-going, while the new spatial reality that is being discussed is already set. The DOT found a way to circumvent and delay necessary planning processes and by deploying innovative and efficient planning strategies became a highly efficient

department in implementing Bloomberg's sustainability agenda by producing valuable new street images.

Indeed, the image of streets, their appearance and built environment at central city-locations seems to be of particular importance in this case. The top priority of Bloomberg and the DOT was to create new street-images rather than a sustainable transportation system. As the core mission was to treat streets as public spaces and to reorganize street space, the development of transport parameters of walking and cycling remained secondary.

While cycling rates increased, its overall share within the transportation system remained marginal in the first years and so did DOT's initiatives for bicycle parking or the tighter connection of bicycling and public transport, which have remained important fields of action. Moreover, the concentration of both bicycle lanes and *Public Plazas* in relatively affluent and white neighborhoods and in the prominent economic and touristic centers has reinforced spatial patterns that focus on the central business districts of the city while leaving out or at least postponing measures in other areas. Thereby, walking and cycling are promoted through their commercial and recreational, rather than transport characteristics; this furthermore has evoked the idea that street redevelopments are connected to gentrification and once again highlights the economic impetus of Bloomberg's agenda.

However, for the first time in decades the reorganization of on-street transportation and the general and comprehensive idea of reducing car-traffic and promote alternative transportation instead have played a role in New York's street and transportation politics and it is to future governments to further adjust and enhance the policies started by the Bloomberg administration.

In the city, it had remained questionable if the temporary transformations of street space would outlast Bloomberg's mayoralty as they were not only quickly implemented, but could potentially also be easily removed. His democrat successor Bill de Blasio had remained vague and ambiguous about these issues during his electoral campaign (Flegenheimer, 2/12/2013). Yet, DOT employees and advocates in interviews in early 2014 were relieved as the new Mayor had taken up on their proposal for a *Vision Zero* and both the bicycle and the *Public Plaza*

Program are in effect until today, continuing and enhancing the work that was started under Mayor Bloomberg, further transforming streets, walking and cycling in New York City. Bloomberg himself however, took his governance approach back to the private sector. When he left office in January 2014, his urban development and street mission did continue. In December 2013, he had founded the international consulting firm *Bloomberg Associates* that aimed to advise city governments across the globe on how to improve the built environment and quality-of-life in their cities. Janet Sadik-Khan as well as her fellow *Commissioner for City Planning* Amanda Burden both became principals within Bloomberg's team and also Andy Wiley-Schwartz took a position in the transportation division to advise communities on strategic transport planning and the rethinking of boulevards and main streets. Hence, Bloomberg's Mayoral legacy and business model was to be expanded to the "rest of the world" (Barbaro, 12/14/2013).[33]

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[33] For more information, see https://www.bloombergassociates.org/; accessed 03/09/2017.

4   CASE STUDY II: BERLIN

The depiction of the case study in New York has shown that the transformation of streets had very high political priority and unfolded a visible spatial impact within the short and clearly limited time frame between the launch of *PlaNYC* in 2006 and the end of Bloomberg's Mayoralty in 2013. Thus, both the prevalent narrative of this process and the projects built in street space were relatively easy to find. To the contrary, at the beginning of my research in Berlin in 2012, the city was mainly characterized by an absence of either prominent new street spaces or public political attention that would have fostered such a transformation. Yet, the year before - in 2011- a new *Urban Development Plan Traffic (UDP Traffic)* had been published that not only promoted sustainable transportation politics and walking and cycling, but also the redesign of streets into livable public spaces. Hence, when I started researching the case in 2012, it was rather the search for the absent that guided me: for the Berlin case, the question was not so much how the transformation of street space in favor of cyclists and pedestrians was possible, but rather why there was *not* a visible transformation of streets in the city.

I took the *UDP Traffic* from 2011 as the starting point for my research which manifested the latest agenda for transport and street development in Berlin and furthermore localized the planning responsibility in the Transport Division of the *Senate Department for Urban Development and the Environment*.[34] The plan had been passed within the Mayoralty of Klaus Wowereit from the Social Democratic Party (SPD), who was Berlin's Mayor from 2002 until 2014, and who had led a center-left coalition of SPD and the Party of Democratic Socialism (PDS) (since 2007: THE LEFT) from January 2002 until September 2011.

Quickly, it became clear that first, the *UDP Traffic* had a predecessor that had been published in 2003 and second, both are consecutive plans that have resulted

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[34] When this work was being finished, the *Senate Department for the Environment, Transport, and Climate Protection* had announced the development of a follow-up called *UDP Traffic 2030* for 2017. See http://www.stadtentwicklung.berlin.de/verkehr/politik_planung/step_verkehr/index.shtml; Website available in German only; accessed 02/22/2017. Furthermore, the *Senate Department for Urban Development and the Environment* no longer existed as it was split up into the *Senate Department for Urban Development and Housing* and the *Senate Department for the Environment, Transport, and Climate Protection* after the local election in autumn 2016.

from a long communicative planning procedure that had already been started in the mid-1990s and that assumedly had path-dependencies that went back to the 1980s. Furthermore, as the plan was still valid when I started my research in 2012, it had been approved by the new government coalition that was formed in late 2011 and that consisted of a great coalition of SPD and Christian Democratic Union (CDU). Despite this political continuity, implementation of the plan into street space has remained a problem in many ways.

Along these lines, the *UDP Traffic* is a temporal manifestation of a continuous process of rethinking transport planning that was handled in the Senate Administration under shifting political conditions and with a multitude of other processes and actors involved.

This chapter does not aim to develop a comprehensive and coherent narrative of the rethinking of transport and mobility in Berlin. Rather, while being aware of and frequently referring to the multiple connections both to the past and to the future, I start from the *UDP Traffic 2011* and the processes attached to the plan's production to illuminate its goals as well as the role that street space plays within the plan and Berlin politics at this specific point in time. Moreover, I will trace processes and problems of implementation that have resulted from it. Ultimately, while I conducted my research, transportation and street politics in Berlin have taken up an unexpected dynamic particularly in the realms of bicycle and pedestrian planning as well as in the re-making of quality-of-place on streets. Thus, I will take three examples of this new political and spatial dynamic that have been still on-going as the dissertation was being finished and that have set out to change both street politics and space in Berlin.

4.1 STRATEGY, CONTINUITY, BALANCE - AN ADMINISTRATIVE TAKE ON STREETS

The *Urban Development Plan Traffic* (*UDP Traffic*) was published by the *Senate Department for Urban Development and the Environment* in March 2011 as one of six strategic Urban Development Plans for the City of Berlin. [35] As a follow-up of the

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[35] The other five Urban Development Plans for Berlin are the UDP Industry, UDP Climate, UDP Supply and Disposal, UDP Housing and the UDP Urban Centers; see
http://www.stadtentwicklung.berlin.de/planen/stadtentwicklungsplanung/, Website available in German only, accessed 02/23/2017.

previous UDP Traffic that was launched in 2003, it has been developed in the traffic and transport division with the involvement of several political and societal stakeholders in the course of a consultative planning procedure. A selection of academics from urban and transport planning brought together in the *Academic Board* advised the administration with the latest state of academic knowledge on urban transportation and supervised the methodological and technical standards deployed in the plan. Moreover, a selection of stakeholders from different societal associations, political groups, and other administrative departments got together at a so called *Round Table* to reflect upon and represent different political interests that exist within the realm of transportation planning and to establish a dialogue between these competing interests (Senatsverwaltung für Stadtentwicklung 2011b, pp. I–II).

On the basis of that dialogue, the *UDP Traffic* is meant to be the *Course Book for Traffic Politics* and is addressed to all actors within the field of transportation to depict prevalent imaginaries about the traffic of the future and how these can be realized. While the plan itself being a non-binding document, it is supposed to provide an overarching frame and orientation for sub-ordinated planning procedures and plans that are to be developed within the administration. The *UDP Traffic* should make sure that the sectoral plans build upon the same presumptions and are purposefully intertwined to achieve the coordinated goals and hence is a strategic and communicative planning tool that aims for both an integrated approach to mobility planning and to the planning process as such (Senatsverwaltung für Stadtentwicklung 2011b, p. IV).

4.1.1 STREETS FOR INTEGRATED MOBILITY AND A LIVABLE METROPOLE

The *UDP's* overarching goal is the long-term optimization of the interaction of all modes of the transportation system which includes public transport, motorized traffic, commercial and freight transport as well as bicycle and foot traffic. At the same time it aims for a significant reduction of motor traffic in Berlin and to ensure mobility, improve traffic flow and simultaneously restrict traffic's negative impact (Senatsverwaltung für Stadtentwicklung 2011b, p. I). In the words of Horst

Wohlfarth von Alm[36], street and transport planner at the *Senate Department for Urban Development and the Environment*, the "[...] goal is not to prevent car-traffic in the city. [...] It is about the urbanization of traffic and to look for ways to make car-traffic more compatible for the city" (Wohlfarth von Alm, SenStadtUm, Interview on 7/17/2013, #00:50.16).

Based on this approach, the *UDP Traffic's* general principle and strategies cover a broad range of issues. As a core piece of the plan the vision *Berlin 2040,* which had been developed to show how transport and mobility will fit into the city's future everyday life, describes Berlin's future mobility system within eight separate categories: in 2040, mobility will be

(1) available for everyone without fixation on one particular means of transportation, which will have led particularly in the inner city to a decrease in driving and an increase of bicycle and foot traffic as well as a heightened use of public transport;

(2) as a livable and attractive metropolis with a polycentric structure and short distances, Berlin will be considered one of the most walkable metropolises in Europe;

(3) the inner city will be an attractive and admired living and working place for numerous people, where streets and squares form an attractive network of urban spaces, main streets that had formerly been dominated by cars will have been redesigned into multi-use boulevards, the only car-traffic that occurs in the inner city is that which is necessary for its performance and cannot be processed otherwise. The attractive setting will have a high quality of life that benefits retail and tourism

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[36] Horst Wohlfarth von Alm is an administrative official at the Senate Department for Urban Development and the Environment (since 2016: Senate Department for the Environment, Transport and Climate Protection) who is responsible for street planning, in particular pedestrian and bicycle planning. See http://www.berlin.de/senuvk/verkehr/politik_planung/rad/de/kontakt.shtml as well as http://www.berlin.de/senuvk/verkehr/politik_planung/fussgaenger/de/kontakt.shtml; last accessed 08/30/2017.

(4)   commercial and freight transport will be efficient, effective, and environmentally friendly and it will be strengthened in its function, yet its negative impacts will be reduced;

(5)   all means of public and private transportation will be clean, quiet, and post fossil which will have turned Berlin into the capital of 'green mobility' and an environmentally friendly traffic management ensures submarginal air and noise emissions along main streets;

(6)   new innovations such as alternative fuels and engines, but also innovative planning, tolls and financing systems will have increased mobility and strengthened the local economy

(7)   the formerly divided city will be situated in a well-connected metropolitan region and

(8)   will be an internationally well accessible destination (Senatsverwaltung für Stadtentwicklung 2011b, p. 35ff.).

Based on the overall vision, the *UPD Traffic* outlines seven partial strategies that together form the plan's strategic approach and define measures to transform the city's transportation and street system. Those strategies are (1) the promotion of environmentally friendly transportation modes, (2) the assistance of commercial transport; (3) the improvement of the quality of city, environment and life; (4) the development of an effective mobility and traffic management; (5) measures that especially benefit the inner city and (6) the outer city; and (7) improve the accessibility of Berlin from the rest of Germany and the adjacent European states. That said, walking and cycling as transport modes and streets as a public space indeed play a crucial role for the plan and its vision, particularly within the strategies (1), (3), and (5).

According to the plan, in the years prior to the publication of the *UDP Traffic*, streets in the inner city were characterized by specific developments that have shaped the agenda of the plan: generally speaking, traffic in the inner city is dominated by the environmentally friendly means of transportation - namely public transport, bicycle and foot traffic – that in 2008 represented 68% of the

total amount of traffic (Senatsverwaltung für Stadtentwicklung und Umwelt 2014a, p. 15). After the first *UDP* had been published in 2003, motorized traffic mainly in the inner city had been decreasing, while traffic between the inner and the outer city particular on radial main streets had slightly increased. Further, the growth in the use of non-motorized transport exceeded expectations particularly in regard to bicycling: overall the share of bicycling rose from 10% to 13% between 1998 and 2008 and in some inner city districts it almost doubled within this time period (ibd., p. 15; 41). Hence, bicycle infrastructure capacities are partially exhausted: Bike-and-Ride facilities that should improve the possibilities of combining cycling and public transport as well as bicycle parking at transport stations and at certain destinations highly frequented by cyclists are often over-capacity, bicycle paths are often overloaded, while the potential of bicycling especially on short trips is not exhausted. Also, the share of foot traffic has increased - although to a lesser degree - and public transport remained more or less stable. The here indicated shift of the modal split in the inner city has heightened the competition for space between motorized traffic, public transport, foot and bicycle traffic as well as other urban uses which therefore remains an important field of action to increase the quality of life and to guarantee for further progress in regard to traffic safety (Senatsverwaltung für Stadtentwicklung 2011b, p. 15ff.).

Based on these developments, the *UDP Traffic* aims to further foster the commenced modal shift, in particular bicycling. Therefore, it considers distributing larger shares of public (street) space to these modes and to expand the infrastructure for the entire 'System Bicycle' (paths, signage, parking, service). Also pedestrian traffic should be enhanced through the creation of safe, comfortable and attractive public spaces which would further benefit other uses such as residential quality and retail. Furthermore, safety for users of non-motorized transport who face a particularly high risk of casualties and fatalities needs to be significantly improved (Senatsverwaltung für Stadtentwicklung 2011b, p. 58ff.). Additionally, urban quality of life and the environment should be improved along highly polluted street segments in the inner city as well as on heavy trafficked radial through roads and in some town centers that are particularly impacted by emissions, noise and parked cars which lowers the attractiveness of public space. Particularly, the re-organization of parking space is expected to contribute to an

increase of the quality of public space, because it creates spatial capacities that can be used to attribute space to the environmentally friendly modes of transport as well as to increase the quality and livability of streets and squares (ibd., p. 75 ff.). Thus, the need for action on streets in the inner city is clearly defined in the *UDP*: due to already decreasing car-traffic volumes, yet still profound negative impacts such as pollution and safety-risks, streets and the inner city transportation system can and should be re-organized according to the needs of road users other than the car. On the one hand, this should be achieved through the stronger integration of the supply of environmentally friendly means of transportation with one another; on the other hand the *UDP* considers the reorganization of traffic through the re-distribution of public street space.

Hence, in general the plan focuses on the transportation system as a whole with all its different modes, flows, connections and interdependencies rather than prioritizing a specific mode (e.g. walking and cycling), or space (e.g. the street). Notwithstanding, while not being targeted as a core strategy of the plan, the organization and quality of street space and the conditions for walking and cycling are part of the long-term urban vision and therewith of the transformations that are necessary to make this vision a reality. Streets in this case are politicized primarily as an infrastructural space that accommodates and channels traffic which correlates with the quality of life in the city.

4.1.2   IN TRANSFORMATION: TOWARDS INTEGRATED TRANSPORT PLANNING

The story of Berlin's current transportation plans and therewith the rethinking of mobility and streets started with the fall of the Berlin Wall in 1989, when for the first time in decades city-wide planning became both possible and necessary. According to the interviewees from the *Senate Department for Urban Development and the Environment*, mainly three pivotal changes in traffic itself as well as in the work of the administration since then have pushed towards an integrated approach to transport planning: first, the negative impacts of post-reunification motorization on the environmental quality and quality-of-life; second, the financial crisis that hit the city by the end of the 1990s and dramatically cut public funds; third, the restructuring of the administration that joined the departments for city planning and transport and thereby fostered their

professional cooperation rather than competition. Thus, in the following segment, I will shortly examine these events as important pre-conditions which have shaped the current developments.

The fall of the Berlin Wall in 1989 yielded spatial-structural incoherence and deficits between and within the two formerly divided city parts that fundamentally had damaged the urban fabric. Across the city's center the remains of the wall and its death-strip as well as the socialist city planning in the East had created enormous areas of vacant land at prime destinations. Hence, urban restructuring and coalescing of both the formerly divided parts and the different architectural layers was a core task of the municipality. Consequentially, in the first years after reunification, urban reconstruction in the city boomed, further accelerated by the decision to reestablish Berlin as the German capital and by prestigious flagship projects that were developed through city planning competitions and private investment, such as the area around *Potsdamer Platz*. These processes were led by the former West-Berlin Senate that already before the reunification had started to focus on the pre-modern historic city as their guiding principle for reconstruction (see Bodenschatz 2010). The ideological turn-away from car-oriented planning of the mid-20th century had been manifested for the first time in the land-use plan (FNP) from 1984 that reduced street and highway infrastructure expansion in the city and rather favored the promotion of public transport and that shifted the concentration of new housing development from the periphery to the city center (Senatsverwaltung für Stadtentwicklung, Abt. I 2002, p. 39ff.). Furthermore, the concept of *Critical Reconstruction* that had already inspired the International Building Exhibition in 1987 was to become the guiding principle for the architectural reconstruction of the reunited Berlin. In regard to building structure, it fundamentally built upon the principle of the European City, meaning that building heights were limited to 22m, arranged as mixed-use urban structures with short ways in multiple centers across the city. This approach was further consolidated in the *Planwerk Innenstadt* (engl. Inner City Plan), published in 1996, that re-concentrated urban development in the inner city after it became clear that the growth expectations of the early years after reunification would not be fulfilled. Instead, the city had to deal with increasing vacancy rates, a lack of international

interest and investment, a real estate bubble caused by failed speculation in newly built office-space, and a declining economy (Bodenschatz 2010; Stimmann 2009).

Thus, by the end of the 1990s, the city was hit by a severe financial crisis that would deeply impact its development for the following years and that also fostered the turn in transportation politics. The fall of the Berlin Wall had not only reunited a formerly physically divided city and therewith posed new challenges to urban development and planning, but ultimately also opened the city to the processes of globalization, de-industrialization and post-fordist societal restructuring which in many cities and regions of the Western world had already been taking place since the 1970s. Consequentially, entire Berlin went through a substantial and accelerated social and economic change that outstandingly impacted the labor and housing markets. Both parts of the city until 1990 had still depended on industrial production as their economic basis which in the West was fostered by state subsidies for the island city and in the East was part of the socialist economy. Hence, the integration of the East into the logics of a capitalist market economy meant a profound loss of jobs in production and administration; the cut in federal subsidies for the Western part created a gap in the municipal budget; and de-industrialization due to global economic dynamics meant a transformation of economic production and the corresponding job market towards the post-industrial economy. This included increasing unemployment of former production workers and an increasing number of low-wage jobs in precarious working environments. Unemployment in Berlin rose from 10% in 1991 to 19% in 2003, while the number of welfare recipients in relation to the total population doubled . Altogether, these developments resulted in an increasing social polarization in the city and a severe financial crisis of the municipality that led to drastic cuts of public money and staffing in public institutions (Häussermann, Kapphan 2000, p. 91ff.; Krätke 2004).

In that context, transport planning also went through different phases and trends during the 1990s. After the fall of the Berlin Wall in 1989, the city faced the challenges and opportunities of a much needed city-wide development strategy that would reconnect the Eastern and Western parts in the city as well as the city to its hinterlands. Despite the relative unpredictability of the events that led to the reunification of the city, about one month after the fall of the wall a task force of

the administrations of East and West was formed that had to implement short-term measures which would reconnect the city and fill infrastructural gaps for both street networks and public transport; furthermore, the task force had to develop mid- and long-term strategies for the city's and the metropolitan region's overall transport development. Already in 1991, in the context of the development of Berlin as the German capital, the House of Representatives politically decided to move towards an integrated perspective of navigating the city's transport development which was supposed to balance different traffic modes and mobility demands (Kalender 2012; Senatsverwaltung für Verkehr und Betriebe 1995).

Nevertheless, in his analysis of car-oriented politics in post-reunification Berlin Wolf (1994) has argued that mainstream transportation politics reverted to already somewhat anachronistic patterns of car-oriented planning and infrastructure-expansion to cope with the expected urban growth. After reunification, the East experienced a quick and massive motorization to catch up to the standards of the West. Thus, by 1994 there were half a million more cars on Berlin's streets than 1990 and this car-friendly development was further promoted by transportation politics that fostered street expansions and construction, a political public climate that encouraged motorized individual transport, as well as political strategies that disadvantaged public transport (Wolf 1994, pp. 124–126ff). Consequentially, while in 1989 the modal split between public transport and motorized traffic was nearly even, by 1993 individual car traffic clearly dominated public transport 62:38% (Wolf 1994, p. 137).

This motorization had profound impacts on street space, traffic safety and livability: the need for more parking was to be met by the expansion of parking space onto the sidewalk, park-and-ride areas were expanded for commuters and parking garages installed in the inner city; aggressive driving, violence, speeding, and illegal car-races were widespread and led to rising numbers of casualties and fatalities that particularly affected cyclists, pedestrians, children and the elderly; in general, a hostile political climate against cyclists and pedestrians hindered an integrated transportation planning and denied their claims for more, better, and safer space to cycle and walk; increasing noise and air pollution particularly along main streets jeopardized quality of life and health in the city. Thus, overall the quality of life and space in the city dropped and the Senate Administration got

126

increasingly alert that transportation development in the city had to change (Wolf 1994, pp. 155–189).

Driven by these developments and on the backdrop of increasing financial scarcity, within the Senate Administration the conviction grew that transportation development needed a new long-term direction which would overcome expensive building of infrastructure and stop the continuous growth of car-traffic. Dr. Friedemann Kunst[37], former head of the Traffic Division in the *Senate Department for Urban Development and the Environment*, described this development in an interview in 2013 as follows:

> so that we already since the mid-90s had tried to establish a strategic politics and said after reunification you have to, well after reunification the focus was clearly on infrastructure expansion […] but soon it became apparent that you can't achieve everything with infrastructure, rather sometimes you even push counterproductive things […] and so already in the mid-1990s we said that we essentially must have a rather comprehensive strategy and that failed simply because the structure of the administrative divisions, building and traffic, and environment all were separated and in competition to one another […], but also because the whole transportation scene in the city was not on speaking terms with each other, so there were many associations that were very egoistic, entirely fixated on their own means of transport and so worked against each another […] so that we just couldn't get ahead (Kunst, SenStadtUm, Interview on 8/21/2013, #00:17.06).

The first trials of developing a comprehensive transport strategy are documented in a brochure called *Materials for the Urban Development Plan Traffic* that was published by the *Senate Department for Transport and Businesses* in 1995, based on the newly drafted, city-wide land use plan.[38] Starting from the prevalent assumptions that Berlin's population until 2010 will grow about 300.000 inhabitants, the plan outlined goals and strategies for an integrated approach to transport planning. Therein, basic goals and strategies of the current UDP Traffic can already be found: the reduction of car-travel in the city as well as the promotion of public transport, walking, and cycling played crucial roles. Overall, the plan aims to take a balanced approach to the transport-system of the

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[37] Friedemann Kunst was the head of the traffic division in the Senate Department for Urban Development and the Environment until he retired in 2013. He had been a long-standing member of the administration who since the late 1980s had been working in different positions within the Senate Department.

[38] The land-use plan 1994 suggests an intense development of the inner city and a promotion of the city's poly-centric structure through the establishment of multiple centers in different parts of the city.

metropolitan region that guarantees long-term functionality, reduced environmental impacts, improved urban quality, and mobility for all. Further, it aims for an integrated planning approach of both city and transport planning, for reducing car-traffic and suburbanization through poly-centric and mixed-use city planning, as well as for a shift in the modal split towards a bigger share of public transport, walking, and cycling (Senatsverwaltung für Verkehr und Betriebe 1995).

Despite the agenda that was set within the traffic administration and which is depicted in the document, a common political agenda could not be derived from that as both the political landscape within the administration as well as within the broader transportation community remained quarreled and competitive for ideologies, resources, and space as Horst Wohlfarth von Alm also pointed out:

> Why it [the UDP Traffic, AL] was not finalized before 2003 also was related to the structure of the administration. We indeed had 2, even 3 separate departments that were led by different parties so that it ultimately did not lead to a result. So, there was the restart in 2000, when transport and city planning were joint in one department - and ultimately with the concrete task to develop an Urban Development Plan Traffic (Wohlfarth von Alm, SenStadtUm, Interview on 7/17/2013, #00:08.41).

In December 1999, a reform in the structure of the Berlin administration joined the formerly separated *Department of Urban Development, Environmental Protection and Technology* and the *Department of Building, Housing and Traffic* into the *Department for Urban Development*. This structural shift in the Senate Administration ultimately marked the starting point of contemporary transport politics in that it unified the interests of urban and transport development and opened up the opportunity to jointly develop a comprehensive urban transport development strategy. However, what was missing was the collective political support from the transportation advocacy community. Thus, facing a quarreled scene of associations, interest groups and party-political actors, the administration set out to strengthen the dialogue between different political actors and stakeholders in the realm of transportation politics and to bring them closer to one another to achieve the needed shift in transportation politics.

4.1.3 DIALOGUE, CONSENSUS, AND COMMITMENT – THE UDP TRAFFIC AND ITS PLANNING PROCESS

The processes of drafting the *UDPs Traffic* both 2003 and 2011 involved three different bodies that provided a powerful forum to unite political actors in Berlin:

the core and editing body was the task force from the *Traffic Division* of the *Senate Department*, which was supported and advised by a selection of scientists from the *Academic Board* and a selection of stakeholders from different societal associations, interest groups, and other administrative departments, that were brought together at the so called *Round Table* (*Runder Tisch*).

The administrative task force was responsible to draft and write the plan, "[...] because certainly the commitment of those who have to implement it [the plan, AL] is higher, when they have participated and contributed as much as possible" (Horn, SenStadtUm, Interview on 7/23/2013, #06:45.00) to the plan's content.[39] The task force was staffed mainly by representatives from the *Senate Department for Urban Development and the Environment*, Department A *Basic Issues of Transportation Politics and Transportation Development Planning* and from Department B which is responsible for the implementation of the strategies. The group "[...] was staffed on-topic. Hence, from the department there were different people that have to deal with different topics and represent these within the taskforce" (Steinmeyer, SenStadtUm, Interview on 8/21/2013, #00:05.10). These topics included traffic themes such as long-distance traffic, international networks, and new mobility, Federal Transport Infrastructure Planning, planning issues such as implementation and the development of binding follow-up plans as well as spatial issues such as design, street layouts and others:

> That means, I would describe the working method in a way that the individuals brought in the know-how that they had to represent within the group. So we were not just staffed subject-specific, but also – about half/half – those who were not part of the process for the first UDP and those who already had been part of the process for the first UDP Traffic. So, we had on the one hand external perspectives [...] and on the other hand an internal perspective with the experience from the first Urban Development Plan (Steinmeyer, SenStadtUm, Interview on 8/21/2013, #00:07.18).

Simultaneously to the work of the administrative taskforce, regular meetings with the Round Table took place to discuss the ideas and work in progress and to

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[39] Burkhard Horn was a traffic planner in the traffic division and the head of the project "Urban Development Plan Traffic". From 2013 until 2017, he was the head of the traffic division in the Senate Department for Urban Development and the Environment, since 2016 Senate Department for the Environment, Transport and Climate Protection (see https://www.berlin.de/sen/uvk/ueber-uns/organisation/; last accessed 08/30/2017). Since October 2017 he is working as a freelance consultant on different issues of urban transport and mobility planning (see http://www.burkhardhorn.de/; last accessed 09/28/2018).

receive feedback and further input that could be worked into the plan. At the table gathered representatives of different political colors, transport modes, economic, societal and environmental interests: the political parties from the House of Representatives, the building and constructions departments of Berlin's districts, big industrial associations (*IHK, Fuhrgewerbeinnung*)[40], representatives for public transport (*BVG, DB*)[41], societal groups such as the Automobile Association (*ADAC*)[42], cycling association (*ADFC*)[43], the local Agenda 21, environmental associations, and representatives for special interests such as city planning or children and parents (Senatsverwaltung für Stadtentwicklung 2011b, p. 3). The Round Table was a consultative council "with the goal to bring all stakeholders, as good as possible and as far as the council remains capable to work, who are actors within transportation politics in Berlin together at one table: from politics, from the associations, from the districts, from the administration, moderated externally, who then have very intensely supported the whole process" (Horn, SenStadtUm, Interview on 7/23/2013, #00:08.31). Yet, the Round Table was not a decision-making body, but it provided a societal sound space where "[…] you give something into it and see how it sounds; and if there is dissonance you have to re-adjust but you have to accept a certain degree of polyphony" (Runge, Process Management, Interview on 8/19/2013, #00:27.30). That said, the administration never "[…] had to do what the Round Table wanted" and the Round Table did not have to appreciate every decision the administration took, even more so "[…] because the Round Table still was at odds with each other" (Runge, Process Management, Interview on 8/19/2013, #00:28.02). Instead, the representatives at the Round Table were supposed to reveal existing, yet often diverging point of views to the administrative task force by claiming the focusing and integration of relevant topics and articulation of specific interests. Therefore, the Round Table primarily was a tool of dialogue and discussion, to reflect on the multiple

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[40] The *Industrie und Handelskammer (IHK)* represents the interest of the industry, entrepreneurs and trade and the Fuhrgewerbeinnung represents the interest of fright, autobus, and ambulance traffic and companies.
[41] The *Berliner Verkehrsbetriebe (BVG)* is the operator of the Berlin subway system, and the *Deutsche Bahn (DB)* is the German national railway system that also operates the S-Bahn in Berlin.
[42] The *Allgemeiner Deutscher Automobil-Club (ADAC)* is the biggest association in Germany and even Europe that represents the interests of car-drivers.
[43] The *Allgemeiner Deutscher Fahrrad Club (ADFC)* is the German national cycling associations that represents the interests of cyclists.

perspectives and political interests related to transportation planning and streets that might cause opposition or difficulties in the planning process, and to solicit understanding for the administration's ideas and actions (see Wohlfarth von Alm, SenStadtUm, Interview on 7/17/2013, #00:15.46).

Moreover, the second consultative council, the *Academic Board* had the task to feed the discussion with the latest scientific knowledge in regard to urban mobility and sustainable transport and to support and reason the decisions of the administration. It was staffed with a broad selection of German academics active in the field of transport research, who read and commented on drafts of the text or answered questions the administration had in regard to the scientific correctness of their ideas. While the interviewees from the Senate Department pointed out that the Academic Board in the process for the first *UDP Traffic 2003* was a crucial tool of advice and support for the administration, its role in the second process apparently was fairly diminished, to the point that one interviewee from the administration even had forgotten that this council existed at all. As a very "consensual group", they often admitted to the ideas of the administration as it "did outstanding work" (Stein, Academic Board, Interview on 8/19/2013, #00:16.46).[44] Yet, the Academic Board took a very important administrative-political role as they backed the strategy of the administrative task force:

> I have asked them once, too, because I partially had the impression that we were not so important, because they already knew everything; but I was told that it is internally very important, to say, the Academic Board says what we always said, too, in simplified terms. So one could hide behind the Academic Board, ehm, so many statements would not have been possible (Stein, Academic Board, Interview on 8/19/2013, #00:41.05).

The procedure of drafting the plan can be roughly described as follows: the administrative task force developed the plan's content in internal discussions and meetings and regularly discussed their ideas in meetings with the Round Table and the Academic Board. For the meetings, the administrative taskforce brought their ideas in form of presentations and/ or text fragments to the Round Table and

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[44] Axel Stein is an urban planner, consultant and researcher who is focused on public transport and street planning. He was a member of the Round Table for the first UDP Traffic in 2003 to represent the Local Agenda 21 and for the second UDP Traffic was a member of the Academic Board. He now works for kcw, an urban consulting firm specialized in public transport; see https://www.kcw-online.de/team/axel-stein, last accessed 08/31/2017.

routinely presented the status-quo of their work in progress. Then, an open, externally moderated discussion of all members of the *Round Table* followed. As basic approach to these negotiations the administration "[...] honestly and openly and transparently presented everything, all data [...] to establish trust and a give-and-take, so that there emerges trust in the process and the product" (Horn, SenStadtUm, Interview on 7/23/2013, #00:08.54). The suggestions and recommendations from these discussions were then evaluated and checked within the administration and either approved or dismissed before the next steps were undertaken. "[T]his open procedure – so to say that we did not enter the poll with the finished product, but had the whole working progress accompanied – that is very open and overall led to a high degree of consent" (Wohlfarth von Alm, SenStadtUm, Interview on 7/17/2013, #00:16.40).

The process developed from top to bottom and started with a careful inventory of the status-quo of transportation development in Berlin and a monitoring of the successes and failures of the first UDP Traffic from 2003:

> So that we could deduct, why a new UPD Traffic is necessary; also, what is to be seen in continuity to the old one, which framing conditions have remained the same, which have changed, which are new. And there, we went very in-depth. Also, in parts supported clearly by the Round Table, especially on the topic of financing and so forth. Hence, what are the framework conditions within which we can act, what can we change at all, on our own, to deduct the necessity of new accents. And only afterwards came the discussion of contents that were partially deducted from these framework conditions and there we went from top to bottom in regard to specification (Horn, SenStadtUm, Interview on 7/23/2013, #00:12.12).

Thus, as a first step, the actors involved agreed upon a status-quo that was based on both previous planning as well as up-to-date data and thereby was supposed to lay out the scope of action. This status is defined by framework legislation of the European Union, traffic developments, infrastructure maintenance, mobility behavior and modal split in Berlin, financial means of the municipality, environmental pollution, impact of the former *UDP Traffic* and so forth (Senatsverwaltung für Stadtentwicklung 2011b, p. 8ff.). Afterwards, the drafting of the plan proceeded parallel to the final structure of the plan from the general principle to the concrete strategies and measures and therewith also moved in scale from the overall abstract or even visionary concept to rather detailed and concrete initiatives and sets of measures:

And so we started with the general principle, because it of course is where you can discuss matters the best detached from one's own interest […] where you can detach yourself from daily operational issues and jointly discuss: where do we want to go? Yet, it was based on solid research about the general framework and the current situation. Therefore, the discussion about the general principle was very productive and one where in the end one can say, that all from the IHK to the BUND said: 'Ok, we can support this, that's where we want to go (Horn, SenStadtUm, Interview on 7/23/2013, #00:13.32).

Yet, while the administrative task force from the beginning was relatively consensual in what they want to achieve with the plan and what should be included content-wise, discussions were led at the Round Table. However, as the Round Table was not a decision-making body, but rather a forum of dialogue, the administrative task-force did not have to convince its participants of their agenda, but rather chose a balancing approach to the plan that aimed to include a big variety of different interests: the *UDP Traffic* "has a very balancing approach […] between different interests, different problem situations and therewith different courses of action" (Steinmeyer, SenStadtUm, Interview on 8/21/2013, #00:09.48). Administrators tried to keep a fine balance between visionary and realistic approaches. While on the one hand, a detachment from everyday issues and tasks helped to develop a common future vision, nevertheless the detailed elaboration of the framing conditions suggest the foundation of the vision within achievable, realistic goals. Indeed, the administrative task force "[…] built the goals upon what we saw as realistic, what is realistically achievable? Plus a little extra, because it should also be an incentive" (Runge, Process Management, Interview on 8/19/2013, #00:08.57).

Thus, for the administration it was important to develop at least a certain degree of consensus at the Round Table that supported the transportation agenda on a conceptual scale and which would guarantee both the success of the process and later the *UDP*. The broad scope of the plan shows the integration of the multiple perspectives on traffic prevalent within the administration, but in particular those that existed at the Round Table and it furthermore ensured a long-term political commitment. The plan was passed several times by governments of different political color in the Berlin Senate reflecting its flexibility within the broader political condition of the city:

on the one hand, it was an Urban Development Plan that was passed by a red-red government, a red-red Senate. Thoroughly in continuity of the first Urban Development Plan Traffic which had been passed by a red-green Senate and now a red-black Senate has approved this Urban Development Plan Traffic without changes as basis for its transportation politics in its coalition agreement. Indeed, that speaks for a broad embedding and also acceptance in very different realms. And on the other hand it is quite funny that when you look into the daily press, that sometimes the IHK [association of the industry] demands the realization of the Urban Development Plan Traffic and other times the BUND [environmental organization] or the ADFC [cyclists' association], depending on the issue at stake (Horn, SenStadtUm, Interview on 7/23/2013, #00:09.39).[45]

The second component of why the plan is a success in the eye of the administration is the unity and understanding they achieved within the transportation scene for both the plan and the way they work:

The plan is not effective because it was passed by the Senate or because the coalition confirmed it again. It tends to have a connecting effect for all people involved; yet, it is not binding. […] The value it has indeed is the transparency, that it is clear: we weighed things, we have to consider different interests and that's what we are doing (Steinmeyer, SenStadtUm, Interview on 8/21/2013, #00:15.56).

Hence, the UDP Traffic is a product in and of itself that manifests the consensus the administration achieved within transportation politics in Berlin. Both supervising councils, the *Round Table* as well as the *Academic Board* were keys to the planning process. They helped to establish the most central agenda of the administration which aimed for dialogue, consensus, and commitment to the new direction in transportation politics. This consensus covers administrative and governmental bodies, as well as interest-driven politics and civil society. After a year-long process, the rethinking of transport and mobility from a car-centric towards a rather integrated perspective seems to have been completed - at least on a strategic level.

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[45] The political colors used in this quote designate: „red-red" designates the coalition between the Socialist Democratic Party (SPD) and the party The Left (Die Linke) that was in power from 2002 until 2011; "red-green" was the coalition between the SPD and the Green Party from 2001 to 2002; "red-black" designates the coalition between SPD and the Christian Democratic Union (CDU) that was in power from 2011 to 2016.

4.2 FROM PLAN TO STREET SPACE: PROCESSES AND CONCEPTS TO SPATIALIZE CONSENSUS

As the *Course Book for Traffic Politics*, the *UDP Traffic* is needed to define the framework of action for the administration and strategically organize the prioritization and funding of particular measures:

> Basically, I guess, every big city needs some kind of strategic, a strategic framework for its transportation politics, ehm, to use its – limited – control capabilities, strategically. To use their means of funding, to prevent fault localization and so forth (Horn, SenStadtUm, Interview on 7/23/2013, #00:02.06).

Yet, where and how these sets of measures should be implemented remains unclear:

> The UDP traffic rather is on the strategic scale, which means that measures are named, yet how and where you implement them in many realms is entirely open, especially in the realm of pedestrian- and bicycle-oriented measures, there usually are no specific measures in there, but rather processing of a strategy, implementation of sets of measures according to the strategy (Wohlfarth von Alm, SenStadtUm, Interview on 7/17/2013, #00:02.16).

In that regard, already within the process of drafting the UDP Traffic, the consensus had its limits and in the broad scope of the plan not only agreement, but also conflict was inherent. The downscaling from the overall vision to the measures that were to be implemented in space, caused increasingly conflictual debates especially at the Round Table and the particular interests of the participants became more and more important in the process after the vision *Berlin 2040* had been conceptualized:

> And then, the discussion becomes more and more concrete and then it becomes also at the Round Table more and more impacted by different interests. Then there are the relapses based on the motto 'yet I might need more road construction for my commercial traffic' and 'I do not want this infrastructure project at all, because it contradicts the basic idea of sustainable transport policies' and so forth. Yet, the disagreements were openly formulated and discussed. And we gathered the inputs and evaluated them and explained with each of these inputs why we maybe incorporated it and why we did not, so that there was a clear transparency and traceability. [...] Of course, the positions not necessarily changed, but it definitely improved the overall acceptance (Horn, SenStadtUm, Interview on 7/23/2013, #00:17.07).

The balancing approach of the administration produced at least a strategic unity among different participants and interests. Yet, in the end participants could agree on an overall idea and strategy, while the way of getting there that would also manifest itself in the implementation of measures in street space remained

widely undiscussed, undefined and hence the imaginaries and conceptualizations of this path diverse. Indeed, while interviewees from the *Round Table* also appreciated the established dialogue and consensus, as well as the overall strategic planning work of the administration, the detailing of the implementation and discussion of measures remained an open question and subverted the overall strategic consensus. The interviewee from the BUND, Martin Schlegel, who represented a number of bigger and smaller ecological interest groups at the *Round Table*, pointed out:

> There are a series of street building measures for example in the plan, about which we did not discuss. Something like that is indeed problematic. There one would have had to have working groups or whatever that would have had to confront these issues. But they wanted to have the focus off the measures, because they of course knew that this would cause most discussions (Schlegel, BUND, Interview on 8/1/2013, #00:20.26).

And also the representative of the German Automobile Association (ADAC), Jörg Becker stated that the problem of implementation remained indeed unsolved:

> The UDP Traffic, as it is now, is a step into the right direction and above all is absolutely reasonable. Yet, the question really is […] how one implements it, generalized from the outer to the inner [city] (Becker, ADAC, Interview on 8/22/2013, #00:49.57).

Thus, both state the lack of implementation-oriented discussion as a problem and thereby indicate the remaining political conflict that has to be fought out in the further process of planning the transformation of streets that was not eliminated by the achieved consensus.

4.2.1 'WE […] HAVE AN IMPLEMENTATION GAP'[46] – STRUCTURAL OBSTACLES TO IMPLEMENTATION

The administrative approach primarily aimed for the described dialogue and consensus and for a plan that integrates the different interests that exist in the transportation community. Therefore, the plan builds upon visions, strategies and sets of measures that equally cover the width of themes and interlock in their joint contribution to reach the overall goal of establishing a different urban mobility system. At the end of the description of each partial strategy as well as in a sub-chapter in the plan's attachment which is called "*Catalogue of Measures until 2025*", sets of measures are listed in the UDP Traffic that are necessary to realize its

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[46] Horn,7/23/2013, #00:17.07

formulated goals. They are categorized after spatial-structural measures, pricing policies and legal measures, organizational initiatives, measures to improve information, motivation, and participation, as well as infrastructural measures. Therein, the Senate Department names the measure itself as well as the institution responsible for it, expected costs, funding opportunities, time frame, and its position within the overall concept of the plan (Senatsverwaltung für Stadtentwicklung 2011b, p. 112ff.). Moreover, as basis for the further procedure, the Senate Administration has processed the definition and implementation of projects named in the UDP Traffic in sub-strategies and binding plans. The *Mobilitätsprogramm 2016* (engl. Mobility Program 2016) for example (Senatsverwaltung für Stadtentwicklung 2011c) details the long-term strategies of the UDP Traffic and pools those measures that are realistically implementable until 2016 and that should effectively contribute to reach the overall goal of the UDP Traffic. Among those are also the promotion of walking and cycling through updating the bicycle and pedestrian strategies as well as the re-organization of street space and the improvement of quality-of-place through the reduction of motorized travel.

Nevertheless, the process of implementation remains problematic. While the UDP Traffic itself was perceived as a success and an effective tool, the lack of implementation also within the administration was perceived as problematic. When asked for the effectiveness of the plan while facing an implementation gap, Burkhard Horn explained:

> I believe it [the UDP, AL] is [an effective tool, AL]; the problem is that we certainly have an implementation gap. So that, especially resources, partially also the structure with the strong political position of the districts which often do not do what we imagine as Senate Administration. So implementation certainly is not as compelling and logic and consequent and sustainable as it would be desirable. That certainly is the case.
>
> AL: And why is that?
>
> BH: It depends a lot on resources, of course, the state is poor. Both financially and personnel-wise, the administration is under-staffed and has a disproportionate number of old people. That applies for both the Senate and the districts. There is a lack of - sometimes there is not even an engineer in a district […] who could engage with bicycle traffic for example. So there is a bottle-neck in the implementation process and that is a problem (Horn, SenStadtUm, Interview on 7/23/2013, #00:41.17).

Furthermore, Berlin is a federal city state. This means for the administration that the Senate and district administrations are interdependent in regard to planning, funding and implementation. Particularly in regard to implementing urban planning projects the responsibility is with the district administration, while the Senate Department, according to Friedemann Kunst, Head of the Traffic Division "[...] has too little opportunities that the central administration objects once in a while and says we have a super-ordinated interest here" (Kunst, SenStadtUm, Interview on 8/21/2013, #00:15.17). Thus while the Senate Administration is responsible to draft plans and concepts for the super-ordinated road network, nevertheless the districts have to implement these projects and process the overall agenda within their administration and the district's civil society and the Senate has relatively few means to force the implementation of its agenda. Moreover, this means that the districts and their political interest have a fundamental say in the decision in which parts, measures and initiatives of the UDP Traffic are being implemented and their interests may vary widely across Berlin, depending on the political color of the local government, the demographic structure, or traffic behavior. Furthermore, the districts also have been impacted by the financial crisis of the 1990s so that personnel as well as financial means are missing and have long been spent on other relevant issues:

> [T]he districts have to implement it based on our guidelines. And these special programs are made so that we manage the funding and distribute it to the districts project-wise. [...] Otherwise, money is distributed to the districts within the general budget and they have scope for using it differently. That means they can redistribute funding that is meant for civil engineering, at least partially, to other realms and in the last years this has often caused redistribution to social work, education and so forth and a neglect of civil engineering. So, the street network is in a state of bad repair. There is a need for action and basically there are no appropriate means – despite special programs, despite different initiatives from the central administration (Wohlfarth von Alm, SenStadtUm, Interview on 7/17/2013, #00:41.21).

Hence, the political priority within the districts – and for the whole city – has been directed elsewhere in the last decades so that the transport and street agenda, while it has achieved political consensus, has lacked political relevance or even mayoral or other political support. Although traffic's negative impacts, as has been described above, caused a rethinking of transport within the Senate administration, it has remained an irrelevant or even problematic issue on a political scale:

> First, we do not have very high pressure […], traffic flow overall is too good […] and that is why this is not a topic for politicians to make themselves a name, this would rather backfire […]. And that is also why it never was a mayoral topic and why we even have problems to put the topic up-front for the head of the department. At the moment, housing is much more important (Kunst, SenStadtUm, Interview on 8/21/2013, #00:12.55).

Kunst further explained that he sometimes wished for the mayor or the Senate to be as supportive as Mayors in other cities such as London or Paris have been for transportation agendas. Yet, as the interviewees explained, the political priority in Berlin has been lying somewhere else. Culture, economic development, social affairs and lately housing – in the realm of urban development – have shaped urban development politics in Berlin. Hence, while the administrative, subject-specific turn towards integrated mobility had been achieved, the administrative scope of action in regard to implementation was fairly diminished due to the division of powers between the Senate and the districts, a lack of financial and personnel resources within the Senate and district administrations that has limited their scope of action since the late 1990s. Furthermore, major political interest to foster the agenda from Mayor Wowereit and the House of Representatives according to the interviewees was largely absent so that pressure to rebuild streets resulted neither from the traffic situation nor from a heightened interest within city politics (see e.g. Horn, SenStadtUm, Interview on 7/23/2013, #00:36.46; Kunst, SenStadtUm, Interview on 8/21/2013, #00:12.56).

4.2.2 THINKING THE STREET!? – THE CONCEPTUALIZATION OF SPACE IN THE PLANNING PROCESS

The *UDP Traffic* has been drafted around an integrated mobility concept that primarily focuses on the urbanization of traffic and the integration as well as interaction of different traffic modes and flows and thereby deploys a systematic approach to streets as a networked infrastructure. Moreover, as was described above, the implementation of projects into street space had lagged behind due to administrative and political nuisances. However, as I was looking for reasons for the absence of street transformations while conducting my empirical research, I wanted to know from the interviewees in the Senate administration, if and why the transformation of streets was a priority neither in the plan nor in the planning and implementation process. In what follows, I will analyze their prevalent conceptualizations of street space within the *Senate Department of Urban Development and the Environment* during the process of drafting the *UDP Traffic* and

139

afterwards as its implementation was to be pursued. Thereby, I will unveil how the absence of spatial transformations reflects an absence of conceptual thinking and planning work within the administration that would deal with the reorganization of street space.

The UDP Traffic has outlined a very broad thematic scope that is manifested in a set of seven equal strategies that pursue the implementation of the plan. Thereby, it suggests a certain degree of simultaneity and balance, as the interviewees suggested, meaning that generally all strategies are to be treated equally to accomplish the overall goal of the plan to transform the transportation system. However, while the simultaneity outlined in the plan is ideally pursued also in street space, it cannot be held up in the implementation process, which very much depends on prioritization, the allocation of resources to certain measures and overall political interest and agendas. On that note, implementation unfolds its own politics that "[...] very much depends on resources, on political activities, specific accents that the new senator has maybe and so forth" (Horn, SenStadtUm, Interview on 7/23/2013, #00:19.27) and that thereby prioritize strategies and measures as part of the implementation process, when the strategies get spatialized in the city's streets. However, when asked for ideas and possibilities as well as political support to create car-free street sections in the city, Horst Wohlfarth von Alm stated:

> So, I would find it difficult to create a kind of Disneyland at a certain spot in Berlin. Basically, to create a situation that is a-typical for the whole city [...] so to say 'I gonna do something entirely new here, without cars'; that is hard to imagine and it is not necessary either. So, at the fewest spots we have such a pressure that we have to say cars have to get out of there. [...] Such street spaces are not role models. Therefore, we work with this model project ,Begegnungszonen'[47] within the pedestrian strategy, where we want to enable both: to keep car-traffic, but simultaneously enhance quality of place and crossing opportunities for pedestrians (Wohlfarth von Alm, SenStadtUm, Interview on 7/17/2013, #00:47.03).

This statement mentions very important aspects of the debate in Berlin: first, it reveals the perspective onto streets being a city-wide network that should provide "typical" and equal conditions throughout the city; second, the traffic pressure is relatively low so that the idea of banning cars from certain streets has

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[47] A *Begegnungszone* is a derivative of the Shared Space concept. See Ch. 4.3.2

been perceived as artificial, unnecessary, and conflictual; consequentially, and third, while car-oriented mobility has been challenged due to environmental, financial, and other nuisances, the car as an appropriate street user is not questioned but rather has remained the determining factor for the constitution and distribution of street space. Furthermore, imaginaries of future metropolitan streets seemed to have played only a minor role even within the Senate administration. When asked for the possibilities to redesign streets, the head of the Department Dr. Friedemann Kunst explained that this was not part of the administration's strategic approach in the UDP Traffic to redesign streets to become a livable and attractive urban space:

> That is not our approach. Yes, so we say that they [streets, in particular radial streets AL] have an important function for traffic that we cannot replace [...]. So, there is no money and there are no measures that we know of that, let's say, would allow for such a significant reduction of traffic that we could redesign them to such an extent that they would also be an attractive habitat. We try that wherever possible, but as a strategic goal other things seemed to be more important to us (Kunst, SenStadtUm, Interview on 8/21/2013, #00:04.26).

Hence, in the thinking and actions of the administration the street is primarily an infrastructural space so that traffic volumes and flows are higher ranked than the spatial quality of street space. Only if the reorganization of traffic flows allows for a significant reduction of car-traffic volumes, the street can also be redesigned in regard to its spatial quality.

While on the one hand there was a consensus that motorized traffic had to be reduced and public transport, walking and cycling had to be promoted, the related necessity or desirability of re-organizing streets had not yet gotten onto the agenda in both municipal politics nor in public discourse, but remained on the abstract scale of traffic flows as Dr. Imke Steinmeyer, traffic planner in the Senate Administration, explained:

> So, there is a basic understanding, I guess, to say that 'hey, if one third of all trips is for car traffic, then two thirds are for something else and then we have to have it all in mind'. Yet, that does not mean that this has gotten to public attention or into politics, what that means for street space. And this is a basic problem, I believe. So, if I look into the press currently, then there is a commitment to maintain streets, yet if the whole inner city is covered with construction sites for street maintenance it disturbs the daily routine (Steinmeyer, SenStadtUm, Interview on 8/21/2013, #00:27.02).

Thus, there is an anticipated political conflict with citizens and in particular drivers that emerges around the implementation of projects in street space and that plays a crucial role in the thinking of the administration. Citizens and drivers are expected to be over-challenged by a reorganization of street space and to protest and block the work of the administration. Therefore, as was the case in the process of drafting the *UDP Traffic*, the communication with citizens and the careful mediation of the administration's new agenda plays a key-role within the concept to make it politically viable and to sustain its validity in the long-term:

> I guess [...] concepts that very quickly want to achieve a lot and do a lot, always run the risk that they overwhelm those that create traffic themselves, the citizens, and cause counter-reactions and therefore are rather counter-productive. [...] So that does not mean that one does nothing and always waits for everything to happen automatically. I guess there are possibilities to establish temporary stages [...]. I guess there are creative solutions that one does not dare to try yet, because one is not used to it and so forth. And I think one has to make clear that one stays with the issue, but one cannot expect too much of people, because the risk that this will not be understood and accepted is simply too high. We will soon have the next election so that everything will be on hold, until one is ready again, but it could be counter-productive (Horn, SenStadtUm, Interview on 7/23/2013, #00:29.40).

Thus, as Horn pointed out, the administration takes a very precautious approach both to innovative planning solutions as well as to the communication of their ideas to the people. On the one hand Burkhard Horn seems to be aware that streets play a crucial role both in the life of the city and for the organization and regulation of traffic and that planning concepts exist that could lead the implementation of such projects; on the other hand, he states that 'one is not used to it', with 'one' speaking of the people within the administration that are responsible to adapt these concepts to the Berlin context, who seem to be not thinking about streets. The missing focus on streets within the UDP Traffic and the Senate Department has generated other priorities which also manifest in the absence of planning manuals and plans that would strategically guide and publicly promote the redesign of streets:

> So, there is nothing like a master plan main streets. We are not the only division within the Senate Department for Urban Development and the Environment that is dealing with this topic, but it's also the division for urban development and city planning. We haven't come very far in that regard yet. [...] The difficult thing is then of course to have the money to re-design streets. That's always a problem in Berlin [...] that there are no resources for bigger street re-designs. That means we have to hang on other service providers, when they anyway re-install canal x or conduction y we have to guarantee that the street surface will be re-designed according to the new

traffic needs. [...] We try that as good as possible. Already, we try to – for example in regard to cycling policy – we try to install cycling infrastructure at the expense of motorized traffic. Often, these are measures that do not particularly affect the design quality, because it is all about implementing it by little means, also marking cycle tracks without moving the curb, but anyway reducing space for motorized traffic; which can have positive effects [...] so these are small steps. Yet, we are far off from turning the radial main streets into nice boulevards like one maybe hopes for or imagines sometimes (Horn, SenStadtUm, Interview on 7/23/2013, #00:23.52).

Hence, the redesign of streets depends either on its decreasing relevance and functionality for car- traffic or on funding and planning addressed to maintenance of various kinds of infrastructure that lie beneath the roadbed or other urban development plans that restructure the city.

The interdependence between decreasing car-traffic volumes and the redesign of inner city streets, in particular main streets, is further amplified by a particularity of Berlin's urban structure: Berlin is a polycentric city with relatively low density, a large city area and a stark contrast between the settlement structure in the inner and outer city. While the dense inner city largely stems from the city's industrial growth in the 19th century, the areas that lie beyond the city-highway A100 and the S-Bahn ring depict a greater variety: exclusive residential areas for the middle classes from the late 19th century and garden cities, multiple popular social housing projects from the 1920s to the 1950s as well as the large housing developments that emerged between the 1960s and the 1980s in both East and West (Bodenschatz 2010). This spatial structure fundamentally impacts mobility patterns: while car-ownership and car-dependency are low in the inner city, the outer districts display much more car-dependent lifestyles which affect city-wide transport and street planning. In 2008, the overall modal split of car-traffic in Berlin accounted for 32%. However, while the inner city districts of Mitte (22%) and Friedrichshain-Kreuzberg (17%) clearly were below the average, many districts of the outer city were much more car-dependent: Spandau and Reinickendorf as the most car-dependent districts both had 44%, Steglitz-Zehlendorf (40%), Marzahn-Hellersdorf (38%), and Treptow-Köpenick (40%) also clearly were above city-wide average. Those districts that cover both inner and outer city areas like Neukölln (32%), Pankow (26%), and Tempelhof-Schöneberg (32%) depict numbers around the average modal share (Senatsverwaltung für Stadtentwicklung und Umwelt 2014a, p. 17).

This spatial distribution and conflict between inner and outer city lifestyles and mobility patterns also was a crucial component of the thinking about the re-organization of streets within the Senate Department. While people living in the inner city were expected to approve of a re-design for more spatial quality of streets, car-dependent people in the outer districts who work or shop in the city rather are expected to claim street space as car-space and very much rely on the functionality of a street:

> Personally, I find it difficult; the discussion probably finds a consensus in the inner city, where we have high density, narrow street spaces, high traffic volumes etc. There you surely get a consensus within those living there to say we want redesign, because it is more livable for you. Yet, there will be an outcry in the outer city, when you cannot drive smoothly in the inner city anymore (Steinmeyer, SenStadtUm, Interview on 8/21/2013, #00:51.06).

This car-oriented approach to streets is further amplified in the federal project to expand the highway A100, Berlin's city-highway, which was one of the most important street infrastructure projects of the last years with quite high political priorities and was part of both the UDPs 2003 and 2011.[48] As part of this project there were ideas and requirements to redesign streets in the inner city, which due to the highway extension have a diminished function for traffic. While there was no general consensus to redesign streets in the city, projects attached to the highway found a political consensus:

> What I also see is that there is no basic consensus for a rebuilding of street spaces [...] the process was very much characterized by the discussion about the extension of the Highway A100 and on that note there were lengthy discussions about if I build a highway and pool traffic flows and relief the inner city, which is the intention, because I create a bypass, then I have to redesign in its surroundings. And then there was a consensus, both politically and administratively. That always is the request -to pool - and then use street space differently than as a six-lane thoroughfare or something like that. That worked, because that was clearly related: if you want this, then you have to do the other (Steinmeyer, SenStadtUm, Interview on 8/21/2013, #00:28.15).

Yet, the implementation also of these projects is lagging behind and also remains bound to funding that is only available if other infrastructural and functional measures are being implemented in the particular street. Again, an overall plan is missing to guide these initiatives.

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[48] For more information on the project see
http://www.stadtentwicklung.berlin.de/verkehr/politik_planung/strassen_kfz/a100/de/erweiterung.shtml; accessed 03/14/2017.

All in all, both the role of streets in the plan and the prevalent imaginaries of streets within the department of the Senate Administration are very much bound to the networked traffic function of streets and to the car as prime street user. Streets remain an infrastructure that provides the space for traffic to move and therefore has primarily to be designed in order to keep up that functionality. Despite the consensus that was reached in the planning process, the decision makers within the administration remain worried about potential political conflict on streets and therefore take a very precautious approach to the implementation of the plan that would cause a spatial transformation of streets. While guidelines and consensus had been established on a superordinate scale, implementation – or the spatial scale – of the transformation remained secondary in the formulation of the plan. In other words the negotiation about the distribution of street space where planning and mobility concepts get localized has been postponed and remains a field of conflict and the process of spatializing the consensus another step.

Thus in the implementation process the transport agenda becomes political and in that regard starkly depends on political interest and support. Steinmeyer brings to the point what the implementation of the UDP traffic in street space means:

> That is, I believe, indeed the most difficult, […] to get from a bird's-eye perspective to the worm's-eye view […] and how you get this through an administration. There, certain implementation- so there would help something like a PLAST; or there would help something like these are the framing conditions from which you should act. This is done for bicycle and pedestrian traffic, yet that does not change that there are the same discussion at junctions, when you have to consider the cycling strategy and the public transport strategy and so forth. So, I would say the weighing of interests on the small scale is the most difficult. So, a strategic plan is easily done. But to fill it with life or implement it is an everyday challenge (Steinmeyer, SenStadtUm, Interview on 8/21/2013 Part 2, #00.07.36).

Hence, from the perspective of planning procedure, the rethinking of streets is ceded to the implementing institutions that have to spatialize the Senate Administration's strategic approach.

4.3 NEW STREET SPACES FOR WALKING, CYCLING AND SHOPPING

The previous analysis has shown that the perspective on street space during the process of drafting the *UDP Traffic* was ambiguous: while on the one hand streets should be developed into livable spaces that promote alternative modes of transport, on the other hand they were largely neglected in the conceptualizations and plans that were developed in the Senate administration. Streets predominantly remained a traffic-infrastructure, particularly for cars and the re-organization of street space played a minor role in the strategic thinking and was rather deferred to the implementation process.

Notwithstanding, the transformation of streets has been slowly proceeding in the city, mainly as part of the implementation of the bicycle and pedestrian strategies and as part of the redevelopment strategies for the urban and economic centers in the city. From the beginning, the promotion of walking, cycling and public transport has been an essential part of the UDP Traffic and the Mobility Program 2016 and therefore the drafting of both a pedestrian and a bicycle strategy that specify the concepts and initiatives necessary to promote walking and cycling in the city have been among the priorities of the Senate Administration. Furthermore, the redevelopment of important urban centers as attractive retail and shopping destinations is a core strategy of the overall development in Berlin that is manifested in the *Urban Development Plan Centers 3*. Thus, streets in these areas play an important role in regaining public space qualities from the motor-car and are an important part of the agenda.

In what follows, I have picked three examples from these different planning realms of street transformation to show the political spectrum of street transformations that unfolds in the implementation process. With numbers of cyclists rising, particularly the debate on cycling has gained considerable political steam, pushed by citizens and advocates as the demand for bicycle infrastructure has overhauled the supply provided by the municipality. On another note, the pilot-projects of the so called 'Begegnungszone' have caused conflicts with local residents and business owners. Lastly, the example of the re-making of Karl-Marx-Straße in Neukölln as an urban center and pedestrian- and bicycle-friendly space shows the complexity of street planning and implementation as it pools multiple

planning responsibilities and scales, actors, interests and debates that shape contemporary street space .

4.3.1 BECOMING A CYCLING CITY: PLANNING, POLITICS, AND ADVOCACY FOR MORE CYCLE-SPACE

The Senate Department for Urban Development started its work for bicycling in Berlin with high ambitions: in 2005, a few months after the first Cycling Strategy had been published, they put a lot of effort into marketing and public relations for more bicycle use in Berlin and established the label of a *Cycling City Berlin* to express their commitment towards the promotion of cycling (Senatsverwaltung für Stadtentwicklung,3/16/2005).

The car-oriented planning and new mobility patterns that started after the Second World War in Berlin had had dramatic effects on cycling rates: between the early 1950s and the late 1960s a stark drop of over 160% diminished the numbers of cyclists. Only in the early 1970s did cycling in Berlin start to regain its relevance: despite some statistical ups and downs in the 1980s, after reunification, and in the early 2000s cycling in Berlin overall has been growing ever since. Particularly, since the mid-1990s the growth in cycling accelerated and after the first cycling strategy was launched in 2004, the statistics grew even faster with an increase of 40% of cycling traffic until 2012 (Senatsverwaltung für Stadtentwicklung und Umwelt 2014a, p. 41).

As of 2008, cyclists' share of the city-wide modal split amounted to 13%. In the inner city districts of Kreuzberg (21%), Pankow (17%) and Mitte (14%) their share was the highest city-wide. Particularly in Mitte and Kreuzberg, cycling rates have continually been growing since the early 2000s. The most recent data from 2014 indicates the growth had continued: in relation to 2001, bicycle traffic had increased about 150% in the city. The highest numbers were reached in Kreuzberg, where bicycle traffic grew about 259%, and in Mitte, where it got to 205%. In the other districts, particularly outer city-areas, bicycle traffic grew slower or remained rather constant (Ingenieurbüro für Verkehrserhebungen, -statistik und -planung 2015; Senatsverwaltung für Stadtentwicklung und Umwelt 2014a). However, in 2010, when the administrative task force started the process for the development of the second *UDP Traffic*, the development of cycling in the city had developed far better than they had expected so that a rethinking of

planning for cycling was an important aspect within the process and strengthened the bicycle-friendly planning approach (Wohlfarth von Alm, SenStadtUm, Interview on 7/17/2013, #00:11.42).

The latest bicycle strategy as a sub-plan of the UDP Traffic was published in 2013, thereby replaced its predecessor which had been published in 2004. It has been developed by the FahrRat, a council of representatives from the Senate administration and cycling experts from associations and academia. It aims to increase cycling's share of the modal split from 13% to 18-20% in 2025, the average length of a cycling trip from 3,7km to 4,6km, and the combined trips of cycling and public transport from 3 to 5%. Furthermore, it aims to reduce fatalities of cyclists about 40% and casualties about 30%, to complete the main cycling network and establish a sub-network, and to spend 5 Euros per inhabitant and year on cycling infrastructure. To reach these goals, the cycling strategy outlines infrastructural, organizational as well as law-enforcement measures: existing cycling infrastructure which is often badly maintained should be improved, the main bike-lane network should be expanded and bicycle-friendly main streets be created, districts are advised to establish sub-networks and more bicycle parking should be provided particularly at public transport hubs. Generally, the interlinkages between bicycling and public transport should be improved, particularly children should be encouraged to cycle, and comprehensive signage should improve orientation for cyclists. Ultimately, better PR and information should improve the acceptance of cyclists as road-users as well as the overall use of cycling as a regular transport mode. In eight model projects first steps should be taken to start the implementation of the strategy: increase the speed on main routes; conceptualize and realize three sub-networks in the districts; implementation of three neighborhood-scale projects that cover measures in the street, bicycle parking and connection to public transport; development of three innovative solutions at junctions; bicycle-friendly timing of traffic lights; pilot-improvement of one shopping street for cycling and bicycle parking; development of a city-wide concept for bicycle-parking; and the continuation of the already existing campaign that fosters mutual respect with other traffic participants and cyclists' behavior compliant to traffic rules (Senatsverwaltung für Stadtentwicklung 2013).

Beyond Berlin's and even Germany's borders the "Cycling Renaissance" (Jacobson 2011) or "Cycling Boom" (Varone 2007a) in the city received attention and attributed the success to the long-term planning work of the administration. Indeed, cycling infrastructure in Berlin has been expanding. According to official data dated in 2013, in regard to cycling infrastructure Berlin has more than 1.000km of bicycle lanes, of which 662km are built bicycle paths and 174km are on-street bicycle lanes. Due to the bicycle-friendly planning that came up in the 1970s, the largest portion of built bicycle paths already existed, while there were hardly any on-street bicycle-lanes. Between 2002 and 2012, 62km of new bike paths and 124km of new bicycle lanes were built, as well as 30km of bus lanes opened to the use of cyclists and 15 bicycle-priority streets added across the city. In 2013 and 2014, 28km of new bicycle lanes were built, 15km of existing bicycle infrastructure rehabilitated, 34km bicycle routes signposted, and 1500 racks were installed for new bicycle parking at public transport hubs (Senatsverwaltung für Stadtentwicklung und Umwelt,6/9/2015). In 2013, the goal to increase cycling in the city was also incorporated into the *Berlin Strategy*, the long-term urban development strategy for the growing city until 2030 (Senatsverwaltung für Stadtentwicklung und Umwelt 2015, p. 50ff.).

One of the most visible and profound projects that has caught a lot of attention was the re-design of Moritzplatz in Kreuzberg in autumn 2015. In spring 2014, the Senate had started an online dialogue with citizens to gather spots and crossings in the city that were being perceived as dangerous for cyclists which was well accepted and used. Out of the results, the Senate generated a list of the 30 most dangerous places to consider a redesign of these places to increase cyclists' safety and diminish the risk of getting into an accident. Many of them were not only subjectively dangerous, but also objectively as they revealed high crash-rates between cyclists and cars. About a year later this dialogue received once more public attention, as almost none of these places had been redesigned or the process to do so started (Jacobs, 5/18/2015). On this list was Moritzplatz in Kreuzberg, a heavy trafficked round-about that connects the district to the city center. On any given day, about 7.300 cyclists cross the place and in 2014 it counted about 16 crashes with cyclists involved (Köhler, 8/21/2015). Hence, in late 2015, a comprehensive street design in the favor of bicyclists was implemented that

narrowed the lane for cars so that cyclists could have a wider lane and even double-lanes to ease their turns. The bicycle-lane was colored in bright red so that it was easier to see for motorists, cyclists and pedestrians alike. As a result the crash-rate for cyclists dropped about 37% within a year and the redesign received an award for successful cycling street design from the BUND, based on votes from Berlin citizens (Senatsverwaltung für Umwelt, Verkehr und Klimaschutz, 12/14/2016).

Fig. 8: Bicycle Lanes in Berlin; re-design of Moritzplatz at the upper left.

However, when this project was implemented, the new Cycling Strategy had been published for two years already and overall implementation of cycling projects remained slow and the cycling network particularly in the inner city, where there are the highest cycling rates, was perforated and still had large gaps in the western inner city. Thus, the political debate about cycling in Berlin became more intense and increasingly caught public attention both in municipal as well as advocacy politics.

Despite the year-long work of the administration and the passage of the cycling strategies 2004 and 2013, the Berlin Senate had remained conflictual and the Berlin government rather unsupportive of promoting cycling in Berlin. And while the lack of implementation was criticized by the opposition of the left, green and Pirate parties, the governing parties of the CDU and SPD took the position that cycling in Berlin as a political topic is irrelevant and rather has to be further regulated than promoted (CDU) or that the work of the administration in that realm is good enough already (SPD) (Jacobs, 5/29/2015). At that time, the bicycle-advocacy community had already started moving towards a stronger involvement in city politics and in the following months accelerated their efforts. Since 2013, the number of participants in so called Critical Mass rides has been steadily rising not only in Berlin, but in many other bigger and smaller cities in Germany. In the entire nation, in summer 2014 about 10.000 people cycled for this event, about 800 alone in Berlin, demanding more rights for cyclists on city streets (see e.g. Wenk, 5/31/2014; Hartz, 3/27/2015). The largest cycling association, the ADFC, started to increase its political pressure in summer 2015, when for the first time they put the annual cycling rally under a political slogan *"Handeln statt Schönreden – Berlin Fahrradstadt jetzt"* and published a paper that insisted on a more comprehensive and determined approach to the implementation of cycling projects. Therein, they demanded funding of 30 Million Euros per year, more personnel in both the Senate and the district administrations, special divisions within the local police to better control and ticket car-drivers' and cyclists' behavior, bicycle lanes along all main streets, bicycle garages at public transportation hubs as well as the elimination of crash hotspots (Hasselmann, 6/10/2015; Birkholz, Lehmann 2016).

Afterwards, a group formed that took the political debate about cycling in Berlin to a new scale: the initiative *Volksentscheid Fahrrad* (Referendum Bicycle) aimed for a referendum that would force the Senate to establish bicycle-friendly planning by law. The law would require the Senate to implement 350km of safe bicycle-priority streets, bike lanes along main streets of 2m width, upgrade 75 crossing per year from unsafe to safe, transparent, fast, and effective repair, 200.000 new bicycle racks particularly at public transport hubs, 50 phased traffic lights for cyclists, 100km bicycle highways for commuters from outer districts,

special police units for cycling and bicycle theft, positions for bicycle planners in both the central and the district administrations, more and better information about cycling and bicycle planning for citizens.[49] The initiative was founded and led by Heinrich Strößenreuther, an experienced political consultant, and grew quickly as it combined the professional working-methods of political consulting with young, dynamic, flexible working methods from the start-up sector. While it had started with a small group of about 30 people, a few months later it counted 100 activists, 1000 people who collected signatures, as well as public support from cycling associations, cycling businesses and ultimately also from the green, left and Pirate political parties of the Berlin parliament. In spring 2016, they gathered more than 100.000 signatures from Berliners who supported their agenda, although only 20.000 would have been necessary to get to the next step in the process for the referendum (Jacobs, 6/14/2016; Birkholz, Lehmann 2016, p. 48). [50]

Similar claims have been made by other groups across the city that rally for more bicycle-friendly street design.[51] Given this tremendous success and the apparent dissatisfaction of citizens, the rhetoric turn-around in city politics quickly followed: while the government and the administration had always said that already enough was being done and the expansion of bicycle infrastructure was proceeding, in a public discussion organized by a local newspaper *Tagesspiegel* in summer 2016 the responsible Senator stated that more had to be done and that he will expand the budget for bicycle planning to 40 million euro per year – compared to the current 15 million - and even outlined the idea to found an agency that would be responsible for bicycle planning in Berlin (Jacobs, 6/29/2016).

Although it is at this point impossible to predict whether this indeed means a turn towards the Cycling City Berlin, it seems that the political pressure from advocates in the realm of bicycle planning is ultimately rising to a level, where the Senate is being pushed to rethink its approach to bicycle politics and project implementation and foster politics that accelerate spatial transformation.

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[49] See https://volksentscheid-fahrrad.de/ziele/; checked 02/14/2017
[50] When this dissertation was being finished, the process of the evaluation of the Volksentscheid Fahrrad by the Berlin Senate was not finished.
[51] These are besides the nation-wide operating ADFC also local groups such as Netzwerk fahrradfreundliches Neukoelln (Network Bicycle Friendly Neukoelln) see http://fahrradfreundliches-neukoelln.de/ , last accessed 09/01/2017.

4.3.2 **Nice to Meet You? – Planning, Space and Conflict of the Berlin Begegnungszone**

The Pedestrian Strategy, published in 2011, also was developed in a consultative planning procedure with the support of the council "Berlin on Foot" (Berlin zu Fuss). Therein, representatives of pedestrian groups, transport and ecological associations as well as the representative for people with disabilities and experts from academia and schools helped the Senate administration to develop a comprehensive strategy to foster walking as a mode of transport in the city. The strategy's goals are to increase user satisfaction; to decrease numbers of accidents; to create accessible public spaces for people with disabilities; to realize pilot projects; and to receive appropriate funding for pedestrian projects, relative to their share of the modal split. Therefore, the central concepts of the strategy are the city of short distances, coherent and safe pedestrian networks, attractive public spaces, increased traffic safety through better crossing conditions on streets and special programs for the safety of children and seniors. To start the implementation of the strategy and to quickly achieve improvements, test measures and to set new impulses for pedestrians, the Senate announced ten model projects which among others contain three pilot projects "Begegnungszone" (traffic-calmed area with precedence for pedestrians) and the development of guidelines for the pedestrian-friendly design of shopping streets and center areas in the city (Senatsverwaltung für Stadtentwicklung Berlin 2011).

A '*Begegnungszone*' (engl.: Meeting Zone) is a derivative of the Shared Space concept that was developed in the 1990s in Switzerland. The pilot project implemented in the small town of Burgdorf in 1995, initially was labeled '*Flaniermeile*' (engl.: Strolling Promenade) and was supposed to develop an alternative to the pedestrian zone that did not exclude, but integrate motorized traffic into a pedestrian-priority street. The concept was integrated as a new traffic regime into Swiss traffic law in 2002 and therein was ultimately labeled *Begegnungszone*. Contrary to common Swiss traffic law that gives the right-of-way to cars, in a *Begegnungszone* the right-of-way belongs to the pedestrian as long as one does not needlessly block vehicles; furthermore, in these areas applies a speed limit of 20km/h and car-parking is only allowed in accordingly marked spaces. In Switzerland, the concept is widely applied in different places such as train station forecourts, shopping areas, in front of schools, in residential districts or in historic

city centers and also made its way to cities in other countries, particularly in France and Belgium (Schweizer 2010).
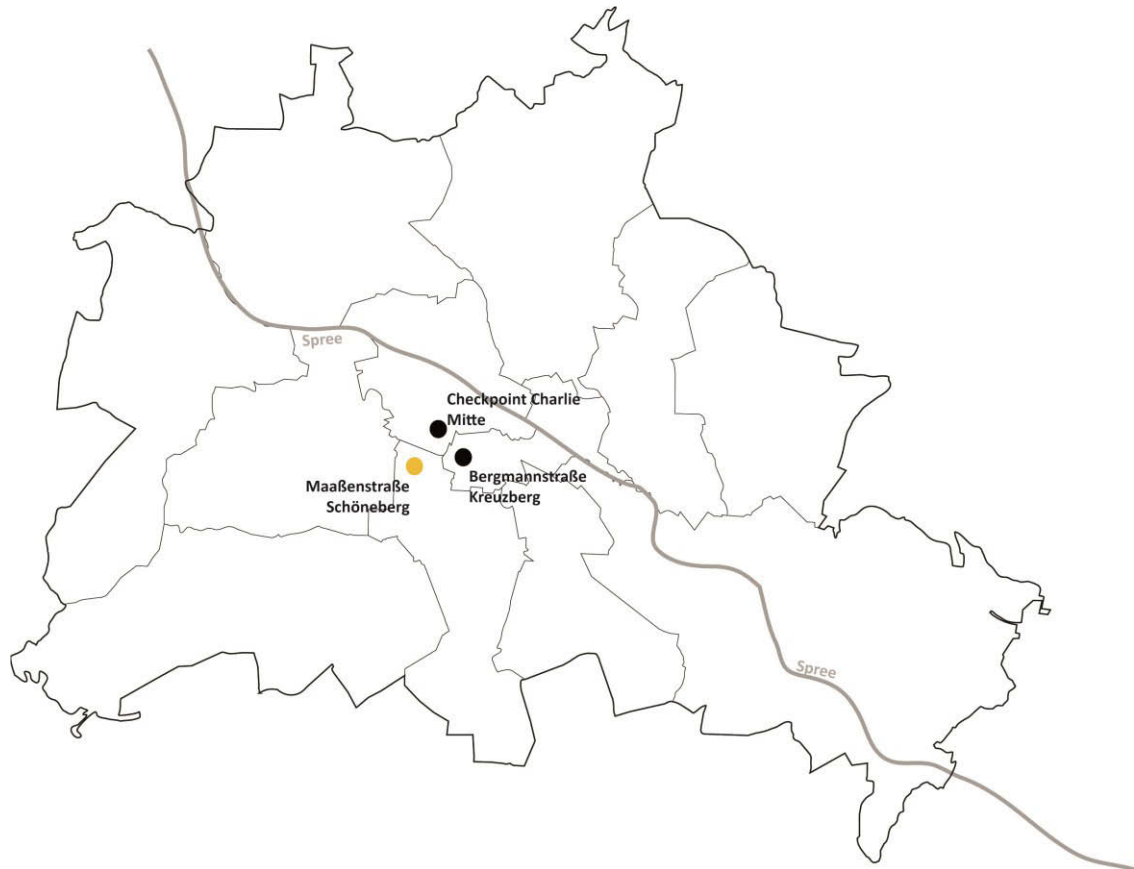

Fig. 9: Distribution of the Pilotprojects 'Begegnungszone' in Berlin, by author.

In the Pedestrian Strategy, the Senate Administration has announced to adapt this concept to Berlin and develop planning tools and spatial modules for a *'Berlin Begegnungszone'* through three pilot projects (see Fig. 9).[52] The implementation of a *Begegnungszone not only depends on spatial planning ideas, but also on legal frameworks:* according to German traffic law the right-of-way on streets belongs to the car except on so called '*Spielstrassen',* where pedestrians and motorized traffic have equal rights and cars have to move in walking speed. Yet, in those streets neither bicycle lanes nor zebra lanes nor 20km/h speed limits are permitted. Therefore, the Senate Administration in the Pedestrian Strategy aimed for a shift in the German federal traffic law (StVO) that would integrate the Begegnungszone as a tool to regulate traffic. Yet, due to its own policy to reduce the amount of signs on

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[52] For more information on the planning of Begegnungszonen in Berlin see
http://www.stadtentwicklung.berlin.de/verkehr/politik_planung/fussgaenger/strategie/de/begegnungszonen.shtml.

streets, the federal traffic ministry repelled the integration of a new traffic sign and therewith the establishment of a set of regulations and design standards that would apply in the Begegnungszone. Therefore, the administration had to look for loopholes to implement the new concept within existing traffic legislation, which is why in the Berlin Begegnungszone the car had to keep the right-of-way, there are no bicycle or zebra lanes (Dobberke, 11/27/2013; Senatsverwaltung für Stadtentwicklung Berlin 2011; Senatsverwaltung für Stadtentwicklung und Umwelt 2014b, p. 6).

Based on 33 proposals from the districts and pedestrian associations, the Senate administration chose three streets in the inner city for re-organization: the touristy area around Checkpoint Charlie in Mitte and two mixed-use streets in Schoeneberg on Maaßenstraße, and in Kreuzberg on Bergmannstrasse; both are locally well-known streets with a great variety of retailers, restaurants and cafes (Senatsverwaltung für Stadtentwicklung Berlin 2011). In autumn 2015, the first *Berlin Begegnungszone* was opened in Maaßenstraße. The planning process had been carried out by the Senate Administration in cooperation with the district's administration and a comprehensive participation of citizens. The process for Maaßenstraße was started in autumn 2013 and comprised several town hall meetings, a moderated online-dialogue, a separate participation of children and adolescents as well as associations for disabled people. Maaßenstraße is a short, only two blocks long, mixed-use street in the district of Schoeneberg that connects Nollendorfplatz – a traffic junction and public transport hub where four subway lines cross – and Winterfeldtplatz, a 19th century plaza that twice a week hosts one of Berlin's biggest weekly markets (see Fig. 10). Maaßenstraße is lined by many restaurants, cafes and shops and is a popular area particularly at night. Prior to the redesign, there had been conflicts between different users particularly due to speeding cars, a bicycle-lane on the sidewalk which heightened the conflict between cyclists and pedestrians, and the seating areas of the restaurants that further narrowed space on the sidewalk. Thus, the restructuring of street space was supposed to ease these conflicts, enhance the conditions for pedestrians and the overall spatial quality of the street. The new street design basically narrowed the traffic lanes, created new accessible crossing-opportunities, shifted bicycle-

traffic onto the roadway, created new areas with furniture for staying, and reduced parking space for cars (Senatsverwaltung für Stadtentwicklung und Umwelt).
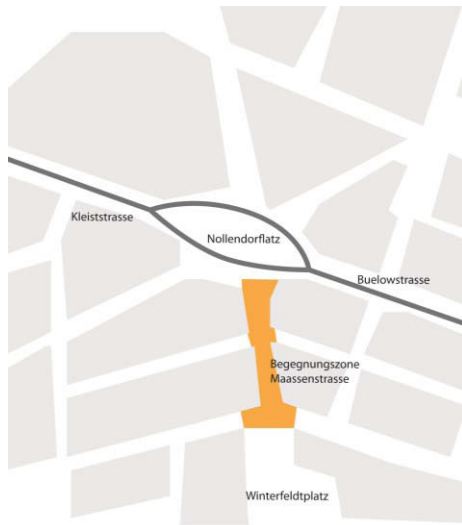

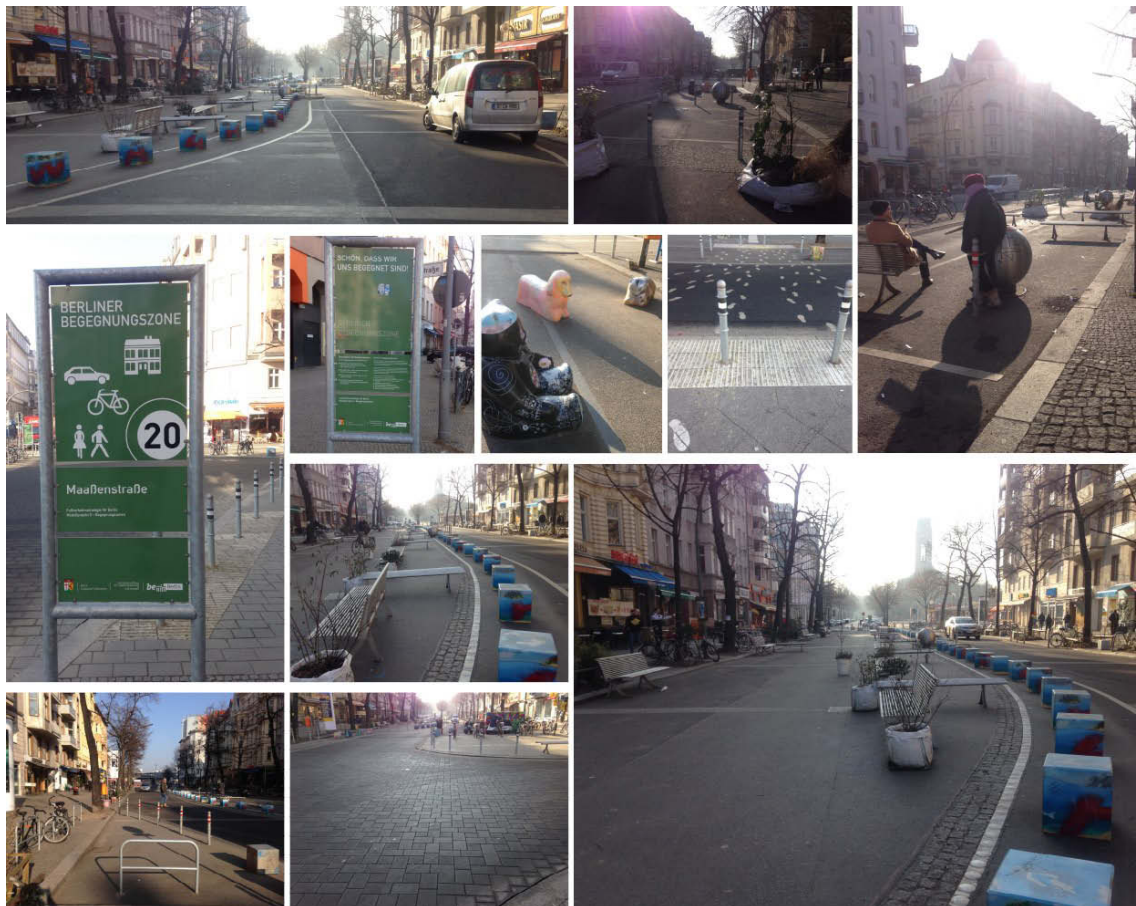Fig. 10: Location of Maaßenstraße in Berlin Schöneberg, by author[53].

Fig. 11: Impressions from the Begegnungszone in Maaßenstraße, 2017.

[53] Data Basis: Open Street Maps 2016

When entering Maaßenstraße from Nollendorfplatz, a green sign that depicts a house, a car, a bicycle, a woman, a man and a traffic-sign that shows the speed limit of 20km/h marks the entrance to the Begegnungszone. In the first block of the street, the right side of the street has been closed for cars and designated for pedestrians, walking, staying and playing. Between the bicycle parking on the central island, that separates the area from the roadway, and the sidewalk several benches and other furniture, planters and seats for children in the shape of animals have taken the former car space on the street. Footprints and tactile surfaces mark the right spot to cross the street on which cyclists, cars and delivery vehicles frequently roll along. At the junction with Nollendorfstraße, a shift in the roadway from asphalt to grey tile and stone pavement indicates the joint use of the area by cars, cyclists, and pedestrians alike. After crossing Nollendorfstraße the roadway swings to the right, and the pedestrian area shifts to the street's left side. Here again, benches and planters create a place for people to rest, stay and communicate. At the end of the street at the crossing with Winterfeldtstraße once more a shift in street pavement should indicate the common use of the area before the back of the green entrance-sign marks the end of the Begegnungszone, saying 'Nice, that we met' (ger.: Schoen, dass wir uns begegnet sind) (see Fig. 11).

Before the project was even implemented it received an award for its innovative planning for mutual respect on city streets within the Competition for Cities and Municipalities 2014 (Senatsverwaltung für Stadtentwicklung und Umwelt, 3/11/2015). Notwithstanding, the Berlin Begegnungszone on Maaßenstraße has remained contested in the first year of its existence. Already in the winter after its opening, dissatisfaction spread among abutters, shop and restaurant owners: people complained that cars still drove faster than 20km/h, that there was not enough traffic control and that drivers would not obey the parking rules; the lack of parking negatively impacted sales on the market on Winterfeldtplatz and in the stores along Maaßenstraße; the narrow roadway caused congestion because delivery vehicles could not be passed; and restaurant owners were worried about their existence due to restrictions for their outdoor-areas: to further regulate and control the use of the street, the district of Tempelhof-Schoeneberg had developed a bylaw that determined the use of certain areas of the street. This particularly addressed the separation of pedestrian and

commercial or gastronomic areas, which says that the new pedestrian areas should not be used commercially. Due to funding capacities, the curbstones could not all be lowered and therefore clearly separate the pedestrian space on the street from the sidewalk. Furthermore, the street trees that had already existed highlight the border between these different pedestrian spaces (Bezirksamt Tempelhof Schöneberg 2015; Schmiemann, 2/1/2016; Schütze, 2/5/2016; Senatsverwaltung für Stadtentwicklung und Umwelt Berlin 2014).

Consequentially, counter movements soon formed among abutters, business owners and ultimately also in political parties. Particularly the district's liberal party (FDP) started to fight against the Begegnungszone by collecting signatures and opinions from abutters and business owners through questionnaires. By June 2016, 66 abutters and 33 business owners participated and mainly criticized the cessation of about 50 parking spaces, missing green spaces, the ugly design of the pedestrian areas, congestion, and the demolition of previously existing zebra lanes which increases perceived danger when crossing the street. The FDP called for a deconstruction of the Begegnungszone. Furthermore, an initiative called 'Rolle rückwärts' (engl.: role backwards) had collected 850 signatures against the project and delivered them to the district administration. While they disliked the project as a whole, they nevertheless appreciated the new 20km/h speed limit, the new bicycle racks and the shift of cyclists from the sidewalk onto the roadway. Later, in July 2016 two artists that had accompanied the participation process in Maaßenstraße initiated an action day: through art projects and sponsorships for watering new plants in sacks they fostered the involvement of local residents in the street and improved the street's look which increased the overall acceptance of the Begegnungszone. Nevertheless, despite the comprehensive participation of citizens in the planning process, the political debate about the space after its implementation kept on-going throughout the year, oscillating between different claims such as removal, partial removal or transformation of the design. The Senate Administration evaluated the Begegnungszone in autumn 2016, yet as of January 2017 the future of the Begegnungszone on Maaßenstraße and the evaluation of the project and its consequences were still undecided (Dobberke, 6/7/2016; Meyer, 8/10/2016; Schmiemann, 8/27/2016; Noetzel, 1/19/2017).

In that regard, the implementation of pedestrian-priority zones in Berlin apparently will require further negotiation in politics and planning as well as about appropriate spatial design as such. While the implementation of the Begegnungszone at Checkpoint Charlie is planned for 2019, the Begegnungszone on Bergmannstrasse is currently proceeding through participatory planning and already contested by abutters and business owners.[54] In July 2016 it was announced, that the Begegnungszone on Bergmannstrasse will be implemented for a test phase of about 18 months (Kather, 7/29/2016).

4.3.3 NEW URBAN CENTERS AND ATTRACTIVE SHOPPING STREETS

As a special typology and as the cultural, social, and economic backbone of the districts, the main shopping streets receive particular consideration within the *UDP Traffic* as well as in both the Bicycle and Pedestrian Strategies. As a central goal, the overall connectivity and accessibility of inner city centers should be improved to strengthen Berlin's polycentric urban structure, which particularly includes the accessibility of these areas by bicycle or on foot. Furthermore, street layout and public space design play crucial roles for the quality of space and attractiveness of these streets and hence for their function as an urban destination and neighborhood meeting point (Senatsverwaltung für Stadtentwicklung 2013, p. 5; Senatsverwaltung für Stadtentwicklung 2011b, p. 103; Senatsverwaltung für Stadtentwicklung Berlin 2011).

Moreover, the redevelopment of urban centers and the strengthening of Berlin's polycentric urban structure is a central agenda of the city's overall strategic development which is manifested in the *Urban Development Plan City Centers 3* (see Fig. 12). Within the city structure, the city's main streets and in particular the radial streets play a special role as they on the one hand often form the social and economic centers of the polycentric city and on the other hand straightly connect the historic inner with the outer city and therefore during the 20th century have been strongly shaped by and for the automobile (see Hofmann et al. 2013). That said, nowadays these "centres and shopping streets represent important focal points" for the city as "places for working and living, for leisure

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[54] For more information about the concerns in regard to a Begegnungszone on Bergmannstraße, see http://leiser-bergmannkiez.de/bergmann.html, last accessed 09-01-2017.

and culture" (Senatsverwaltung für Stadtentwicklung 2011a, p. 9). The UDP *City Centers 3*, which had been launched in 2011, focuses on "maintaining and strengthening Berlin's centres, thereby contributing to boosting the attractiveness of Berlin as a metropolis" (ibd.).
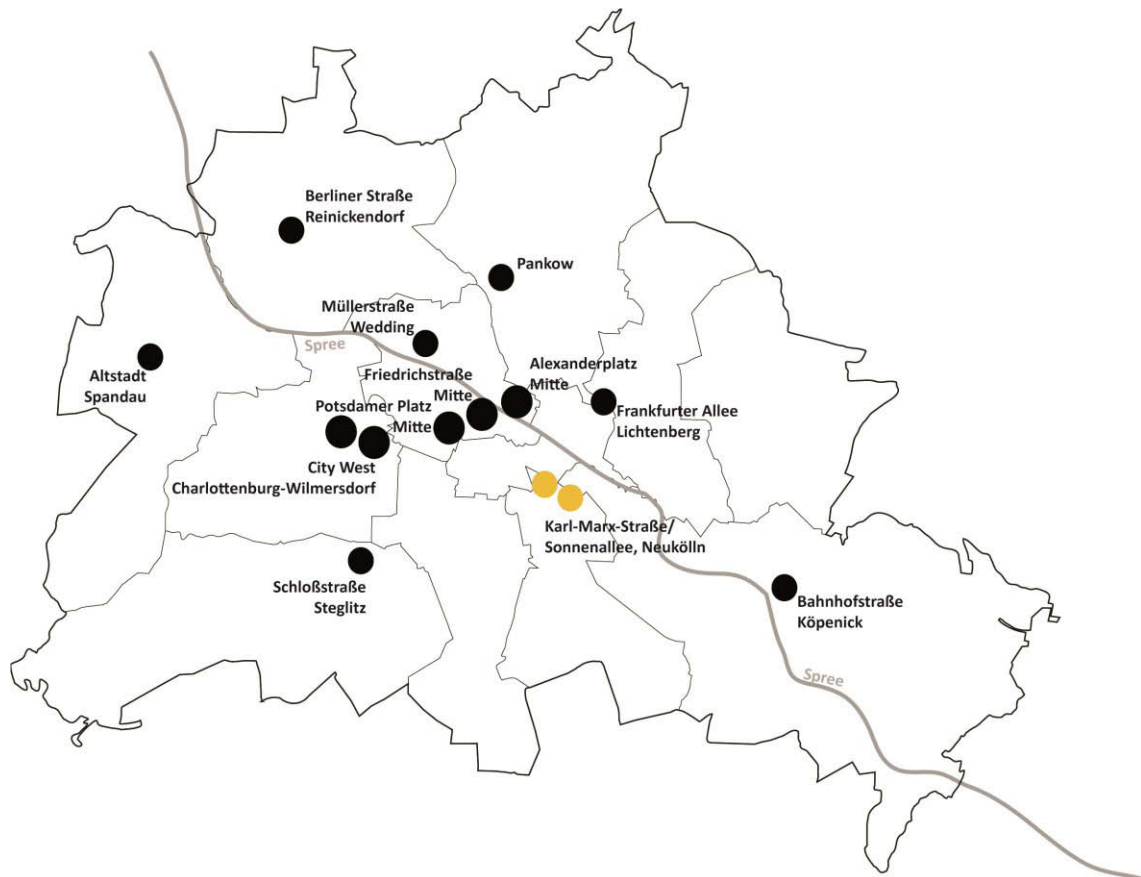
Fig. 12: Designated Centers in Berlin, by author.

In these centers, streets play a crucial role in that "[s]patial deficits in Berlin's centers are often associated with interferences by motorized traffic and traffic infrastructure. Noise, scruffy public spaces, breaks, weak linkages between the different parts of a center and minor presence are typical negative characteristics" (Senatsverwaltung für Stadtentwicklung 2011a, p. 39). At the same time, street width often "allows for management of traffic and simultaneously the creation of spatial quality" (ibd.) so that "improving quality of public spaces [and] maintaining streets and plazas as central urban spaces" (ibd., p. 38) is an important goal of the center concept to upgrade the quality of shopping areas in Berlin. Further, "avoiding motorized traffic" (ibd., p.9) is a core agenda of the management of shopping areas which is why the plan puts a focus "on them being reachable on foot, by bike or with public transport" (ibd., p. 10). In that regard, the *UDP Traffic*

160

and the *UDP City Centers 3* are tightly related and together are meant to shape streets as attractive, livable and accessible shopping destinations.

The *UDP City Centers 3* has designated a central area that consists of five different cores between City West and Alexanderplatz in the East, eight main centers that possess regional significance as well as quite a number of district and neighborhood centers in the city.[55] A crucial tool for the redevelopment of centers of different categories is the city funding program *Active Centers*[56] that is carried by federal, state and communal money and supports the revitalization of shopping streets and town centers in Germany. Redevelopments that are funded by these programs are the main centers Müllerstraße in Wedding, Bahnhofstraße in Köpenick and Karl-Marx-Straße in Neukölln. Furthermore, the development of the prestigious City West and of some district and neighborhood centers is based on this program.[57] In many cases, the reorganization of traffic and street space is an explicit part of the redevelopment agenda.

In the following paragraphs, I take the re-making of Karl-Marx-Straße in Neukölln as an example to illustrate the role street space and traffic organization play within contemporary urban renewal programs and processes of commercial and residential gentrification. After years of increasing unemployment and poverty rates as well as public disinvestment that resulted in out-migration of residents and businesses and consequentially growing vacancy rates, Karl-Marx-Straße and the entire district of Neukölln since the early 2000s have gained new attention from residents, tourists and urban developers. Public officials since then have aimed to develop the area in a way that is appealing to tourists and that increases livability, spatial quality and the overall shopping experience. However, as these goals stand at odds with the local populace the agenda clearly develops towards both demographics and businesses that are different from the status quo and

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[55] See Map:
http://www.stadtentwicklung.berlin.de/planen/stadtentwicklungsplanung/download/zentren/2011-07-31_StEP_Zentren3_Karten.pdf, accessed 03/01/2017
[56] For more information on the program, see
http://www.staedtebaufoerderung.info/StBauF/DE/Programm/AktiveStadtUndOrtsteilzentren/Programm/programm_node.html;jsessionid=ABDAA9154554FD546271CED792671280.live11292; accessed on
03/01/2017, website available in German only.
[57] See
http://www.stadtentwicklung.berlin.de/staedtebau/foerderprogramme/aktive_zentren/de/gebiete/index.shtml

clearly oriented towards the new urban middle class that should vitalize the area (see Steigemann 2017, p. 12). Consequentially, the street has become a contested space of growing economic competition, rising rents and overall gentrification processes within which pedestrian- and bicycle-friendly street design as well as "qualitative" public spaces that attract people to stay in the area play important roles.

Fig. 13: The "Sanierungsgebiet" of Karl-Marx-Straße in Berlin Neukölln, by author.[58]

In 2011, the area around Karl-Marx-Straße (and Sonnenallee) has been formally designated a redevelopment area (*Sanierungsgebiet*) to enhance both its residential and economic qualities (see Fig. 13). The redevelopment area stretches from Maybachufer and Weigandufer at the Landwehrkanal in the North-East, over Sonnenallee and Karl-Marx-Straße to the area of the former *Kindl*-brewery in the West as well as Richardplatz and Karl-Marx-Platz in the South.[59] As the areas economic center, Karl-Marx-Straße should be developed into an attractive shopping, retail and cultural destination, a dynamic local meeting point and diverse neighborhood. Therefore, the program aims to strengthen retail and the communication among retailers, to transform the street from a traffic space into an attractive public space with more space for cyclists and pedestrians, to create more attractive public spaces to stay, connect the area to its surroundings, strengthen the diversity of shopping and cultural amenities, to strengthen residential quality, integrate abutters and establish long-term cooperation and communication.[60] The redevelopment is managed by the *Action! Karl-Marx-Straße (A!KMS),* a city-management organization founded by the district administration of Neukölln. The *A!KMS* works as moderator that connects different actors, fosters projects and initiatives between retailers and the district's administration in form of Public Private Partnerships, and conducts outreach work to increase the street's and its new development's popularity.[61]

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[59] See map http://www.aktion-kms.de/files/110810_s0851_neukoelln.pdf, accessed 03/02/2017
[60] For more information, see
http://www.stadtentwicklung.berlin.de/staedtebau/foerderprogramme/aktive_zentren/de/karl_marx_strass
e/index.shtml, accessed on 03/01/2017, website available in German only.
[61] See http://www.aktion-kms.de/hintergrund/; accessed 03/02/2017, available in German only.

Fig. 14: The new Alfred-Scholz-Platz, 2017.

The remaking of the public spaces in the area started in 2014, with the opening of the new *Alfred-Scholz-Platz*, formerly known as *Platz der Stadt Hof* (see Fig. 14). At a central destination between two subway stations and in front of big retail buildings the *Platz der Stadt Hof* had merely been a widened sidewalk at a big car-crossing. After the redesign, a plaza had been built that turned a four-way crossing into a three-way crossing and thereby created a pedestrian area on a former car-space that was furthermore equipped with a food-stall and regularly is used for festivities and events.[62] In the further process, the remaking of public spaces that is planned in that area covers several main and side streets that connect the area on the one hand to Kreuzberg and on the other hand to the redevelopment area of the former *Kindl*-brewery. Donaustraße will be remade to serve the bicycle route between Neukölln and Kreuzberg, which means partial asphaltization for better bicycling as well as establishing safer crossings for pedestrians. Neckarstraße and

[62] See http://www.aktion-kms.de/projekte/abgeschlossene-projekte/alfred-scholz-platz/, accessed 03/02/2017, available in German only.

Isarstraße have been traffic-calmed, redesigned to provide for a better quality-of-place and equipped with more bicycle parking. These streets connect through a newly built staircase to the residential and cultural development area of the former *Kindl*-brewery.[63]

The remaking of Karl-Marx-Straße itself is conducted in several construction phases that started at the outer part of the area around S-Bahn train station Neukölln and incrementally proceeds to the more central areas around Neukölln's City Hall up to the crossing with Weichselstraße (see Fig. 15). The very first part of the street was redesigned already in 2004, funded by the federal investment program "Stadtumbau West" (engl.: Urban Redevelopment West) which developed the area around the S-Bahn station. However, most re-construction measures are being conducted within the program *Active Centers*: the first part of the street that was redesigned lies between Jonastraße and Uthmannstraße and was finalized in early 2016. In April 2016, the rebuilding of the second section between Uthmannstraße und Briesestraße started. The re-design of the street contains street widenings and new parking spaces, the enlargement of sidewalks, planting of trees, better street lights, and additional seats and benches for passers-by. Cyclists and drivers should receive one separate lane in each direction and additional bicycle parking should provide for the increasing number of cyclists. Also, crossing of the street should be eased through central islands. Along with the reorganization of the street space, the maintenance and advancement of the subway infrastructure and of technical supply lines such as telecommunication and so forth is taking place (Rogoll 2010; Senatsverwaltung für Stadtentwicklung und Umwelt,4/1/2016).

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[63] See http://www.aktion-kms.de/projekte/

Fig. 15: Impressions from Karl-Marx-Strasse, 2017.

The remaking of Karl-Marx-Straße is still on-going, the completion of its reconstruction has been projected to 2021 (Loy, 4/7/2016), the time frame for the redevelopment of the whole area was formally projected to 2026. As a special street typology, the quality of inner city shopping streets is of particular relevance for the overall urban development of the city and the re-organization of traffic flows and street space here is tightly connected to the redevelopment and economic restructuring of an entire neighborhood. Bicycle and pedestrian planning play a crucial role both in regard to connectivity to the area as well as to improve the quality of space in the area.

4.4 CONCLUSIONS OF THE CASE II

The *UDP Traffic* is a strategic urban development plan that was developed in the *Senate Administration for Urban Development and the Environment* as a tool that should reframe transportation politics in the city and lead it towards a reduction of motorized travel and the urbanization of the transport system. Therefore, it outlines an integrated approach that aims for an incorporation of all traffic participants and road users into an effective, multi-modal mobility system. Therein, traffic flows of different scales, in particular car-traffic, public transport, cycling and walking should be equally considered according to their function within the overall system. Nevertheless, the plan clearly postulates a turn away from car-oriented policies and instead favors the minimization of car-travel and its negative impacts on the city and the promotion of environmentally friendlier alternatives instead. Thereby, it aims to increase the overall mobility and quality-of-life in the city and politicizes the infrastructural and public space of the metropolitan street as part of the mobility system.

In this chapter, the production of the *UDPs Traffic* 2003 and 2011 has been told along the lines of a long and complex, yet continuously on-going planning process which involved many different actors from institutions and society. Thus, as the *Course Book for Traffic Politics,* the UDP not only provides the normative frame within which future debates, plans and projects should be developed but foremost is the temporal manifestation of the consensus found during these processes and negotiations between different actors. In other words, the plans are milestones in the long-term, permanent process of establishing a new transport system in the city and both manifest and foster the rethinking of transport and streets through the link they create between former goals, the status quo and future goals, between overall planning and implementation of projects as well as the various actors involved.

The rethinking of transport analyzed in this chapter started right after reunification when the city had to reconnect its formerly separated parts. Although the West-Berlin Senate already in the 1980s had initiated a turn away from car-oriented transport politics and from the beginning decisions by the Senate required a comprehensive approach to traffic planning, the early years after

reunification were characterized by infrastructure expansion and car-oriented planning until the mid-1990s. However, a combination of different factors eventually initiated the shift towards integrated mobility planning within the Senate Administration: the negative impacts of post-reunification motorization on the quality-of-life in the city; Berlin's financial crisis that drastically cut the investments in infrastructure; and the restructuring of the administration that joined the departments for city and transport planning which eased conflicts within the administration and ultimately enabled the dialogue with other political actors from the quarreled transport community.

In preparation of the *UDPs Traffic* 2003 and 2011, this dialogue was institutionalized at the *Round Table* and the *Academic Board* as the basic communicative instruments in the planning process. While the *Academic Board* rather was a consultative council, that had the task to infuse the discussion with the latest academic knowledge and thereby to provide a stronger argument for the administration's decisions, the *Round Table* was a representative political forum to reflect a wide array of interests, claims, and needs that exist in the realm of transport and street space: here, representatives of the administration, political parties as well as interest-driven associations from the transport community got together to discuss their ideals of transport development, to reflect and support the work of the administration in the process of developing the plans and to establish a political consensus which would enable the administration to continue their work in absence of mayoral political support and interest. Hence, from the beginning, the administration took a very balancing approach which aimed to integrate the different perspectives on transport into the plan: they proceeded from the large-scale vision to the small-scale sets of measures to create a common vision that is detached from particular interests and priority provided transparency and explanation to establish mutual understanding for the different interests within the scene. The discussion mainly focused on the strategy and the overall vision so that implementation has been widely left out of the consensus achieved in the plan. Despite the definition of several sets of measures at the end of the UDPs, they remained on the strategic scale and therefore required further steps in planning, negotiation and design. Thus, for the administration, this dialogue and the here established consensus was one of the core-achievements of

the planning process and was essential for the overall acceptance of and commitment to the plan, while implementation remained one of many further steps.

Reasoning, why the implementation of the strategy was lacking behind, the interviewees mainly named a lack of financial and personnel resources, the interdependent allocation of responsibilities between the Senate Administration and the districts as well as a lack of political support and interest from the Mayor and the Senate. However, it has been shown that the administration itself has been taking a very cautious approach to implementation: although the *UDP Traffic* clearly postulates a reorientation of transport politics from the car towards public transport, walking, and cycling, cars nevertheless remained a fundamental constituent of their imaginaries as well as planning and implementation decisions. The redistribution of street space was largely perceived as risky for politicians, who would have to fear drawbacks instead of profiling, and as conflicting with citizen-interests who could be over challenged by too quick or too extensive interventions into the familiar, car-friendly streetscape.

In this regard the spatialization of the strategic agenda in street space and therewith the thinking about streets as an urban space other than the infrastructure that accommodates traffic was neither part of the plan nor of the negotiation process. Although the vision *Berlin 2040* in the *UDP Traffic* aims for streets to be attractive urban spaces, the role of the street within the transportation plan and in the reasoning of the Senate Administration largely remains absent or reduced to an infrastructure that connects to other infrastructures and transport modes and that foremost has to fulfil its function of providing space for car-traffic. Therefore, spatial –re-designs are rather the consequence of shifts in infrastructural functions or of the re-organization of traffic modes than a starting point to rethink traffic and urban mobility systems which also manifests in the absence of plans, guidelines or manuals that would systematically define the reorganization and re-designing of streets according to the transport agenda across the city. Instead, street space is treated as an add-on to infrastructure maintenance of different kinds as well as dependent on car-traffic volumes, which means that a re-design is only possible if car-traffic volumes get

below a critical amount so that traffic flow is not obstructed. Consequentially, in the further procedure, the implementation of projects particularly in the realms of bicycle and pedestrian planning has remained slow and ineffective.

However, in the last years the work of the administration has been further proceeding, in that they also published several binding sub-strategies for the implementation of the *UDP Traffic* in the realms of cycling, walking and public transport. Furthermore, while political interest and pressure on streets from the perspective of motorized travel remained absent, it nevertheless developed in other realms that affect street space. In particular the demand for better bicycle infrastructure as well as the municipal interest in redeveloping urban centers created the political dynamic to transform streets. While the major conceptual turn towards a cycling city had been made within the Senate Administration in the early 2000s, implementation had been lagging behind. Since the mid-1990s cycling numbers had been on the rise and after the first UDP Traffic had been launched in 2003, cycling grew even faster with a largely unexpected pace so that the pressure particularly on inner city streets grew substantially so that the demand fundamentally overtook the supply. Furthermore, since 2013, the administrative agenda is being complemented by advanced advocacy work that demands a more comprehensive and quicker implementation of bicycle infrastructure and thereby currently seems to form the necessary political pressure that will up-scale cycling politics in the city. In another case, the redevelopment of urban centers and shopping areas includes the remaking of streets as attractive public spaces and destinations and thereby especially promotes bicycle- and pedestrian-friendly street spaces. Those redevelopments are still ongoing, yet the example of Karl-Marx-Straße has illustrated that streets on the one hand should connect urban destinations to its surroundings through desirable forms of mobility and on the other hand as attractive public spaces form the basis for a desired form of consumption in an attractive setting and a higher quality-of-place to attract people and business.

The example of the *Begegnungszone Maaßenstraße* shows that a consensus achieved in planning and participation not necessarily produces a consensus in space, yet that space produces once more rather conflictual debates as the overall

ideas of less car-traffic and better pedestrian spaces are trickling down. As a comprehensive approach to the re-design of a street the model project of a *Begegnungszone* has been implemented on Maaßenstrasse in Schöneberg through a participatory planning process between administration, politics, and citizens. Yet, the future of the project remains uncertain. First, the spatial concept itself had to be weakened due to framing conditions set by German traffic law. Second, despite the integration of abutters into the planning process, discontent, worries and protest arose shortly after the project had been completed criticizing a wide range of issues from the design-quality, the lack of parking to a decrease in sales for the businesses in the street. Soon, political parties from the opposition took up on these complaints and fostered a political debate about and renegotiation of the project that is still on-going and that might include a deconstruction of the project.

The developments in Berlin in regard to streets are still on-going. As Berlin in recent years has been growing and overall gained global relevance, there has been a shift in regard to urban development politics that is for example manifested in the Berlin Strategy and that bundled particular urban development agendas: the overall political interest in urban development has been increasing which brings transportation, or rather mobility and in particular bicycling also further upfront. Since the Senate election in September 2016 which meant a shift in the city government from a great coalition of SPD and CDU to a center-left coalition of SPD, the Green Party and the Left Party, the *Department of Urban Development and the Environment* has been split up into the *Department for Urban Development and Housing*, led by Senator Katrin Lompscher from the left party and the *Department for the Environment, Transport, and Climate Protection*, led by Senator Regine Guenther, a climate and energy expert without party-affiliation. Since then, the debate about greening urban transport and transforming streets is becoming louder and more distinct: the central boulevard *Unter den Linden* should become car-free; on main streets, car lanes should be replaced by bicycle-lanes; already before the election, Jan Gehl – or at least co-workers from of his office – was invited to Berlin to accompany the redesign process of Schönhauser Allee in Prenzlauer Berg which will provide more spaces for cyclists, pedestrians as well as refuge islands to sit and communicate (Loy, 2/22/2017; Beikler, 11/5/2016; Wähner, 4/2/2016). Hence, the political interest and pressure seems to be fundamentally

changing and in the coming years will assumedly accelerate the transformation of streets.

In spring 2016, the administration started the process to draft a new UDP Traffic as a follow-up for the 2011 version. Hence, the process of supra-ordinated negotiation and adjusting the agenda as well as implementing projects remains dynamic. It remains unclear if that will also include a stronger integration of street space into the administrative-political debate and planning approach.

5 CONCLUSION: RETHINKING THE STREET?! – THE POLITICS OF STREETS

My research project started from an observation I made a few years ago in New York City: at central city destinations pedestrianization and bicycle lanes signaled a profound shift within the cities' streets and mobility politics away from car-oriented planning towards the reintegration of bicyclists and pedestrians into metropolitan street space. Indeed, this shift had been publicly announced by the city government in its comprehensive planning works *PlaNYC* and *The Sustainable Streets Strategic Plan.* Similarly, the Berlin *Senate Department for Urban Development and the Environment* had published the latest version of the *Urban Development Plan Traffic* in 2011. On the one hand, the plan also aimed for a reduction of motorized traffic and the promotion of walking and cycling in the city; on the other hand, spatial transformations of street space at that time had remained marginal. Thus it seemed, that the City of New York had found an apparently successful way to take back street space from the automobile and attribute it to other street users and thereby foster people-centered street design and a more sustainable urban mobility, while the City of Berlin – despite similar goals – failed to implement its agenda.

In New York, the process of *rethinking the street* was started by Mayor Bloomberg to support urban and economic growth and from the beginning was focused on the implementation of projects and hence the creation of new street spaces and images in the city (see Ch. 3.1). Therefore, the process was primarily meant to find effective ways of street transformation. On the other hand, in Berlin the process was started within the transport administration, primarily goaled for a new discourse within transportation politics and mainly emphasized the mobility system as a whole and hence streets' function as transport infrastructure, while their spatial transformation remained secondary (see Ch. 4.1). Hence, although the global paradigm of *Sustainable Development* defines common goals, the politicization of streets has followed quite locally distinct paths and thereby produced both similar and different spaces.

Due to these similarities and differences, the cities of New York and Berlin provided ideal case studies to examine a) the role of local planning processes within a global paradigm, b) their spatial impact and transformations and c) the

shifting politics of streets and their different linkages to both global and local dynamics. Thereby, it was shown that contemporary politics of streets oscillate between mobility and quality-of-place, between economy and ecology, between global as well as local goals and demands which are subsumed under the green headline of 'sustainability'.

Since the previous chapters have analyzed the cases separately, the first part of the Conclusion will focus on a concluding comparative analysis of the processes in New York and Berlin.

5.1 THE POLITICIZATION OF STREETS IN NEW YORK AND BERLIN

Rethinking the street in this work has designated a globally applied paradigm of sustainable mobility and street planning as well as the local political processes that aim to implement and spatialize the paradigm. Altogether, these challenge and renegotiate the existing production modes of streets as well as the existing spatial order which seems to be not working or not desired anymore. To understand this existing spatial order, I have built my analysis upon a historical examination of *rethinking the street* since the mid-19th century, when urbanization processes and the rise of urban planning produced streets as a politically contested urban space that increasingly needed to be governed to facilitate movement and to maintain the functioning of a city. Thereby, I particularly focused on the case study cities New York and Berlin.

Since the first urban settlements evolved, streets had to fulfill functions as architectural baseline, transportation infrastructure, and public space. However, as was shown in Chapters 2.1 and 2.2, since the mid-19th century different user interests, transport modes, and political actors have competed for the regulation and distribution of street space. While this in the beginning primarily meant the regulation of pedestrians and horse carriages, technological progress and modernization yielded first the bicycle and then the car as new street users around which influential actors assembled that formed powerful political coalitions and thereby fostered the transformation of the street from a mixed-use space of people into a mobility infrastructure used for movement. In the first half of the 20th century, modernist ideals of urban planning, an expanding car-industry, and motorization established a new urban order that was arranged around the car and

largely displaced pedestrians and bicyclists from metropolitan street space. In New York as well as Berlin, this has generated the still predominant automobile street order, which means that the physical street space is primarily organized and regulated to enable movement, an here in particular movement in cars (see Ch. 2.2.3).

However, in the 1960s, when motorization in Western societies reached its preliminary peak, protest against car-oriented city-planning arose from civil society as well as a new generation of planners who aimed for a people-friendlier city and mobility. Since then, an increasing number of studies, concepts, and policy- and design-guidelines emerged that aimed to establish a more urban form of transport or a more people-centered and livable street design. However, while in Berlin these concepts were at least partially built in form of pedestrian zones or bicycle lanes, in New York they remained entirely absent until recently (see Ch. 2.3).

Eventually, with the increasing global relevance of sustainability as the guiding principle for city planning since the early 1990s, the transformation of mobility and the automobile street order has gained significant political steam. On the one hand, this was reasoned in local urban conditions: as the Berlin case study has shown, the traffic administration in the reunified city early on tried to establish a strategic agenda for urbanized transport due to problems such as growing motorization, suburbanization, noise and air pollution. Yet, it was not until the early 2000s that a political consensus was reached that supported the new agenda and that very slowly started to foster the transformation of mobility in the city (see Ch. 4.1). On the other hand, the developments in New York have shown that simultaneous to the increasing relevance of the sustainability paradigm, streets as a public space in the 1990s gained more and more attention from the city government: Giuliani's law-and-order as well as quality-of-place policies turned streets into places of tourism, consumerism, police-control and marketing-image and thereby laid the ground for post-industrial public space governance as well as residential and commercial gentrification (see Ch. 2.3.3). Thus, by the early 2000s streets in Berlin and New York had been politicized between the poles of

a) being a mobility infrastructure that has to serve a more environmentally friendly and urban transport system and of

b) being a public space that has to provide livability and quality-of-place in a metropole within global city competition.

Thus, in the two case study cities the politicization of streets originated in different assumptions and pre-conditions that then were subsumed under the universally valid headline of *Sustainability*, but were also continued in plans, planning processes, and street space.

5.1.1 GOALS AND PLANS: ECONOMIC GROWTH VS. INTEGRATED URBAN TRANSPORT

In New York and Berlin, *PlaNYC* and the *Sustainable Streets Plan* as well as the *UDP Traffic* have similarly aimed to reduce car-traffic in the cities, promote alternative modes, in particular walking and cycling, and plan streets that foster these mobility modes as well as street life. In other words, both plans aimed for an overall turn of transport planning towards the basic principles of the global paradigm of *Sustainable Mobility* and livable street space. Yet, through the spatial lens of the metropolitan street, the plans revealed significant differences (see Fig. 16).

	New York	**Berlin**
Goal	Economic growth, quality of life	Integrated Transport
Main Strategies	develop streets as a public space, foster livability and quality-of-place	develop streets as an infrastructure, foster intermodal mobility and traffic flow
Process	Implementation-oriented	Discourse and consensus-oriented

Fig. 16: Sustainable Streets Plan vs. UDP Traffic

As was described in Chapter 3.1 *Rethinking the Street* in New York began in late 2006, when *PlaNYC* was drafted by the newly found *Mayor's Office of Long-Term Planning and Sustainability (OLTPS)* to foster city-wide economic growth under the headline of sustainability. Therein, both transportation and land-use played a crucial role as the plan aimed to relief street congestion, reduce motor-vehicle traffic and shift customers onto public transport and non-motorized modes of

transportation to increase the circulation of people and goods in the city; moreover, it aimed to re-make public spaces in the city, in particular streets, to create a more recreational and lively street environment. Following this, the *Department of Transportation* published the *Sustainable Streets Strategic Plan* that further emphasized the role of streets as public spaces, the goal to transform streets from so called *utilitarian corridors* into so called *vibrant public places* as well as the importance of the promotion of alternative mobility-modes, in particular walking and cycling, in the city. Moreover, *world class street* design and quality of space were identified as important factors within global city competition to attract and retain people and businesses. To foster implementation, both *PlaNYC* and the *Sustainable Streets Plan* listed initiatives and detailed benchmarks that were meant to lead the implementation process (see Ch. 3.1.1).

To the contrary, the *UDP Traffic* is a comprehensive transportation plan that primarily aims to optimize the interaction of all modes of the transportation system and to ensure mobility, improve traffic flow and simultaneously restrict traffic's negative impact. It has been developed within the Transportation Division of the *Senate Department for Urban Development and the Environment* and is meant to function as a *Course Book for Traffic Policy* that depicts the imaginaries about the traffic of the future and how these can be realized. It resulted from a consultative planning procedure that institutionalized dialogue within transportation politics at the *Round Table* and the *Academic Board* which brought together administration secretaries, advocates, associations and academics to jointly discuss transport development in Berlin and establish a reliable consensus that was expressed in the strategic plan. Hence, the *UDP Traffic* deploys a broad, technocratic perspective onto the mobility system and integrates perspectives from mode-specific interests, from different political ideologies, spatial scales, and environmental as well as economic demands. Therein, the transformation of streets widely remains a side-effect. However, the plans particularly for the inner city goal for more livability on city streets with less driving, the promotion of cycling and walkability, attractive streets and squares, transformation of main streets into boulevards and a high quality of life that fosters tourism and retail particularly in Berlin's many urban centers (see Ch. 4.1.1) .

Hence, in both cities the plans depict overall goals that are subsumed in the sustainability paradigm: the municipalities aim to reduce motorized-traffic, shift traffic onto public transport, foster walking and cycling and establish a new spatial order on streets that provides more livability and quality of place and diminishes the hegemony of the car. Particularly in New York these goals not only depict a shift within transportation politics – as it was mostly argued by the Department of Transportation - but even more so they depict the continuation of distinct public space politics that are meant to increase economic turn-over by remaking physical space and by improving the quality-of-life in the city. To the contrary, in Berlin the Sustainable Transport agenda was largely lacking political support and overall goals, but rather originated out of a technocratic need and initiative. As these political agendas (or the absence thereof) are reflected in the local processes to draft the plans, they appear quite differently.

5.1.2 PROCESS: POLITICAL VS. ADMINISTRATIVE AGENDA

In both cases, the planning process attempted to establish a new thinking and planning within the operating administrative agency as well as city politics and change the existing spatial order on the respective city's streets. Therefore, in both cities a process was initiated to draft the above described plans as the guiding documents for future city, transport and street development as well as to anchor the discourse within the city. Yet, the research has shown that the processes in New York and Berlin pursued different goals and therefore were executed by different actors, who determined different kinds of discourse, implementation programs as well as planning time-frames (see Fig. 17).

	New York	Berlin
Initiation	Politically wanted	Administration-led
New Actors	Integration of advocates as actors into the administration	Integration of advocates as "communicative" actors into the planning process
New Discourse	Creating a public discourse through new media and professionalized advocacy	Creating dialogue within the transportation scene
Implementation	Process and implementation tightly linked	Process and implementation separated
Timeframe	Short-term	Long-term
Space	Street-centered	Mobility-centered

Fig. 17: Planning Process in New York vs. Planning Process in Berlin

Mayor Michael Bloomberg initiated the process to *rethink the streets* in New York as part of his overall urban development agenda to foster city-wide urban and economic growth through the physical restructuring of the city. Therefore, he initiated the *rethinking* from the highest political position and fostered a process that was targeted, quick, and implementation-oriented. Only one week after *PlaNYC* had been published, Bloomberg appointed a new Transportation Commissioner, Janette Sadik-Khan, and with her brought new leadership to DOT that was able to reshape the department's political agenda and focus (see Ch. 3.2.1). She re-staffed key-positions of her department and created a new sub-division that was primarily responsible for joint bicycle, pedestrian and public space planning. Together with her new employees, she carried out what they called a strategic planning process within the agency, which was in the first place meant to unify the department behind the new agenda and find innovative and effective ways to reach *PlaNYC's* goals – or rather to implement the initiatives suggested therein. The DOT imported international best-practices, used plans and ideas that had been developed internally in the previous years, but could not find political approval and overall increased the department's knowledge-base in these realms through pertinent staffing-decisions that employed people from the bicycle, pedestrian, and livable streets advocacy into the department (see Ch. 3.2.1). The advocacy community in the early years of municipal rethinking had been going through a phase of

significant professionalization, initiated and funded by entrepreneur Mark Gorton. The New York City Streets Renaissance Campaign had unified bicycle and public space advocacy to jointly rally for more livable streets in the city and through the use of media strategies such as blogging and movie production provided a platform that was able to fundamentally contribute to a new discourse on streets (see Ch. 3.2.2).

To the contrary, the process in Berlin was not politically initiated, but rather built upon the work of the administration to change the political climate in regard to transportation planning and to build a political consensus among different actors in the field of transportation politics that would support the planning work of the Senate Department. As different actors in the realm of transport politics were quarreled, the main goal of the Senate Administration became the establishment of a dialogue. Therefore, representatives from different political interest groups and parties were integrated into the process to reflect the diverse opinions and demands within society in regard to mobility and transport. However, while in New York certain advocates received decision-making power as they were hired into the DOT and there could execute their ideas for the municipality, in Berlin the representatives of the interest groups never had any kind of decision-making power but rather functioned as a so called *Societal Soundboard* that was meant to reflect and enrich the work of the administration. The advocates remained consultative actors, while the final decision about strategies and measures to be manifested in the plan remained with the administrative officials who said to have chosen a balancing approach that aimed to integrate all the different interests into the *UDP Traffic*. This "balanced" consensus that was achieved among the actors involved and that was then manifested in the *UDP Traffic* was largely seen as the biggest success of the process as it should provide a reliable framework of action for the administration (see Ch. 4.1.3).

From these different procedures and goals also resulted quite different relations between planning and implementation processes. While in New York the change of the built environment and hence the implementation of projects was a

central part of the agenda, in Berlin the implementation of projects required other planning processes and negotiations on different scales (see Ch. 4.2.1).

To circumvent long planning negotiations prior to spatial transformation and to quickly change the built environment, the DOT mostly built its strategies upon a transfer of both internal and external knowledge, its own powers over space, low-key, temporal initiatives and repetition of spatial schemes as well as the cooperation with the private sector. Two of the core programs that in the early years fostered the spatial transformation of street space in the city, crucially built upon these core strategies: the *Public Plaza Program* and the *Bicycle Program* (see Ch. 3.3.1and 3.3.2). The *Public Plaza Program* was developed by the newly hired director of the program, Andy Wiley-Schwartz, who had come to DOT from the advocacy organization *Project for Public Spaces* where he had gained years of experience in community work and in remaking streets into places for public use. Thus he brought a new pool of knowledge into DOT and furthermore could build upon DOT's experience with the first of such places that was opened in Brooklyn already in 2006, before even *PlaNYC* had been published. He and his team developed a system that encouraged private sector involvement through a competitive application process and their commitment to provide for maintenance and programming of the *Plaza* once it would be implemented. In return, the DOT would fund and build the plaza and lead the process with the community. This system of private sector involvement and the use of temporal materials enabled the DOT to quickly spread the *Plazas* across the central areas of the city and to circumvent larger political conflicts. As they could be sure that a crucial alliance of business-owners and residents supported the project when they applied for it, and the temporal materials provided the strong argument of trying-it-out, of being able to take the project back in case it fails, the DOT minimized the risk of political conflict and resistance. Furthermore, the temporal initiatives covered a grey space in planning law so that formal processes could be left out and delayed to the capital planning process when the Plazas would eventually be made permanent. The bicycle program followed a similar logic: in the years before *PlaNYC* was published, the bicycle division had already been building up its capacities and had implemented first lanes in Brooklyn. To circumvent formal planning procedures, the DOT developed a palette of typologies of bicycle lanes and other necessary

amenities that would enable a quick implementation of the bicycle path on the street's surface without otherwise necessary processes of coordination of planning. The DOT often started with simple on-street bicycle lanes and markings that were further developed over time, when they had been accepted by abutters and attracted a growing number of cyclists. That way, the bicycle network has expanded all over the city, starting from the East River Bridges and the CBDs in Manhattan and Brooklyn.

On the opposite side in Berlin the implementation of the goals and measures developed in the *UDP Traffic* remained of secondary importance, as the plan itself for the administration seemingly marked the political success and further planning procedures were necessary to explicitly define and implement the initiatives proposed. First, they had to be further developed in sub-ordinate strategies that address one particular traffic mode such as the *Bicycle Strategy* or the *Pedestrian Strategy*. Moreover, the implementation of projects required the involvement of the districts as well as public financial and personnel means that were scarce in the city. However, it has been shown in Chapter 4.2.2 that the administration has taken a very cautious approach to street space as such to the extent that plans and concepts to remake street spaces and layouts did not exist. This was on the one hand rooted in the explicitly comprehensive and consensus-oriented perspective onto the mobility system and on the other hand in the worry of political conflict, resistance, or the production of seemingly inappropriate spaces which would be a-typical for the city and represent a "Disneyland"-character within Berlin, as Horst Wohlfarth von Alm from the Senate Department put it in an interview (see Ch. 4.2.2). While in New York the approach to streets was a very spatial one in that it was concentrated on the remaking of the physical space, in Berlin the approach to streets rather was focused on the mobility system and traffic flows. This included for example that the reorganization of street space was only possible in areas where the amount of car-traffic had been reduced so that it would still flow with fewer space as well as that the first initiatives to promote bicycling were focused on the connection of bicycles and public transport, bike-share and the piecemeal expansion of the bike-lane network through rather inconspicuously marked bicycle lanes. Striking spatial measures for years remained scarce in Berlin due to

long, on-going planning processes, a lack of financial and personnel means, and a lack of innovative approaches such as in New York that sped up implementation.

Thus, at the end of this process in New York the municipality had found efficient ways to create a new (though often transitory) spatial reality which serves as an imaginary of a different future and which is a strong political statement of the municipality that they are dedicated to changing the streetscape towards more livable spaces. The temporal measures– as they could be adapted, changed or taken aback – foster "Politics of Urban Experiment" (Karvonen et al. 2014) towards sustainable street spaces that might provoke political conflict also as a forum of discussion about possible futures. The Berlin Senate Department has largely neglected this possibility of instant changes as they stuck to long, formal planning procedures that in the end also did not eliminate political conflict (see Ch. 4.3.1 and 4.3.2). Nevertheless, while implementation was lacking behind, the planning process remained on-going so that the administration proceeded in detailing the overall strategy. Simultaneously, the demand for new street spaces developed in other realms: bicycling in the city has been steadily growing in the past years and related advocacy efforts have increasingly been professionalized; furthermore, within the *UDP Urban Centers*, streets have come into focus of urban development as recreational shopping areas that should strengthen Berlin's economic base. Furthermore, projects of pedestrianization, so called *Begegnungszonen* are being tested since 2016 along local shopping streets and in touristic centers. These projects show that, although the planning process has taken much longer, the difference between New York and Berlin starts to dwindle as the places created resemble similar if not the same typologies.

5.1.3 NEW STREET SPACES: INFRASTRUCTURE VS. PLACE

In both cities bicycle- and pedestrian-friendly street transformations have been promoted, though by quite different processes: while in New York planning and implementation were tightly linked, in Berlin these were elements of separated processes. It has been argued in the previous paragraphs that in New York the emphasis of both the planning and implementation process was primarily put on the production of new places, while in Berlin the planning procedure was rather focused on reconfiguring the entire mobility system and implementation of

projects remained secondary. However, over the years, more bicycle-lanes, new pedestrian spaces and livable street layouts have been created in both New York and Berlin, so that the implemented physical structures are widely the same (bicycle-lanes, pedestrianized areas, etc.). Moreover, despite the previously described planning and implementation processes, their diverging focus on streets as a public place versus streets as a mobility infrastructure as well as the time-frames of implementation, globally shifting practices, demands, and strategies of urban development have shaped new political and socio-spatial realities that once more bring the cases closer together (see Fig. 18).

	New York	Berlin
Bicycle Spaces	Infrastructure provision, creation of a network and new geographies	Existed; lack of infrastructure, closing gaps
	Coalition with advocates	Debate/ conflict with advocates
	Relatively low demand	Growing demand
Pedestrian Spaces	New geographies	Pilot projects in the inner city
	Pedestrians as consumers, shoppers, tourists	Pedestrians as consumers, shoppers, tourists
	Gentrification, growth	Gentrification, growth

Fig. 18: Bicycle and Pedestrian Spaces in New York and Berlin

In New York, entire new street geographies were produced through the repetitive implementation of *Public Plazas* and the massive expansion of the bicycle-lane network. By temporal means and through a distinct trying-it-out approach that circumvent formal planning procedures, the DOT has created new street spaces that represent new street images and that have attracted new or different people, users, and practices and changed the infrastructural connectivity in the city. From a mobility perspective, particularly the expansion of the bicycle-lane network provided new infrastructure for the then widely neglected and marginalized transportation mode of bicycling. Since then, and in particular since

the invention of the city's bike-share program the numbers of bicyclists have been continuously growing – although their overall share remains marginal compared to that of Berlin or other European cities. The provision of bicycle infrastructure has created an urban environment that encourages more people to cycle, because it provides safer and quicker routes in the congested city and has created a network that starts from the most frequented central business areas in the city.

To the contrary, Berlin already had a bicycle-lane network that resulted from planning activities since the 1970s. Since the early 2000s, the demand for more bicycle infrastructure has overhauled the supply: while ridership particularly in inner city districts has more than doubled and has been continuing to grow, Berlin annually builds between 25 and 30km of new bicycle-lanes compared to the average of 50 miles (80,5km) built bicycle-infrastructure in New York. As the implementation of strategies that had already been laid out in the *UDP Traffic* were lacking behind, new interest-groups formed that intensified the political debate about cycling in the city and thereby accumulated growing political power and influence. As was shown in Chapter 2.3.2, in the past years, bicyclists' political stand within urban transportation politics has accelerated in both the US and Germany. After decades of negligence, bicycling reemerged in the 1970s as an antagonistic mobile practice and political symbol that stood for a critique of the existing social, political, and economic order and for the demand for more environmental consciousness in governmental politics as well as for the right to the street of cyclists in an automobile world. Bicycle advocacy groups were formed that were dedicated to these causes and expressed their claims in rallies and demonstrations against car-infrastructure planning and unrestricted car-use in urban areas. However, while in Europe bicycle planning was already pursued in the 1970s and 80s, in the United States it was only in the early 1990s that federal traffic law was changed in such a way that bicycle and pedestrian projects were attributed with funding and personnel capacities to their use. Simultaneously, the first *Critical Mass* took place in San Francisco and set out to change both cycling culture and advocacy on a global scale. As it quickly transformed from a demonstration into a life style and party event, it can be seen as the initial momentum when bicycle advocacy turned away from primarily environmentalist claims towards the demand for independent, individual mobility and thereby not

only turned towards those characteristics that they share with drivers, but furthermore put the integration into the automobile system, the rally for a share of street space on the first place of their agenda while environmentalist claims were reduced to side-effects. This shift resembles 19th century urban dynamics, when elite cyclists (and later motorists) accumulated political power to change the previously existing street order as an expression of the new urban middle class' individualism, flexibility, and freedom (see Ch. 2.2.1). Moreover, it has formed the base for the growing coalition between advocates and planners that aim for a normalization of cycling and thereby have turned the bicycle from an oppositional vehicle into a symbol of the mainstream sustainable future and bolstered its political agency within contemporary street politics.

In New York, bicycle advocates were hired into the Department of Transportation and the cooperation between the municipality and advocacy groups was intensified to accelerate the expansion of the bicycle-lane network. Notwithstanding, it has also been shown that bicyclists' remain marginalized in daily traffic in New York: harassing police tactics as well as the events around the *Critical Mass Ride* 2004, when cyclists' got arrested for participating in that ride as well as the still relatively low riding statistics show that more is necessary to establish cycling as a viable, everyday transport-mode. In Berlin, advocacy groups received only advisory power within the planning process and the newly formed *Volksentscheid Fahrrad* – a group that quickly gained city-wide influence - was rather treated as an opponent instead of collaborator. On the one hand, the Senate Department for Urban Development that way missed a chance to gain political support for its own agenda to enhance the cycling conditions in the city. On the other hand, they thereby created a dissent that fostered a city-wide debate on cycling in the city that at least theoretically allows for a collection and negotiation of different perspectives on bicycle-transportation.

Furthermore, the evolved New York bicycle-lane network reproduced already existing geographies of image and capital production in the city center. The new bicycle lanes have been concentrated in the areas of most intense economic development in New York, namely Lower Manhattan and Western Brooklyn, to increase the traffic flow between those neighborhoods and districts and to show

that cycling contributes to, rather than hinders economic growth. These spatial patterns have been furthermore reinforced by the *Public Plaza Program.* The program has been immediately linked to BID activities that usually lead the community application program and that concentrate many of the initiatives in areas of economic production, local businesses, or tourist destinations. Most importantly the showcase project of the pedestrianization of *Times Square*, one of the most famous squares in the world, centrally located in Midtown, the touristic and economic hotspot of the city.

Also in Berlin, spatial patterns of street transformation have emerged that reflect the production of new street spaces in areas of shopping, consumption or sight-seeing. The pilot projects of the *Begegnungszonen* are located either in central touristic areas or along important local shopping streets in inner city districts. Moreover, those streets that are remade in the context of the *UDP Centers 3* are all linked to the restructuring of retail in that area to increase the attractiveness of the street as a shopping destination. The process at *Karl-Marx-Strasse* is led by a management institution *Aktion Karl Marx Strasse* that connects private and public actors to improve the shopping experience and the overall attraction of the street and its adjacent neighborhood that is under major redevelopment. As these redevelopments displace grown local structures, residents, and consumers, they contribute to state-led gentrification processes in the district of *Neukölln.*

Thus, in both case studies the production of walkable areas or of 'livable' streets that should provide a high quality of place to people is tightly linked to areas of economic production and consumption and particularly addresses streets that provide a high density of shops, restaurants, cafes and the like – in other words areas that underlie processes of gentrification which are often linked to the remaking of places of consumption that are located in central areas and address the favored lifestyle of a desired urban middle-class, both as residents and tourists (see Ch. 2.3.3). Thereby, the pedestrian is primarily produced as shopper and consumer that on the one hand needs space to flow to access destinations of consumption and on the other hand is provided with spaces designed for people to stay. Unlike bicyclists, pedestrians are largely lacking influential advocacy groups or a public debate in both cities. Although both cities do have programs to improve

safety on city streets in particular for children and the elderly, to ease pedestrian crossing of broad streets or to improve pedestrian connectivity, the urban development discourse is mainly shaped by the above described constructions of pedestrianism. Similar to the bicycle policies, this also resembles processes of pedestrianism that emerged in the 19th century, when it became a desired street activity as both a social practice of display and leisure of the new urban middle and upper classes and a part of the expanding transportation system along with the emergence of modern metropolitan streets as an instrument to order the growing industrial metropoles (see Ch. 2.1.3).

Thus, the politics of contemporary street space emerge between the pressures of the urban economy that is inherently both global and local, shifting mobility demands that are expressed through a global movement of interest-driven politics, and the provision of quality-of-life in areas of economic growth and (state-led) gentrification. While the political actors in New York from the beginning pursued these goals within an overall agenda of urban economic development, the administration in Berlin started from an agenda of transforming and urbanizing transport. However, in recent years the technocratic mobility agenda has increasingly been flanked by political interests that point to the same global dynamics and developments that initiated the transformation process in New York.

Thus, the transformation of streets and the promotion of walking and bicycling is not encouraged to develop a more sustainable, healthier, post-automobile system of urban transport – as the paradigm of *Sustainable Mobility* suggests – but rather to spur urban development and to govern public space through a pragmatic and technocratic approach of mobility and flow. Planners and citizens have to become aware that the technocratic perspective onto streets as a space for sustainable mobility is insufficient as it disguises the multiple political interlinkages and contestations that are happening on a global and local scale in metropolitan streets. As these dynamics shape urban street spaces, the integration of the spatial perspective into planning processes helps to understand the multiple linkages between urban and transport development between mobility and quality-of-place, economy, ecology, and the social realm, as well as the global and local scales. It has been shown in this work that the focus of the mainstream

sustainability paradigm in regard to streets increasingly blurs in favor of the economy and economic urban development. Therefore, planners have to take action to rethink their once oppositional concepts and particularly strengthen the socio-political perspective and its relation to ecological goals.

6 BIBLIOGRAPHY

Alrock, Uwe; Bodenschatz, Harald; Bohne, Rainer; Frinken, Matthias; Kegler, Harald; Kurth, Detlef et al. (2013): Der Grosse Plan. Aktuelle Beiträge zum Städtebau. Edited by SRL - Vereinigung für Stadt-, Regional- und Landesplanung e.V. (Schriftenreihe, 56).

Amato, Joseph Anthony (2004): On foot. A history of walking in New York: New York University Press.

Architekten- und Ingenieur Verein zu Berlin e.V. (Ed.) (2009): Berlin und seine Bauten. Teil I - Städtebau. Berlin: DOM publishers.

Bahrdt, Hans Paul (1978): Die Straße als Kommunikationsfeld. In *Die Alte Stadt* 1978 (2/3), pp. 196–207.

Ballon, Hilary (2012): The greatest grid. The master plan of Manhattan, 1811-2011 in New York: Columbia University Press.

Ballon, Hilary; Jackson, Kenneth T.; Moses, Robert (Eds.) (2007): Robert Moses and the modern city. The transformation of New York ; Queens Museum of Art; Miriam and Ira D. Wallach Art Gallery; Exhibition Robert Moses and the Modern City. 1. ed. in New York, NY: Norton.

Beatley, Timothy (2012): Sustainability in Planning: The Arc and Trajectory of a Movement, and New Directions for the Twenty-First-Century-City. In Bishwapriya Sanyal, Lawrence J. Vale, Christina D. Rosan (Eds.): Planning ideas that matter. Livability, territoriality, governance, and reflective practice. Cambridge Mass.: MIT Press, pp. 91–124.

Bechtler, Cornelius; Hänel, Anja; Laube, Marion; Pohl, Wolfgang; Schmidt, Florian (Eds.) (2010): Shared Space. Beispiele und Argumente für lebendige öffentliche Räume in Bielefeld: AKP Verein zur Förderung Kommunalpolitischer Arbeit - Alternative Kommunalpolitik.

Bedarida, Francois; Sutcliffe, Anthony (1980): The Street in the Structure and Life of the City. Reflections on Nineteenth-Century London and Paris. In *Journal of Urban History* (6), pp. 379–396.

Bender, Thomas (2014): History, Theory, and the Metropolis. In Dorothee Brantz, Sasha Disko, Georg Wagner-Kyora (Eds.): Thick Space. Bielefeld: Transcript, pp. 125–140.

Benevolo, Leonardo (1998): Die Stadt in der europäischen Geschichte. 2. ed. München: Beck .

Benjamin, Walter; Tiedemann, Rolf (1983, 1982): Das Passagen-Werk. Frankfurt am Main: Suhrkamp.

Bernt, Matthias; Grell, Britta; Holm, Andrej (2013): Introduction. In Matthias Bernt, Britta Grell, Andrej Holm (Eds.): The Berlin Reader. A compendium on urban change and activism. Bielefeld: Transcript (Urban Studies), pp. 11–21.

Bernt, Matthias; Grell, Britta; Holm, Andrej (Eds.) (2013): The Berlin Reader. A compendium on urban change and activism in Bielefeld: Transcript (Urban Studies).

Bezirksamt Tempelhof Schöneberg (2015): Pilotvorhaben Begegnungszone Maaßenstraße. Nutzungs- und Gestaltungsstatut in Berlin. Available online at http://www.berlin.de/ba-tempelhof-schoeneberg/politik-und-verwaltung/aemter/strassen-und-gruenflaechenamt/strassen-gruenflaechen-verwaltung/genehmigungen-sondernutzungserlaubnisse-und-ausnahmegenehmigungen-350190.php, checked on 2/15/2017.

Birkholz, Tim; Lehmann, Tim (2016): Volksentscheid Fahrrad in Berlin. 105.425 Unterschriften für eine fahrradfreundliche Stadtplanung. In *PLANERIN* (4), pp. 47–48.

Blickstein, Susan G. (2010): Automobility and the Politics of Bicycling in New York City. In *International Journal of Urban and Regional Research* 34 (4), pp. 886–905.

Bliemer, Michiel C J; Mulley, Corinne; Moutou, Claudine J. (Eds.) (2016): Handbook on transport and urban planning in the developed world in Cheltenham, UK, Northampton, MA, USA: Edward Elgar Publishing.

Blomley, Nicholas K. (2007): Civil Rights Meet Civil Engineering. Urban Public Space and Traffic Logic. In *Canadian Journal of Law and Society* 22 (2), pp. 55–72.

Blomley, Nicholas K. (2011): Rights of passage. Sidewalks and the regulation of public flow. 1. Aufl. in London: Routledge.

Bluestone, Daniel (1997): "The Pushcart Evil". In David Ward, Olivier Zunz (Eds.): The landscape of modernity. New York City, 1900-1940. Baltimore: Johns Hopkins University Press, pp. 287–312.

Bodenschatz, Harald (2009): Städtebau von den neunziger Jahren des19. Jahrhunderts bis zum Ersten Weltkrieg. 1890-1918. In Architekten- und Ingenieur Verein zu Berlin e.V. (Ed.): Berlin und seine Bauten. Teil I - Städtebau. Berlin: DOM publishers, pp. 13–109.

Bodenschatz, Harald (2010): Städtebau in Berlin. Schreckbild und Vorbild für Europa in Berlin: DOM Publishers.

Bodenschatz, Harald (2013): Aufstieg und Fall der großstädtischen Hauptstraßen. In Harald Bodenschatz, Aljoscha Hofmann, Cordelia Polinna (Eds.): Radialer Städtebau. Abschied von der autogerechten Stadtregion. Berlin: DOM publishers, pp. 27–37.

Bodenschatz, Harald; Hofmann, Aljoscha; Polinna, Cordelia (Eds.) (2013): Radialer Städtebau. Abschied von der autogerechten Stadtregion. Berlin: DOM publishers (Grundlagen, 23).

Bogner, Alexander; Littig, Beate; Menz, Wolfgang (Eds.) (2009): Experteninterviews. Theorien, Methoden, Anwendungsfelder. 3., grundlegend überarbeitete Auflage in Wiesbaden: VS Verlag für Sozialwissenschaften.

Brantz, Dorothee; Disko, Sasha; Wagner-Kyora, Georg (Eds.) (2014): Thick Space. Bielefeld: Transcript.

Brash, Julian (2011): Bloomberg's New York. Class and governance in the luxury city. Athens: University of Georgia Press.

Briese, Volker (Ed.) (1995): Wege zur Fahrradgeschichte. Beiträge der Fahrradhistorischen Tagung des Allgemeinen Deutschen Fahrrad-Clubs im Historischen Museum Bielefeld 1994. Fahrradhistorische Tagung; Allgemeiner Deutscher Fahrrad-Club; Historisches Museum Bielefeld in Bielefeld: Bielefelder Verl.-Anst (Schriften der Historischen Museen der Stadt Bielefeld, Bd. 5).

Brüdermann, Stefan (1995): Fahrradgeschichte als Regional- und Lokalgeschichte. Polizeirechtliche und soziale Aspekte des Fahrradverkehrs vor 1914. Das Beispiel des Herzogtums Braunschweig. In Volker Briese (Ed.): Wege zur Fahrradgeschichte. Beiträge der Fahrradhistorischen Tagung des Allgemeinen Deutschen Fahrrad-Clubs im Historischen Museum Bielefeld 1994. Bielefeld: Bielefelder Verl.-Anst (Schriften der Historischen Museen der Stadt Bielefeld, Bd. 5), pp. 33–46.

Bucksch, Jens; Schneider, Sven (Eds.) (2014): Walkability. Das Handbuch zur Bewegungsförderung in der Kommune. Verlag Hans Huber.

Bundesministerium für Verkehr und digitale Infrastruktur (Ed.) (2015): Verkehr in Zahlen 2014/ 2015. With assistance of Sabine Radke. Deutsches Institut für Wirtschaftsforschung. 43. Jg in Hamburg: Dt. Verkehrs-Verl.

Burrows, Edwin G.; Wallace, Mike (1999): Gotham. A history of New York City to 1898 in New York: Oxford University Press.

Calbet i Elias, Laura; Hutterer, Florian; Uttke, Angela (2013): 150 Jahre Hobrechtplan. Die wiederkehrende Frage nach dem grossen Plan. In SRL - Vereinigung für Stadt-, Regional- und Landesplanung e.V. (Ed.): Der Grosse Plan. Aktuelle Beiträge zum Städtebau (Schriftenreihe, 56), pp. 123–125.

Caro, Robert A. (1975): The power broker. Robert Moses and the fall of New York in New York: Vintage Books.

Cohen, Nevin; Robbins, Paul (Eds.) (2011): Green Cities. An A-to-Z Guide in Thousand Oaks: SAGE Publications (Green Society. Towards a Sustainable Future).

Conley, Jim; McLaren, Arlene Tigar (Eds.) (2009): Car troubles. Critical studies of automobility and auto-mobility in Farnham, England, Burlington, VT: Ashgate Pub.

Denters, Bas; Mossberger, Karen (2006): Building Blocks for a Methodology for Comparative Urban Political Research. In *Urban Affairs Review* 41 (4), pp. 550–571.

Department of Transportation of New York City (2008a): World Class Streets. Remaking New York City's Public Realm. Available online at http://www.nyc.gov/html/dot/downloads/pdf/WCS_Gehl_08_spreads.pdf, updated on 12/4/2008, checked on 9/19/2012.

Department of Transportation of New York City (2008b): Sustainable Streets. Strategic Plan for the New York Department of Transportation 2008 and beyond. Department of Transportation of New York City in New York, NY. Available online at http://www.nyc.gov/html/dot/downloads/pdf/stratplan_compplan.pdf, checked on 12/2/2011.

Department of Transportation of New York City (2009): Street Design Manual. Available online at http://www.nyc.gov/html/dot/downloads/pdf/sdm_lores.pdf, updated on 7/12/2010, checked on 9/19/2012.

Department of Transportation of New York City (2010): Green Light for Midtown. Evaluation Report. Available online at http://www.nyc.gov/html/dot/downloads/pdf/broadway_report_final2010_web2.pdf, updated on 2/17/2010, checked on 1/27/2012.

Department of Transportation of New York City (2015): Bicycle Network Development. With assistance of Alan Ma. Available online at http://www.nyc.gov/html/dot/downloads/pdf/bikeroutedetailscy06-cy15.pdf.

Dittfurth, Udo (2014): Verkehrsplanung in West-Berlin. Ein Bericht aus dem Ideologischen Sektor. In Günter Schlusche, Verena Pfeiffer-Kloss, Gabriele Dolff-Bonekämper, Axel Klausmeier (Eds.): Stadtentwicklung im doppelten Berlin. Zeitgenossenschaften und Erinnerungsorte. Berlin: CH. Links Verlag, pp. 226–241.

Domosh, Mona (1998): Those "Gorgeous Incongruities": Polite Politics and Public Space on the Streets of Nineteenth-Century New York City. In *Annals of the Association of American Geographers* (Vol. 88, No. 2), pp. 209–226.

Duneier, Mitchell; Carter, Ovie (2001): Sidewalk. New York: Farrar Straus and Giroux.

Düwel, Jörn; Gutschow, Niels (2009): Städtebau vom Ersten Weltkrieg bis zu den "Grenzen des Wachstums" in den frühen siebziger Jahren. In Architekten- und Ingenieur Verein zu Berlin e.V. (Ed.): Berlin und seine Bauten. Teil I - Städtebau. Berlin: DOM publishers, pp. 111–345.

Ebert, Anne-Katrin (2010): Radelnde Nationen. Die Geschichte des Fahrrads in Deutschland und den Niederlanden bis 1940. Frankfurt, New York: Campus Verlag.

Epperson, Bruce D. (2014): Bicycles in American highway planning. The critical years of policy-making, 1969-1991. Jefferson, North Carolina: McFarland & Company, Inc., Publishers.

Federal Highway Administration (2003): Accommodating Bicycle and Pedestrian Travel: A Recommended Approach. Available online at http://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/design_guidance/design.cfm, checked on 6/6/2012.

Flick, Uwe (2007): Qualitative Sozialforschung. Eine Einführung. Orig.-Ausg., vollst. überarb. und erw. Neuausg. in Reinbek bei Hamburg: Rowohlt-Taschenbuch-Verl.

Flick, Uwe; Kardorff, Ernst von; Steinke, Ines (Eds.) (2008): Qualitative Forschung. Ein Handbuch. 6th ed. in Reinbek bei Hamburg: Rowohlt-Taschenbuch-Verl.

Florida, Richard (2006): The rise of the creative class. And how it's transforming work, leisure, community and everyday life. NY: Basic Books.

Fraunholz, Uwe (2002): Motorphobia. Anti-automobiler Protest in Kaiserreich und Weimarer Republik. Göttingen: Vandenhoeck & Ruprecht.

Fyfe, Nicholas R. (Ed.) (1998a): Images of the street. Planning, identity, and control in public space. London, New York: Routledge.

Fyfe, Nicholas R. (1998b): Introduction. Reading the Street. In Nicholas R. Fyfe (Ed.): Images of the street. Planning, identity, and control in public space. London, New York: Routledge, pp. 1–10.

Gehl, Jan (2010): Cities for people. Washington, DC: Island Press.

Gehl, Jan (2011): Life between buildings. Using public space. 6th ed. Washington, DC: Island Press.

Geschke, Sandra Maria (Ed.) (2009): Straße als kultureller Aktionsraum. Interdisziplinäre Betrachtungen des Straßenraumes an der Schnittstelle zwischen Theorie und Praxis. VS Verlag für Sozialwissenschaften.

Gilderbloom, John I.; Riggs, William W.; Meares, Wesley L. (2015): Does Walkability Matter? An Examination of Walkability's Impact on Housing Values, Forclosures and Crime. In *Cities* (42), pp. 13–24.

Gläser, Jochen; Laudel, Grit (2010): Experteninterviews und qualitative Inhaltsanalyse. 4. Auflage, Wiesbaden: VS Verlag.

Grawenhoff, Sören; Motzkus, Arnd (Eds.) (2009): Urbane Mobilität. Verkehrsforschung des Bundes für die kommunale Praxis. Bremerhaven: Wirtschaftsverl. NW Verl. für neue Wissenschaft (direkt, 65).

Greenberg, Miriam (2008): Branding New York. How a city in crisis was sold to the world. New York: Routledge.

Gutfreund, Owen D. (2004): Twentieth century sprawl. Highways and the reshaping of the American Landscape in New York: Oxford University Press.

Gutfreund, Owen D. (2007): Rebuilding New York in the Auto Age. Robert Moses and his highways. In Hilary Ballon, Kenneth T. Jackson, Robert Moses (Eds.): Robert Moses and the modern city. The transformation of New York. New York, NY: Norton, pp. 86–93.

Harvey, David (2003): Paris, Capital of Modernity. New York: Routledge.

Harvey, David (2008): The Right to the City. In *NLR* (53), pp. 23–40.

Hass-Klau, Carmen (2015): The pedestrian and the city. London, New York: Routledge.

Häussermann, Hartmut; Kapphan, Andreas (2000): Berlin, von der geteilten zur gespaltenen Stadt? Sozialräumlicher Wandel seit 1990. Opladen: Leske + Budrich.

Held, Martin (2007): Nachhaltige Mobilität. In Oliver Schöller (Ed.): Handbuch Verkehrspolitik. Wiesbaden: VS, Verl. für Sozialwiss, pp. 851–876.

Henderson, Jason (2013): Street fight. The politics of mobility in San Francisco. Amherst and Boston: University of Massachusetts Press.

Herlihy, David V. (2004): Bicycle. The history. New Haven: Yale University Press.

Hodson, Mike; Marvin, Simon (Eds.) (2014): After Sustainable Cities? New York: Routledge.

Hofmann, Aljoscha; Polinna, Cordelia; Richter, Jana; Schlaack, Johanna; Bodenschatz, Harald; Machleidt, Hildebrand (2013): Hauptstraßen der Großstadt: Vom Verkehrsraum zum Stadtraum. In Harald Bodenschatz, Aljoscha Hofmann, Cordelia Polinna (Eds.): Radialer Städtebau. Abschied von der autogerechten Stadtregion. Berlin: DOM publishers, pp. 13–25.

Hohm, Hans-Jürgen (1997a): Die Straße als Ort automobiler Inklusion. In Hans-Jürgen Hohm (Ed.): Strasse und Strassenkultur. Interdisziplinäre Beobachtungen eines öffentlichen Sozialraumes in der fortgeschrittenen Moderne. Konstanz: UVK Univ.-Verl. Konstanz, pp. 23–81.

Hohm, Hans-Jürgen (Ed.) (1997b): Strasse und Strassenkultur. Interdisziplinäre Beobachtungen eines öffentlichen Sozialraumes in der fortgeschrittenen Moderne. Konstanz: UVK Univ.-Verl. Konstanz.

Holzapfel, Helmut (2012): Urbanismus und Verkehr. Bausteine für Architekten, Stadt- und Verkehrsplaner. Wiesbaden: Vieweg + Teubner Verlag.

Hopf, Christel (2008): Qualitative Interviews - ein Überblick. In Uwe Flick, Ernst von Kardorff, Ines Steinke (Eds.): Qualitative Forschung. Ein Handbuch. 6th ed. Reinbek bei Hamburg: Rowohlt-Taschenbuch-Verl., pp. 349–360.

Horton, Dave (2006): Environmentalism and the Bicycle. In *Environmental Politics* 15 (1), pp. 41–58.

ICLEI - Local Governments for Sustainability (2010): The Process Behind PlaNYC. How the City of New York Developed its Comprehensive Long-Term Sustainability Plan. With assistance of The Mayor's Office for Long-Term Planning and Sustainability. Available online at http://nytelecom.vo.llnwd.net/o15/agencies/planyc2030/pdf/iclei_planyc_case_study_201004.pdf, checked on 2/24/2014.

Ingenieurbüro für Verkehrserhebungen, -statistik und -planung (2015): Fahrradverkehr-Pegelzählungen Berlin - Jahresbericht 2014 in Berlin. Available online at http://www.stadtentwicklung.berlin.de/verkehr/lenkung/vlb/download/bericht_radverkehr_2014.pdf, checked on 2/14/2017.

Jacobs, Jane (1961): The Death and Life of Great American Cities. Vintage Books ed. in New York: Vintage Books.

Jain, Angela; Moraglio, Massimo (2014): Struggling for the use of urban streets: preliminary (historical) comparison between European and Indian cities. In *International Journal of the Commons* 8 (2), pp. 513–530.

Kalender, Ural (2012): Die Geschichte der Verkehrsplanung Berlins. Köln: Forschungsges. für Straßen- und Verkehrswesen.

Källtorp, Ove (Ed.) (1997): Cities in Transformation. Social and Symbolic Change of Urban Space.: Avebury.

Kantor, Paul; Savitch, H. V. (2005): How to Study Comparative Urban Development Politics: A Research Note. In *International Journal of Urban and Regional Research* 29 (1), p. 153.

Karvonen, Andrew; Evans, James; van Heur, Bas (2014): The Politics of Urban Experiments. Radical change or business as usual? In Mike Hodson, Simon Marvin (Eds.): After Sustainable Cities? New York: Routledge, pp. 104–115.

Kirchhof, Astrid Mignon (2015): "For a Decent Quality of Life": Environmental Groups in East and West Berlin. In *Journal of Urban History* 41 (4), pp. 625–646.

Knoflacher, Hermann (1996): Zur Harmonie von Stadt und Verkehr. Freiheit vom Zwang zum Autofahren. 2nd ed. Wien: Böhlau.

Koolhaas, Rem (1994): Delirious New York. A retroactive manifesto for Manhattan. New York: Monacelli Press.

Krätke, Stefan (2004): Economic Restructuring and the Making of a Financial Crisis. Berlin's Socio-Economic Development Path 1989 to 2004. In *disp - The Planning Review* (156), pp. 58–63.

Krause, Ludwig (2014): Verkehrsplanung für die Hauptstadt der DDR. Ein Bericht aus Akteursperspektive. In Günter Schlusche, Verena Pfeiffer-Kloss, Gabriele Dolff-Bonekämper, Axel Klausmeier (Eds.): Stadtentwicklung im doppelten Berlin. Zeitgenossenschaften und Erinnerungsorte. 1. Auflage. Berlin: CH. Links Verlag (Beiträge zur Geschichte von Mauer und Flucht), pp. 216–225.

Krusche, Jürgen (2011): Strassenräume Berlin Shanghai Tokyo Zürich. Eine foto-ethnografische Untersuchung.nBaden: Müller.

Lay, Maxwell G. (1992): Ways of the world. A history of the world's roads and of the vehicles that used them. New Brunswick N.J.: Rutgers University Press.

Lefebvre, Henri (1991): The Production of Space. Malden, Mass.: Blackwell.

Lefebvre, Henri (2003): The Urban Revolution in Minneapolis: University of Minnesota Press.

Levels, Annika (2013): New York: Planung und Umsetzung des Sustainable Streets Strategic Plan. In Harald Bodenschatz, Aljoscha Hofmann, Cordelia Polinna (Eds.): Radialer Städtebau. Abschied von der autogerechten Stadtregion. Berlin: DOM publishers, pp. 156–163.

Loukaitou-Sideris, Anastasia; Ehrenfeucht, Renia (2012): Sidewalks. Conflict and Negotiation Over Public Space: MIT Press Ltd.

Low, Nicholas (2013): From Automobility to Sustainable Transport. In Nicholas Low (Ed.): Transforming urban transport. The ethics, politics and practices of sustainable mobility. London, New York: Routledge, pp. 57–84.

Low, Nicholas (Ed.) (2013): Transforming urban transport. The ethics, politics and practices of sustainable mobility in London, New York: Routledge.

Lutz, Sabine (2010): Shared Space - Raum für alle. In Cornelius Bechtler, Anja Hänel, Marion Laube, Wolfgang Pohl, Florian Schmidt (Eds.): Shared Space. Beispiele und Argumente für lebendige öffentliche Räume. Bielefeld: AKP Verein zur Förderung Kommunalpolitischer Arbeit - Alternative Kommunalpolitik, pp. 19–29.

Lynch, Kevin (1960): The Image of the City. Cambridge, Mass.: MIT Press

Mapes, Jeff (2009): Pedaling revolution. How cyclists are changing American cities. Corvallis OR: Oregon State University Press.

Marcuse, Peter (1987): The grid as city plan: New York and laissez-faire planning in the nineteenth century. In *Planning Perspectives* 2 (3).

Martin, George (2009): The Global Intensification of Motorization and Its Impacts on Urban Social Ecologies. In Jim Conley, Arlene Tigar McLaren (Eds.): Car troubles. Critical studies of automobility and auto-mobility. Farnham, England, Burlington, VT: Ashgate Pub., pp. 219–233.

McShane, Clay (1979): Transforming the Use of Urban Space: A Look at the Revolution in Street Pavements, 1880-1924. In *Journal of Urban History* (5), pp. 279–307.

McShane, Clay (1994): Down the asphalt path. The automobile and the American city in New York: Columbia University Press.

Meadows, Donella H.; Meadows, Dennis L.; Randers, Jorgen; Behrens, William W. (Eds.) (1972): The Limits to growth. A report for the Club of Rome's project on the predicament of mankind. Club of Rome. New York: Universe Books.

Merki, Christoph Maria (2002): Der holprige Siegeszug des Automobils 1895-1930. Zur Motorisierung des Strassenverkehrs in Frankreich, Deutschland und der Schweiz. Wien: Böhlau.

Meschik, Michael; Traub, Robert (2008): Planungshandbuch Radverkehr. Springer-Verlag/Wien.

Mitscherlich, Alexander (2013): Die Unwirtlichkeit unserer Städte. Anstiftung zum Unfrieden. 27th ed., Frankfurt am Main: Suhrkamp (Edition Suhrkamp, 123).

Mollenkopf, John (Ed.) (2005): Contentious City. The politics of recovery in New York City in New York: Russell Sage Foundation.

Mollenkopf, John (2005): How 9/11 Reshaped the Political Environment in New York. In John Mollenkopf (Ed.): Contentious City. The politics of recovery in New York City. New York: Russell Sage Foundation, pp. 205–222.

Motzkus, Arnd (2009): Nationale Verkehrspolitik und urbane Mobilität. Von der Forschung zur Praxis im Spannungsfeld von Stadt und Verkehr. In Sören Grawenhoff, Arnd Motzkus (Eds.): Urbane Mobilität. Verkehrsforschung des Bundes für die kommunale Praxis. Bremerhaven: Wirtschaftsverl. NW Verl. für neue Wissenschaft (direkt, 65), pp. 23–37.

Nadin, Vincent (2012): International Comparative Planning Methodology: Introduction to the Theme Issue. In *Planning Practice and Research* 27 (1), pp. 1–5.

National Association of City Transportation Officials (2014): Urban Bikeway Design Guide. Second edition in New York: National Association of City Transportation Officials. Available online at http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=806098.

National Association of City Transportation Officials (2016): Global Street Design Guide in Covelo: Island Press. Available online at http://gbv.eblib.com/patron/FullRecord.aspx?p=4721418.

Newman, Peter; Kosonen, Leo; Kenworthy, Jeffrey (2016): Theory of Urban Fabrics: Planning the walking, transit/ public transport and automobile/ motor car cities for reduced car dependency. In *Town Planning Review* 87 (4), pp. 429–458.

Norton, Peter D. (2007): Street Rivals: Jaywalking and the Invention of the Motor Age Street. In *Technology and Culture* (48, 2), pp. 331–359.

Norton, Peter D. (2008): Fighting traffic. The dawn of the motor age in the American city in Cambridge, Mass: MIT Press.

Norton, Peter D. (2015): Of Love Affairs and Other Stories. In Stephen Zavestoski, Julian Agyeman (Eds.): Incomplete streets. Processes, practices and possibilities. London, New York: Routledge, pp. 17–35.

Pegels, Juliane (2004): Privately owned public space: New York Citys Erfahrungen im Umgang mit öffentlich nutzbaren Räumen, die sich in privatem Besitz befinden. Dissertation. RWTH, Aachen.

Pooley, Colin (2013): Promoting Walking and Cycling. New Perspectives on Sustainable Travel. With assistance of Tim Jones, Miles Tight, Dave Horton, Griet Scheldeman, Caroline Mullen, Ann Jopson, Emanuele Strano. Bristol: Policy Press.

Pucher, John R.; Buehler, Ralph (Eds.) (2012a): City cycling in Cambridge Mass.: MIT Press.

Pucher, John R.; Buehler, Ralph (2012b): Promoting Cycling for Daily Travel: Conclusions and Lessons from across the Globe. In John R. Pucher, Ralph Buehler (Eds.): City cycling. Cambridge Mass.: MIT Press, pp. 347–363.

Radkau, Joachim (1995): Das Fahrrad in den Technikvisionen der Jahrhundertwende oder: Das Erlebnis in der Technikgeschichte. In Volker Briese (Ed.): Wege zur Fahrradgeschichte. Beiträge der Fahrradhistorischen Tagung des Allgemeinen Deutschen Fahrrad-Clubs im Historischen Museum Bielefeld 1994. Bielefeld: Bielefelder Verl.-Anst (Schriften der Historischen Museen der Stadt Bielefeld, Bd. 5), pp. 9–32.

Reblin, Eva (2012): Die Straße, die Dinge und die Zeichen. Zur Semiotik des materiellen Stadtraums. Bielefeld: Transcript (Urban Studies).

Robinson, Jennifer (2011): Cities in a World of Cities: The Comparative Gesture. In *International Journal of Urban and Regional Research* 35.1.

Roess, Roger P.; Sansone, Gene (2012): The wheels that drove New York. A history of the new york city transit system. New York: Springer.

Roost, Frank (2000): Die Disneyfizierung der Städte. Großprojekte der Entertainmentindustrie am Beispiel des New Yorker Times Square und der Siedlung Celebration in Florida. Opladen: Leske und Budrich.

Rosen, Paul; Cox, Peter; Horton, David (Eds.) (2007): Cycling and society. Aldershot, England, Burlington, VT: Ashgate (Transport and society).

Russo, Ryan; Wade, Randy; Benson, Joshua; Lucas, Christopher (2008): Ninth Avenue Bicycle Path and Complete Street. Department of Transportation of New York City. Available online at http://www.nyc.gov/html/dot/downloads/pdf/rr_ite_08_9thave.PDF.

Sachs, Wolfgang (1992): For love of the automobile. Looking back into the history of our desires. Berkeley: University of California Press.

Sadik Khan, Janette (2008): Janette Sadik-Khan's "Sustainable Streets". Available online at http://www.streetfilms.org/janette-sadik-khans-sustainable-streets/, checked on 12/9/2011.

Sadik-Khan, Janette; Solomonow, Seth (2016): Streetfight. A Handbook For An Urban Revolution. New York: Viking.

Sanyal, Bishwapriya; Vale, Lawrence J.; Rosan, Christina D. (Eds.) (2012): Planning ideas that matter. Livability, territoriality, governance, and reflective practice. Cambridge Mass.: MIT Press.

Sassen, Saskia (1991): The Global City. New York, London, Tokyo in Princeton, NJ: Princeton University Press.

Schiller, Preston L.; Bruun, Eric Christian; Kenworthy, Jeffrey R. (2010): An introduction to sustainable transportation. Policy, planning and implementation. London, Washington: Earthscan.

Schlusche, Günter; Pfeiffer-Kloss, Verena; Dolff-Bonekämper, Gabriele; Klausmeier, Axel (Eds.) (2014): Stadtentwicklung im doppelten Berlin. Zeitgenossenschaften und Erinnerungsorte. Berlin: CH. Links Verlag.

Schmucki, Barbara (1995): Automobilisierung. Neuere Forschungen zur Motorisierung. In *Archiv für Sozialgeschichte* (35), pp. 582–597.

Schmucki, Barbara (1999): Vom Schwung der Fahrt zur Form der Strasse : Veränderungen des städtischen Raums im Zeichen der Massenmotorisierung. In *Traverse: Zeitschrift für Geschichte* (2), pp. 151–170.

Schmucki, Barbara (2001): Der Traum vom Verkehrsfluss. Städtische Verkehrsplanung seit 1945 im deutsch-deutschen Vergleich in Frankfurt, New York: Campus-Verl.

Schöller, Oliver (Ed.) (2007): Handbuch Verkehrspolitik. Wiesbaden: VS, Verl. für Sozialwiss.

Schweizer, Thomas (2010): Begegnungszonen in der Schweiz - ein Erfolgsmodell. In Cornelius Bechtler, Anja Hänel, Marion Laube, Wolfgang Pohl, Florian Schmidt (Eds.): Shared Space. Beispiele und Argumente für lebendige öffentliche Räume. Bielefeld: AKP Verein zur Förderung Kommunalpolitischer Arbeit - Alternative Kommunalpolitik, pp. 87–101.

Senatsverwaltung für Stadtentwicklung (2011a): Stadtentwicklungsplan Zentren 3. Available online at http://www.stadtentwicklung.berlin.de/planen/stadtentwicklungsplanung/download/zentren/2011-07-31_StEP_Zentren3.pdf, updated on 7/18/2011, checked on 9/17/2012.

Senatsverwaltung für Stadtentwicklung (2013): Neue Radverkehrsstrategie für Berlin in Berlin. Available online at http://www.stadtentwicklung.berlin.de/verkehr/politik_planung/rad/strategie/download/radverkehrsstrategie_senatsbeschluss.pdf.

Senatsverwaltung für Stadtentwicklung, Abt VII Verkehr (2011b): Stadtentwicklungsplan Verkehr. With assistance of Burkhard Horn, Friedemann Dr. Kunst, Birgit Beck, Hermann Blümel, Joachim Krey, Julius Menge et al. Edited by Land Berlin in Berlin. Available online at http://www.stadtentwicklung.berlin.de/verkehr/politik_planung/step_verkehr/download/Stadtentwicklungsplan_Verkehr_Berlin_gesamt.pdf, checked on 2/23/2017.

Senatsverwaltung für Stadtentwicklung, Abt VII Verkehr (2011c): Mobilitätsprogramm 2016 des Stadtentwicklungsplan Verkehr. Edited by Abt VII Verkehr Senatsverwaltung für Stadtentwicklung. Land Berlin in Berlin. Available online at http://www.stadtentwicklung.berlin.de/verkehr/politik_planung/step_verkehr/download/Mobilitaetsprogramm2016.pdf, checked on 6/25/2012.

Senatsverwaltung für Stadtentwicklung Berlin (2004): Radverkehrsstrategie für Berlin. Vorlage - zur Kenntnisnahme - in Berlin. Available online at http://www.stadtentwicklung.berlin.de/verkehr/politik_planung/rad/strategie/download/Fahrradstrategie.pdf, checked on 2/1/2013.

Senatsverwaltung für Stadtentwicklung Berlin (2011): Fußverkehrsstrategie für Berlin. Ziele, Maßnahmen, Modellprojekte in Berlin. Available online at http://www.stadtentwicklung.berlin.de/verkehr/politik_planung/fussgaenger/strategie/download/fuss_broschuere.pdf, checked on 9/17/2012.

Senatsverwaltung für Stadtentwicklung und Umwelt: Besseres Miteinander. Begegnungszone Maaßenstraße in Berlin. Available online at http://www.stadtentwicklung.berlin.de/verkehr/politik_planung/fussgaenger/strategie/download/begegnungszone_maassenstr_flyer.pdf.

Senatsverwaltung für Stadtentwicklung und Umwelt (2014a): Berliner Verkehr in Zahlen 2013. Mobilität der Stadt in Berlin (berlinbaut).

Senatsverwaltung für Stadtentwicklung und Umwelt (2014b): Erster Bericht zur Umsetzung des Stadtentwicklungsplanes Verkehr 2025. Senatsbeschluss vom 23.September 2014 in Berlin. Available online at http://www.stadtentwicklung.berlin.de/verkehr/politik_planung/step_verkehr/download/StEP_Verkehr_Fortschrittsbericht.pdf.

Senatsverwaltung für Stadtentwicklung und Umwelt (2015): Berlin Strategy. Urban Development Concept Berlin 2030 in Berlin. Available online at http://www.stadtentwicklung.berlin.de/planen/stadtentwicklungskonzept/download/strategie/BerlinStrategie_Broschuere_en.pdf.

Senatsverwaltung für Stadtentwicklung und Umwelt Berlin (2014): Fußverkehrsstrategie für Berlin. Modellprojekt 5 - Begegnungszonen - Stand der Umsetzung in Berlin. Available online at http://www.stadtentwicklung.berlin.de/verkehr/politik_planung/fussgaenger/strategie/download/begegnungszonen_kurzbericht2014.pdf.

Senatsverwaltung für Stadtentwicklung, Abt. I (2002): Berliner Pläne 1862 bis 1994 in Berlin. Available online at http://www.stadtentwicklung.berlin.de/planen/fnp/pix/historie/Berliner_Plaene_1862_bis_1994.pdf.

Senatsverwaltung für Verkehr und Betriebe, Abt V. (1995): Verkehrsplanung für Berlin. Materialien zum Stadtentwicklungsplan Verkehr in Berlin.

Sheller, Mimi; Urry, John (2000): The City and the Car. In *International Journal of Urban and Regional Research* 24 (4), pp. 737–757.

Smethurst, Paul (2015): The Bicycle. Towards a Global History in Houndmills Basingstoke Hampshire: Palgrave Macmillan.

Smith, Neil (2002): New Globalism, New Urbanism. Gentrification as Global Urban Strategy. In *Antipode* 34 (3), pp. 427–450.

Soffer, Jonathan M. (2010): Ed Koch and the rebuilding of New York City. New York: Columbia University Press.

Solnit, Rebecca (2002): Wanderlust. A history of walking. London: Verso.

Southworth, Michael (2005): Designing the Walkable City. In *Journal of Urban Planning and Development*, pp. 246–257. Available online at http://scitation.aip.org/getpdf/servlet/GetPDFServlet?filetype=pdf&id=JUPDDM000131000004000246000001&idtype=cvips&doi=10.1061/(ASCE)0733-9488(2005)131:4(246)&prog=normal, checked on 6/5/2012.

Spath und Nagel (2009): Fußverkehrsstrategie für Berlin - Grundlagen; Entwurf vom 30.07.2009. Available online at http://www.stadtentwicklung.berlin.de/verkehr/politik_planung/fussgaenger/strategie/download/fuss_grundlagen.pdf, updated on 8/3/2009, checked on 9/17/2012.

Speck, Jeff (2012): Walkable city. How downtown can save America, one step at a time. New York: Farrar Straus and Giroux.

Spinney, Justin (2007): Cycling the City: Non-Place and the Sensory Construction of Meaning in a Mobile Practice. In Paul Rosen, Peter Cox, David Horton (Eds.): Cycling and society. Aldershot, England, Burlington, VT: Ashgate, pp. 25–45.

Stehlin, John (2014): Regulating Inclusion: Spatial Form, Social Process, and the Normalization of Cycling Practice in the USA. In *Mobilities* 9 (1), pp. 21–41.

Steigemann, Anna Marie (2017): Offering "more"? How store owners and their businesses build neighborhood social life. Dissertation. Technische Universiät Berlin, Berlin. Available online at http://dx.doi.org/10.14279/depositonce-5710, checked on 9/15/2017.

Stern, Robert A. M.; Fishman, David; Tilove, Jacob (2006): New York 2000. Architecture and urbanism between the bicentennial and the millennium. New York, NY: Monacelli Press.

Stern, Robert A. M.; Gilmartin, Gregory F.; Mellins, Thomas; Fishman, David (1987): New York 1930. Architecture and urbanism between the two World Wars. New York, N.Y.: Rizzoli.

Stern, Robert A. M.; Mellins, Thomas; Fishman, David (1995): New York 1960. Architecture and Urbanism between the Second World War and the Bicentennial. New York, NY: The Monacelli Press.

Stimmann, Hans (2009): Städtebau vom "Europäischen Jahr des Denkmalschutzes" bis heute. 1975-2010. In Architekten- und Ingenieur Verein zu Berlin e.V. (Ed.): Berlin und seine Bauten. Teil I - Städtebau. Berlin: DOM publishers, pp. 347–455.

Stopher, Peter R. (2016): History and Theory of Urban Tranport Planning. In Bliemer, Michael C J, Corinne Mulley, Claudine J. Moutou (Eds.): Handbook on transport and urban planning in the developed world. Cheltenham, UK, Northampton, MA, USA: Edward Elgar Publishing, pp. 36–52.

The City of New York, Mayor Michael R. Bloomberg (2007): PlaNYC. A Greener, Greater New York in New York, NY. Available online at http://nytelecom.vo.llnwd.net/o15/agencies/planyc2030/pdf/full_report_2007.pdf, checked on 12/4/2011.

Tolley, R. S. (1997): The greening of urban transport. Planning for walking & cycling in western cities. 2nd ed. Chichester, Toronto: Wiley.

Tran, Minh-Chau; Schmidt, J. Alexander (2014): Walkability aus Sicht der Stadt- und Verkehrsplanung. In Jens Bucksch, Sven Schneider (Eds.): Walkability. Das Handbuch zur Bewegungsförderung in der Kommune. Verlag Hans Huber, pp. 61–71.

United Nations (2015): Sustainable Development Goals. Goal 11: Make cities inclusive, safe, resilient, and sustainable. Available online at http://www.un.org/sustainabledevelopment/cities/, checked on 8/18/2017.

United Nations Human Settlements Programme (2013a): Planning and Design for Sustainable Urban Mobility. Global report on Human Settlements. United Nations Human Settlements Programme in London, New York.

United Nations Human Settlements Programme (2013b): Streets as Public Spaces and Drivers of Urban Prosperity. Edited by United Nations Human Settlements Programme. UN Habitat in Nairobi.

Urry, John (2004): The 'System' of Automobility. In *Theory, Culture & Society* (21), pp. 25–39.

Valverde, Mariana (2012): Everyday law on the street. City governance in an age of diversity in Chicago, London: The University of Chicago Press.

Venturi, Robert; Scott Brown, Denise; Izenour, Steven (2007): Lernen von Las Vegas. Zur Ikonographie und Architektursymbolik der Geschäftsstadt. 2. ed., Gütersloh, Basel: Bauverl; Birkhäuser (Bauwelt-Fundamente Architekturtheorie, 53).

Vitale, Alex S. (2008): City of disorder. How the quality of life campaign transformed New York politics. New York N.Y.: New York University Press.

Walks, Alan (Ed.) (2015): The Urban Political Economy and Ecology of Automobility. Driving Cities, Driving Inequality, Driving Politics in London, New York: Routledge.

Walks, Alan; Siemiatycki, Matti; Smith, Matt (2015): Political Cycles. Promoting velo-mobility in the auto-mobile city. In Alan Walks (Ed.): The Urban Political Economy and Ecology of Automobility. Driving Cities, Driving Inequality, Driving Politics. London, New York: Routledge, pp. 237–254.

Ward, David; Zunz, Olivier (Eds.) (1997): The landscape of modernity. New York City, 1900-1940. Baltimore: Johns Hopkins University Press.

WBGU (2016): Der Umzu der Menschheit. Die transformative Kraft der Städte. Hauptgutachten. Available online at http://www.wbgu.de/fileadmin/user_upload/wbgu.de/templates/dateien/veroeffentlichungen/hauptgutachten/hg2016/wbgu_hg2016.pdf.

Whyte, William Hollingsworth (2010): The social life of small urban spaces. 7. Print, New York, NY: Project for Public Spaces.

Whyte, William Hollingsworth; Underhill, Paco (2009): City. Rediscovering the center. Philadelphia: University of Pennsylvania Press.

Wolf, Winfried (1994): Berlin, Weltstadt ohne Auto? Verkehrsgeschichte 1848-2015. Köln: ISP.

Woodworth, A. Vernon (2011): Walkability (Pedestrian-Friendly Streets). In Nevin Cohen, Paul Robbins (Eds.): Green Cities. An A-to-Z Guide. Thousand Oaks: SAGE Publications, pp. 451–453.

Yin, Robert K. (2009): Case study research. Design and methods. 4th ed. Los Angeles Calif.: SAGE Publications.

Zavestoski, Stephen; Agyeman, Julian (Eds.) (2015): Incomplete streets. Processes, practices and possibilities. London, New York: Routledge.

Zukin, Sharon (1997): Cultural strategies and urban identities: Remaking public space in New York. In Ove Källtorp (Ed.): Cities in Transformation. Social and Symbolic Change of Urban Space.: Avebury, pp. 205–217.

Zukin, Sharon; Kasinitz, Philip; Chen, Xiangming (Eds.) (2016a): Global cities, local streets. Everyday diversity from New York to Shanghai.

Zukin, Sharon; Kasinitz, Philip; Chen, Xiangming (2016b): Spaces of Everyday Diversity. The Patchwork Ecosystem of Local Shopping Streets. In Sharon Zukin, Philip Kasinitz, Xiangming Chen (Eds.): Global cities, local streets. Everyday diversity from New York to Shanghai. pp. 1–28.

Zukin, Sharon; Trujillo, Valerie; Frase, Peter; Jackson, Danielle; Recuber, Tim; Walker, Abraham (2009): New Retail Capital and Neighborhood Change: Boutiques and Gentrification in New York City. In *City&Community* 8 (1), pp. 47–64.

Press and Blog Articles

Aaron, Brad (2007): DOT Launches Gehl Street Survey Project. Edited by Streetsblog New York City. Available online at http://www.streetsblog.org/2007/09/12/dot-launches-gehl-street-survey-project/, checked on 6/6/2016.

Barbaro, Michael (2013): Bloomberg Focuses on Rest (as in Rest of the World). In *New York Times*, 12/14/2013. Available online at http://www.nytimes.com/2013/12/15/nyregion/bloomberg-focuses-on-rest-as-in-rest-of-world.html, checked on 3/9/2017.

Beikler, Sabine (2016): Unter den Linden soll ab 2019 autofrei sein - weitgehend. In *Tagesspiegel*, 11/5/2016. Available online at http://www.tagesspiegel.de/berlin/koalitionsverhandlungen-in-berlin-unter-den-linden-soll-ab-2019-autofrei-sein-weitgehend/14798238.html, checked on 3/2/2017.

Bloomberg, Michael (2003): Mayor Michael Bloomberg's 2003 State Of The City Address. Edited by Gotham Gazette in New York. Available online at http://www.gothamgazette.com/index.php/government/1670-mayor-michael-bloombergs-2003-state-of-the-city-address, checked on 5/13/2016.

Bruni, Frank (2011): Janette Sadik-Khan, Bicycle Visionary. In *New York Times*, 9/10/2011. Available online at http://www.nytimes.com/2011/09/11/opinion/sunday/bruni-janette-sadik-khan-bicycle-visionary.html?_r=0, checked on 5/7/2016.

Crowly, Michael (2009): Honk, Honk, Aaah. How Transportation Commissioner Janette Sadik-Khan Manages to Be Equal Parts Jane Jacobs and Robert Moses. New York Magazine. Available online at http://nymag.com/news/features/56794/, updated on 12/4/2011, checked on 12/4/2011.

Dobberke, Cay (2013): Auch in der „Begegnungszone" behalten Autos die Vorfahrt. In *Tagesspiegel*, 11/27/2013. Available online at http://www.tagesspiegel.de/berlin/berliner-verkehrspolitik-auch-in-der-begegnungszone-behalten-autos-die-vorfahrt/9131934.html, checked on 2/15/2017.

Dobberke, Cay (2016): "Begegnungszone Maaßenstraße ist gescheitert". In *Tagesspiegel*, 6/7/2016. Available online at http://www.tagesspiegel.de/berlin/berlin-schoeneberg-begegnungszone-maassenstrasse-ist-gescheitert/13699554.html, checked on 2/16/2017.

Flegenheimer, Matt (2013): New York Bike-Lane Advocates Fear New Mayor Will Roll Back Gains. In *New York Times*, 2/12/2013. Available online at http://www.nytimes.com/2013/02/13/nyregion/new-york-bike-lane-advocates-fear-new-mayor-will-roll-back-gains.html, checked on 3/9/2017.

Frassica, Matt (2010): The Man Who Closed Times Square to Traffic. Transportation Alternatives. Available online at https://www.transalt.org/news/media/4201, checked on 5/4/2016.

Fried, Ben (2008): Meet the New DOT… Again. Streetsblog New York City. Available online at http://www.streetsblog.org/2008/01/16/meet-the-new-dot-again/, checked on 5/16/2016.

Gay, Jason (2013): A Nutty Idea for a Crazy Town: Bike Share Blossoms in NYC. Available online at http://www.wsj.com/articles/SB10001424052702304526204579099092311069628?alg=y, checked on 5/7/2016.

Hartz, Bettina (2015): Fahrradbewegung Critical Mass: Und wohin fahren wir jetzt? In *taz*, 3/27/2015. Available online at http://www.taz.de/!5014987/, checked on 2/13/2017.

Hasselmann, Jörn (2015): Kampfradeln. In *Tagesspiegel*, 6/10/2015 (22425), p. 10.

Idov, Michael (2010): Clash of the Bearded Ones. Hipsters, Hasids, and the Williamsburg Street. In *New York Magazine*. Available online at http://nymag.com/realestate/neighborhoods/2010/65356/, checked on 11/27/2014.

Jacobs, Stefan (2015): Es fährt ein Rad nach nirgendwo. Das Blaue vom Radweg. Politische Hindernisse für sichere Straßen. In *Tagesspiegel*, 5/18/2015 (22403), p. 7.

Jacobs, Stefan (2015): Sattelfest im Parlament. Die Abgeordneten streiten über den Radverkehr - die CDU würde die Probleme lieber ignorieren. In *Tagesspiegel*, 5/29/2015 (22413), p. 10.

Jacobs, Stefan (2016): Das Erfolgsrezept der Fahrrad-Aktivisten ist ihre Strategie. In *Tagesspiegel*, 6/14/2016. Available online at http://www.tagesspiegel.de/berlin/volksentscheid-in-berlin-das-erfolgsrezept-der-fahrrad-aktivisten-ist-ihre-strategie/13733496.html, checked on 2/14/2017.

Jacobs, Stefan (2016): Geisel will 40 Millionen Euro in Radverkehr investieren. In *Tagesspiegel*, 6/29/2016. Available online at http://www.tagesspiegel.de/berlin/diskussion-zum-berliner-fahrrad-volksentscheid-geisel-will-40-millionen-euro-in-radverkehr-investieren/13807402.html, checked on 2/14/2017.

Jacobson, Daniel (2011): Berlin's Striking Cycling Renaissance. Streetsblog San Francisco in San Francisco CA. Available online at http://sf.streetsblog.org/2011/10/13/berlins-striking-cycling-renaissance/, checked on 2/10/2017.

Kather, Timo (2016): Begegnungszone wird erstmal testweise eingeführt. In
     Tagesspiegel, 7/29/2016. Available online at
     http://www.tagesspiegel.de/berlin/bergmannstrasse-in-berlin-kreuzberg-
     begegnungszone-wird-erstmal-testweise-eingefuehrt/13937490.html,
     checked on 2/16/2017.

Kimmelman, Michael (2013): A Streetcorner Serenade for the Public Plaza. In *New
     York Times*, 6/2/2013, pp. 1; 17.

Köhler, Regina (2015): So soll der Moritzplatz für Fahrradfahrer sicherer werden.
     In *Berliner Morgenpost*, 8/21/2015. Available online at
     http://www.morgenpost.de/bezirke/friedrichshain-
     kreuzberg/article205587737/So-soll-der-Moritzplatz-fuer-Fahrradfahrer-
     sicherer-werden.html, checked on 2/14/2017.

Komanoff, Charles (2012): The Bicycle Uprising: Remembering the Midtown Bike
     Ban 25 Years Later. Available online at
     http://www.komanoff.net/bicycle/Bicycle_Uprising.pdf, updated on
     9/18/2012, checked on 11/21/2013.

Loy, Thomas (2016): Karl-Marx-Straße ist noch bis 2021 Baustelle. In *Tagesspiegel*,
     4/7/2016. Available online at http://www.tagesspiegel.de/berlin/berlin-
     neukoelln-karl-marx-strasse-ist-noch-bis-2021-baustelle/13413192.html,
     checked on 3/1/2017.

Loy, Thomas (2017): Überfälliges Umdenken - oder "totaler Verkehrsinfarkt"? In
     Tagesspiegel, 2/22/2017. Available online at
     http://www.tagesspiegel.de/berlin/verkehr-in-berlin-ueberfaelliges-
     umdenken-oder-totaler-verkehrsinfarkt/19424078.html.

Meyer, Anja (2016): Wie die Begegnungszone Maaßenstraße jetzt aussieht. In
     Berliner Morgenpost, 8/10/2016. Available online at
     http://www.morgenpost.de/berlin/article208033325/Wie-die-
     Begegnungszone-Maassenstrasse-jetzt-aussieht.html, checked on 2/17/2017.

Naparstek, Aaron (2006a): Mayor Bloomberg Says NYC Traffic Congestion is Good.
     Streetsblog New York City. Available online at
     http://www.streetsblog.org/2006/08/02/mayor-bloomberg-says-nycs-
     traffic-congestion-is-good/, checked on 6/7/2016.

Naparstek, Aaron (2006b): Speak Up to Keep the Willoughby Street Pedestrian
     Plaza. Streetsblog New York City. Available online at
     http://www.streetsblog.org/2006/11/20/speak-up-to-keep-the-willoughby-
     street-pedestrian-plaza/, checked on 6/9/2016.

Naparstek, Aaron (2007a): Andy Wiley-Schwartz Starts at DOT on Monday. Edited
     by Streetsblog New York City. Streetsblog New York City in New York, NY.
     Available online at http://www.streetsblog.org/2007/06/15/andy-wiley-
     schwartz-takes-a-new-job-at-dot/, checked on 1/9/2014.

Naparstek, Aaron (2007b): City Launches "Public Plaza Initiative" at DUMBO
  Pocket Park. Streetsblog New York City. Available online at
  http://www.streetsblog.org/2007/08/10/city-launches-public-plaza-
  initiative-at-dumbo-pocket-park/, checked on 6/9/2016.

Naparstek, Aaron (2007c): NYC DOT Commissioner Iris Weinshall Resigns.
  Streetsblog New York City in New York. Available online at
  http://nyc.streetsblog.org/2007/01/29/nyc-dot-commissioner-iris-
  weinshall-resigns/, checked on 4/19/2017.

Naparstek, Aaron (2007d): Q&A With Transportation Commissioner Janette Sadik-
  Khan. Edited by Streetsblog New York City in New York. Available online at
  http://www.streetsblog.org/2007/06/20/qa-with-transportation-
  commissioner-janette-sadik-khan/, checked on 6/6/2016.

Noetzel, Karen (2017): Über die Begegnungszone Maaßenstraße wird weiter
  gestritten. In *Berliner Wochenblatt Verlag GmbH;*, 1/19/2017. Available
  online at http://www.berliner-woche.de/schoeneberg/verkehr/ueber-die-
  begegnungszone-maassenstrasse-wird-weiter-gestritten-d117077.html,
  checked on 2/17/2017.

Office of the Mayor on 4/27/2007: Mayor Bloomberg names new Transportation
  Commissioner. Janette Sadik-Khan to Head Agency As City Prepares to Meet
  Challenges of the Future in New York, NY. Stu Loeser/John Gallagher.
  Available online at
  http://www.nyc.gov/portal/site/nycgov/menuitem.c0935b9a57bb4ef3daf2f
  1c701c789a0/index.jsp?pageID=mayor_press_release&catID=1194&doc_na
  me=http%3A%2F%2Fwww.nyc.gov%2Fhtml%2Fom%2Fhtml%2F2007a%2
  Fpr126-07.html&cc=unused1978&rc=1194&ndi=1, checked on 1/10/2014.

Office of the Mayor on 4/7/2008: Statement by Mayor Michael R. Bloomberg on
  the failure of the state legislature to vote congestion pricing. New York, NY.
  Stu Loeser/John Gallagher. Online. Available online at
  http://www.nyc.gov/portal/site/nycgov/menuitem.c0935b9a57bb4ef3daf2f
  1c701c789a0/index.jsp?pageID=mayor_press_release&catID=1194&doc_na
  me=http%3A%2F%2Fwww.nyc.gov%2Fhtml%2Fom%2Fhtml%2F2008a%2
  Fpr126-08.html&cc=unused1978&rc=1194&ndi=1, checked on 1/10/2014.

Rogoll, Iris (2010): Umbau der südlichen Karl-Marx-Straße. Zwischen
  Silbersteinstraße und Magdalenenkirche/ Jonasstraße. In *Broadway
  Neukölln. Das Magazin der Aktion Karl-Marx-Straße* (1), p. 8. Available online
  at http://www.aktion-kms.de/files/100305_broadwayneukoelln-
  1_april2010.pdf.

Schmiemann, Brigitte (2016): Die Schöneberger Maaßenstraße steht jetzt unter
  Beobachtung. In *Berliner Morgenpost*, 2/1/2016. Available online at
  http://www.morgenpost.de/berlin/article206990427/Die-Schoeneberger-
  Maassenstrasse-steht-jetzt-unter-Beobachtung.html, checked on 2/16/2017.

Schmiemann, Brigitte (2016): Die Begegnungszone Maaßenstraße steht vor dem Aus. In *Berliner Morgenpost*, 8/27/2016. Available online at http://www.morgenpost.de/berlin/article208135683/Die-Begegnungszone-Maassenstrasse-steht-vor-dem-Aus.html, checked on 2/17/2017.

Schütze, Elmar (2016): Maaßenstraße in Schöneberg: Neue Begegnungszone verärgert Händler und Gastronomen. In *Berliner Zeitung*, 2/5/2016. Available online at http://www.berliner-zeitung.de/berlin/maassenstrasse-in-schoeneberg-neue-begegnungszone-veraergert-haendler-und-gastronomen-23519428, checked on 2/16/2017.

Senatsverwaltung für Stadtentwicklung on 3/16/2005: Berlin wird Fahrradstadt. Rohland, Petra. Available online at https://www.berlin.de/rbmskzl/aktuelles/pressemitteilungen/2005/pressemitteilung.45992.php, checked on 2/14/2017.

Senatsverwaltung für Stadtentwicklung und Umwelt on 3/11/2015: Das Pilotvorhaben "Begegnungszone Maaßenstraße" wurde beim 17. Wettbewerb für Städte und Gemeinden ausgezeichnet in Berlin. Available online at http://www.stadtentwicklung.berlin.de/aktuell/pressebox/archiv_volltext.shtml?arch_1507/nachricht5674.html.

Senatsverwaltung für Stadtentwicklung und Umwelt on 6/9/2015: Umsetzung der Radverkehrsstrategie auf gutem Weg. Berlin investiert 2015 rund 14 Millionen Euro für den Ausbau des Fahrradverkehrs. Pallgen, Martin. Available online at http://www.stadtentwicklung.berlin.de/aktuell/pressebox/archiv_volltext.shtml?arch_1506/nachricht5629.html, checked on 2/13/2017.

Senatsverwaltung für Stadtentwicklung und Umwelt on 4/1/2016: Der Umbau der Karl-Marx-Straße geht in die nächste Runde in Berlin. Dietl, Katrin. Available online at https://www.berlin.de/ba-neukoelln/aktuelles/pressemitteilungen/2016/pressemitteilung.464616.php.

Senatsverwaltung für Umwelt, Verkehr und Klimaschutz on 12/14/2016: Neue Verkehrsführung für Radfahrer am Moritzplatz erhält Auszeichnung in Berlin. Available online at http://www.berlin.de/sen/uvk/presse/pressemitteilungen/2016/pressemitteilung.541244.php, checked on 2/13/2017.

The Bicycle Story (2014): Aaron Naparstek: the Evolution of an Advocate from Honku to StreetsBlog and Beyond. Part 1. Available online at http://www.thebicyclestory.com/2014/04/aaron-naparstek-part-1/, checked on 5/3/2016.

Transportation Alternatives (2006): Vision for Livable Streets Exhibit at MAS. In *Transportation Alternatives Magazine* Spring 2006, pp. 10–11. Available online at http://www.transalt.org/files/news/magazine/2006/spring/10-11.pdf, checked on 7/15/2014.

Vanderbilt, Tom (2009): Beach Chairs in Times Square. How closing Broadway to car could solve a century of traffic woes. In *slate*, 9/16/2009. Available online at http://www.slate.com/articles/life/transport/2009/06/beach_chairs_in_times_square.html.

Varone, Jason (2007a): Berlin's Bicycle Boom. Streetsblog New York City in New York, NY. Available online at http://nyc.streetsblog.org/2007/07/02/berlins-bicycle-boom/, checked on 2/10/2017.

Varone, Jason (2007b): In DUMBO a Parking Lot Will Become a Piazza. Streetsblog New York City. Available online at http://www.streetsblog.org/2007/05/23/dumbo-parking-lot-will-become-a-public-plaza/, checked on 6/9/2016.

Wähner, Bernd (2016): Drei Ideen für die Schönhauser Allee: Senat plant eine behutsame Umgestaltung. In *Berliner Wochenblatt Verlag GmbH;* 4/2/2016. Available online at http://www.berliner-woche.de/prenzlauer-berg/verkehr/drei-ideen-fuer-die-schoenhauser-allee-senat-plant-eine-behutsame-umgestaltung-d97655.html, checked on 3/2/2017.

Wenk, Erik (2014): Critical Mass erreicht Straßen von Berlin. In *Tagesspiegel*, 5/31/2014. Available online at http://www.tagesspiegel.de/berlin/bezirke/friedrichshain-kreuzberg/kreuzberg-phaenomen-massenradeln-critical-mass-erreicht-strassen-von-berlin/9973796.html, checked on 2/13/2017.

Websites

Bureau of Transportation Statistics: Table 1-41. Principal Means of Transportation to Work (Thousands). United States Department of Transportation in Washington DC. Available online at https://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/html/table_01_41.html, checked on 4/18/2017.

NYC Streets Renaissance (2006): Livable Streets. From an Auto-Centric Policy to a City of Great Streets. Available online at http://www.pps.org/pdf/Livable_Streets_withQuotes.pdf, checked on 7/15/2014.

Project for Public Spaces (n.d.): New York City Streets Renaissance. Available online at http://www.pps.org/projects/new-york-city-streets-renaissance/, checked on 4/20/2017.

Transportation Alternatives: T.A.-Timelines. In : Annual Report 2012-2013. Available online at http://transalt.org/files/about/T.A.-Timelines.pdf, checked on 12/6/2013.

Transportation Alternatives (1999): The Electronic Bicycle Blueprint. Available online at http://www.transalt.org/files/resources/blueprint/, checked on 12/3/2013.

Tri-State Transportation Campaign (2016): About Us. Available online at http://www.tstc.org/aboutus.php, checked on 5/16/2016.

Interviews

Aggarwala, Rohit; Head of the Mayor's Office for Long-term Planning and Sustainability. Interviewed by Levels, Annika on 2/21/2014 in New York.

Becker, Jörg; ADAC - General German Automobile Association. Interviewed by Levels, Annika on 8/22/2013.

Budnick, Noah; Deputy Director at Transportation Alternatives. Interviewed by Levels, Annika on 1/24/2014 in New York, NY.

Gorton, Mark; Founder of the New York City Streets Renaissance Campaign. Interviewed by Levels, Annika on 2/3/2014 in New York, NY.

Horn, Burkhard; Senate Department for Urban Development and the Environment, Head of the Task Force for the UDP Traffic. Interviewed by Levels, Annika on 7/23/2013 in Berlin.

Kellogg, Philipp; Executive Director of the Fulton Area Business Alliance. Interviewed by Levels, Annika on 11/6/2014 in New York.

Kent, Ethan; Vice President of the Project for Public Spaces. Interviewed by Levels, Annika on 12/12/2013 in New York.

Kunst, Friedemann Dr.; Senate Department for Urban Development and the Environment, Head of the Department. Interviewed by Levels, Annika on 8/21/2013 in Berlin.

Orcutt, Jon; Policy Advisor, Department of Transportation. Interviewed by Levels, Annika on 2/18/2014 in New York City.

Runge, Diana; Process Management for the UDP Traffic. Interviewed by Levels, Annika on 8/19/2013 in Berlin.

Russo, Ryan; Department of Transportation, Director of Bicycle and Pedestrian Programs. Interviewed by Levels, Annika on 11/11/2014 in New York, NY.

Schlegel, Martin; BUND - Friends of the Earth Germany. Interviewed by Levels, Annika on 8/1/2013 in Berlin.

Stein, Axel; Member of the Academic Board. Interviewed by Levels, Annika on 8/19/2013 in Berlin

Steinmeyer, Imke Dr.; Senate Department for Urban Development and the Environment, Head of the Division for Integrative Traffic Planning. Interviewed by Levels, Annika on 8/21/2013 in Berlin.

Wiley-Schwartz, Andy; Department of Transportation, Assistant Commissioner for Public Space Program. Interviewed by Levels, Annika on 2/24/2014 in New York.

Wohlfarth von Alm, Horst; Senate Department for Urban Development and the Environment, Interviewed by Levels, Annika on 7/17/2013 in Berlin.