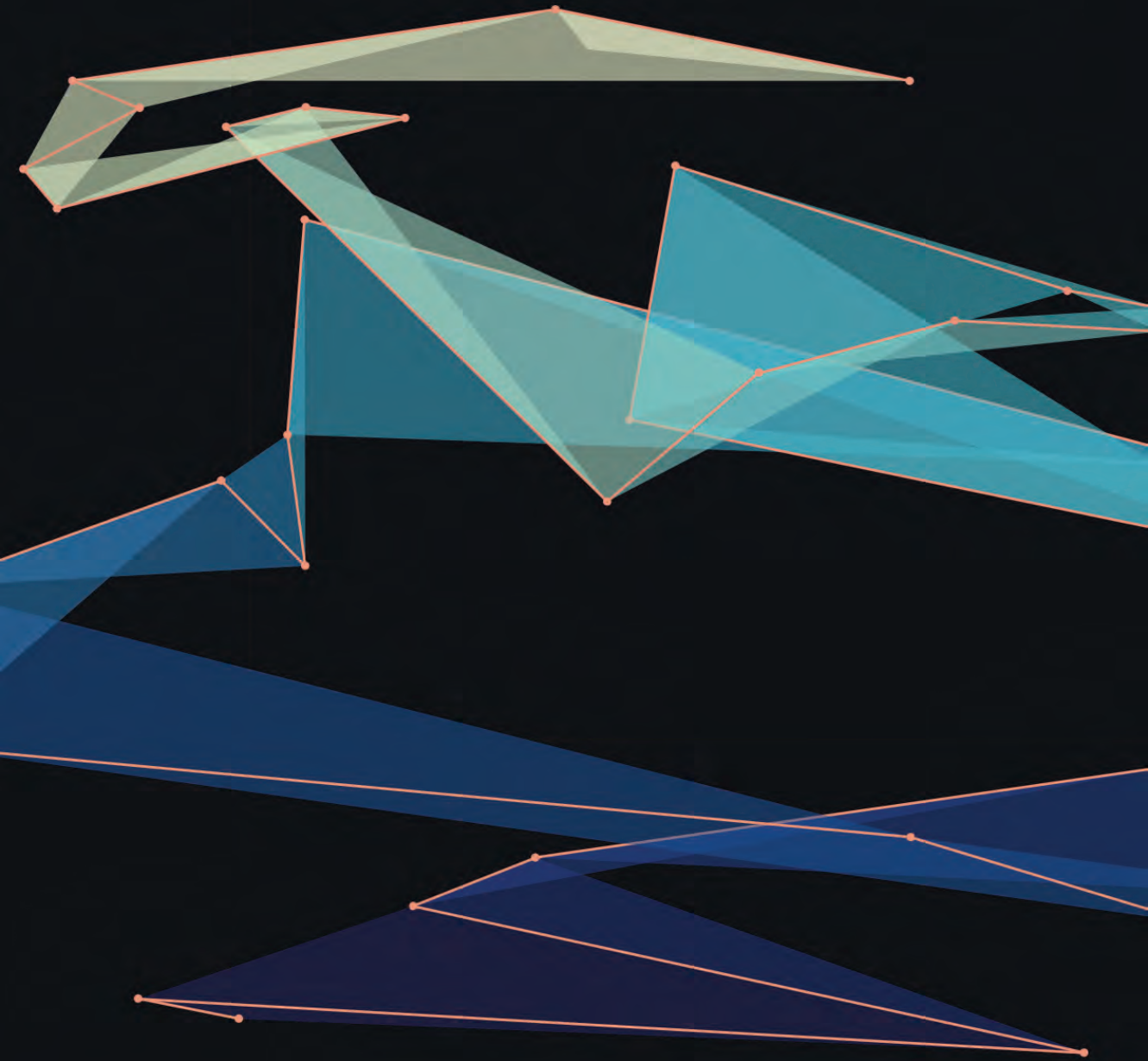


Anne Schirner

IN TOUCH WITH DEBATE

PHYSICALIZING NEGOTIATION OF CONTESTED URBAN OPEN SPACE



KISDedition

KISDedition

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Urban space has become increasingly heterogeneous and is often site of negotiation and contestation involving diverse stakeholders, complex processes, and dynamics. The city has always been a setting for social negotiation and discourse. Since a couple of years the built environment and its development has regularly been subject of heated controversy surfacing on the internet. In particular urban open spaces—such as Gezi-Park in Istanbul or Tempelhofer Feld in Berlin—are affected.

This project lies at the intersection of urban transformation, Actor–Network Theory (ANT), and information visualization. It deploys digital methods and ANT's material–semiotic approach to the analysis of an urban controversy.

Anne Schirner



IN TOUCH WITH DEBATE

VISUALIZING NEGOTIATION OF CONTESTED OPEN URBAN SPACE

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*“Being connected,
being interconnected,
being heterogeneous,
is not enough.*

*It all depends on
the sort of action
that is flowing
from one to the other,
hence the words net and work.*

Really, we should say worknet instead of network”

VENTURINI ET AL., 2016

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SETTING THE SCENE

This thesis was preceded by a research proposal which explored the field of *Controversy Mapping* from a theoretical perspective (SCHIRNER 2015). It investigated the applicability of the research method *Controversy Mapping* to urban matters—in specific to contested urban open spaces, such as Gezi Park in Istanbul during 2013, Tempelhofer Feld in Berlin in 2014 or currently Cologne’s vast green belt. The belt’s area is threatened by expansion plans of 1. FC Köln: The local soccer club intends to increase the size of its training grounds by six hectares within the parklands.

Controversy should not be confused with an argument, a fight or a battle. In the given context it rather refers to the often lengthy process of negotiating uncertainty, which “[...] organizes the more complete investigation of possible states of the world” (CALLON 2001: 26). A panel discussion on *urban controversies*¹, held at London School of Economics (LSE) in March 2013, explored the potential of controversy to become a “productive force on the urban environment, shaping the political, social and material fabric of the city” (“URBAN CONTROVERSIES”). It set out to frame the matter of urban controversy as

a shared uncertainty in which new actors come into scene forcing a reorganization of the power structures and of the built form (IBID.).

¹ Urban@LSE (2013) *Urban Controversies: How controversies shape our future*. Poster retrieved from lse.ac.uk/LSECities/citiesProgramme/pdf/Urban-Controversies-poster.pdf

CONTROVERSY MAPPING

We live in a world exposed to and governed by controversy of all shades. The fact that the world is interconnected through digital networks on a global level even amplifies this condition. By providing a widely accessible platform, the internet facilitates debate and participation on controversial topics—though the amount of data generated along the negotiation may be overwhelming. In this respect French sociologist of science Bruno Latour (2010B) argues that

it is possible that the same tools, the same medium, the same technologies of the web, which have produced the sea of information [...] are also the source of a technology which allows to do the mapping of it. It is exactly the same technology that provides the problem, that should also provide the solution to the problem.

*Controversy Mapping (CM)*² is a course and research method developed and taught by Bruno Latour at Sciences Po Paris for more than a decade. In recent years this course is increasingly being offered at universities worldwide by several disciplines such as history, political science or media arts. The aim of *Controversy Mapping* is to delve into multilayered debates in order to explore complex inter-relations. In a second step these negotiations are mapped and visualized, to facilitate their analysis and the communication of findings to the interested public (LATOUR 2010B).

In order to test the applicability of *Controversy Mapping* to urban issues its two underlying research frameworks were investigated within the scope of the preceding research proposal: Bruno Latour's *Actor-Network Theory (ANT)* and Richard Rogers' *Digital Methods (DM)*. Both voice critical views on conventional sociology and offer an alternative approach. One distinct feature of *Actor-Network Theory* is its material-semiotic approach to analyze complex structures and processes by giving agency not solely to human, but non-human entities as well.

² Also see: <http://www.medialab.sciences-po.fr/projets/teaching-controversy-mapping/>

One finding of the undertaken exploration was the equal engagement of non-human and human actors in debates around contested urban redevelopment projects: History, sports, city authorities, urban planners, cool air, grasslands and -hoppers, architects—to name a few. These so-called actants are forming dynamic, non-hierarchical, flat networks. Here, network formation appears to be an ever evolving process, not coming to a halt, unless transformation is completed and stability achieved, unless controversial issues have been negotiated and overcome, unless the debate is cooling down and matters are settling. Once this point is reached actants are re-black-boxed, hence entering the state of invisibility again.

Within *Controversy Mapping* projects such actor networks are usually generated by deploying *Digital Methods (DM)*, a methodological approach proposed by Web epistemologist Richard Rogers as well as a set of methods, techniques and tools developed since 1999 (ROGERS 2013). Richard Rogers is Professor of New Media and Digital Culture at the University of Amsterdam, where he directs the *Digital Methods Initiative (DMI)*—one of Europe’s leading research groups in the field of Internet Studies. One of its main lines of reasoning is to move internet research “beyond the study of online culture only” (IBID.: 19). *Digital Methods* facilitate social and cultural research through “natively digital objects” (IBID.) such as links, tags or likes. One approach, for instance, is to scrape Google for the most relevant websites addressing the controversy to be explored, and analyze how they are linking to each other through hyperlinks. Graphs are one common visualization method used when mapping a controversy, due to the capability of networks to efficiently convey relationships between engaged actors, their concerns and positions.

The vital role information visualization plays in *Controversy Mapping* is acknowledged by researchers (BOECHAT & VENTURINI 2016). In 2008, Latour expressed dissatisfaction concerning currently used visualization methods during a lecture: “So here is the question I wish to raise to designers: where are the visualization tools that allow the contradictory and controversial nature of matters of concern to

be represented?” (LATOUR 2008: 13). The project *Contropedia*³ can be considered one research project in this realm. The publicly available edit history of individual Wikipedia articles often reflects a societal controversy (BORRA ET AL. 2015). *Contropedia* intends to develop a platform for the real-time analysis and visualization of controversies in Wikipedia.

During a lecture at University of Cologne in June 2015, Latour presented his latest explorations in the field of controversy representation—this time, in the area of acting: Staging the controversy around climate change through a conference simulation in the run-up to COP 21, the 2015 United Nations Conference on Climate Change in Paris. During the “Make It Work” conference 210 students from all over the world formed 42 state and non-state delegations enacted the debate in the quest of an alternative mode of negotiation. The inclusion of non-state delegations, including trans-boundary communities and natural entities, such as forests, cities, the Sahara and oceans, has gained recognition for its visionary approach (LATOUR 2015).

These two examples demonstrate the scope of questioning mapping methods, which are deployed so far.

³ See also: contropedia.net/demo



Fig. 1: Didacus Valadés: Great Chain of Being (1579); Fig. 2: Chrétien Frederic Guillaume Roth: Tree of Knowledge (1769); Fig. 3: Kevin Boyack, Dick Klavans, W. Bradford Paley: The Scientific Paradigms that support Patent Generation (2006)

RESEARCH INTEREST

This publication intends to capture the complexity of today's urban space production and transformation process and to make it graspable. The focus is put on exploring the possibilities and potential of the physical visualization of data—also called data physicalization—of quantitative as well as of qualitative nature.

In recent years 'data objects' received increasing attention in the field of data visualization—both among academics and practitioners (JANSEN & DRAGICEVIC 2013B; PEARSON 2015). Researchers investigate how tangible and physical information visualization can impact the comprehension of data (JANSEN 2014).

Another major field of exploration is the network. Manuel Lima, researcher in the field of data visualization, argues that network representations gained relevance and popularity during the past decades, due to the increasing interconnectedness and decentralization of today's world—of human knowledge, of social ties, of economic processes, etc. (LIMA 2015). Graphs may even be considered one of the most significant visual tropes of the beginning of the 21st century. Lima argues, that in the field of information visualization a shift has taken place, over time, from a ranking top down structure during medieval times → FIG. 1 to the branching tree structure of the Enlightenment → FIG. 2 to an interconnected network structure since the early 21st century → FIG. 3. Such line of reasoning is supported by the concept of the *rhizome* developed by Gilles Deleuze and Félix Guattari (1987) outlined in *A Thousand Plateaus*: "We're tired of trees. We should stop believing in trees, roots, and radicles. They've made us suffer too much" (IBID.: 15). Instead Deleuze and Guattari suggest:

Unlike trees or their roots, the rhizome connects any point to any other point [...]. In contrast to centered (even polycentric) systems with hierarchical modes of communication and preestablished paths, the rhizome is an

acentered, nonhierarchical, nonsignifying system without a General and without an organizing memory or central automation, defined solely by a circulation of states. (IBID.: 21)

This approach is also reflected in the frequency of use of the network metaphor in the area of *Controversy Mapping* to date (VENTURINI, MUNK, & JACOMY 2016). On one hand its popularity is based on importing social network analysis techniques into research in the field of Science and Technology Studies (STS); on the other hand it relies on the hyperlink structure of the internet, through which the controversy is studied by tracing the paths, controversial issues take among the actors, that are involved (IBID.: 1). On a similar note, Manual Lima (2011: 44) refers to the World Wide Web as “arguably the largest rhizomatic system ever created by man”. Also Bruno Latour acknowledges Deleuze and Guattari’s influence on his work by stating that “ANT should really be called ‘actant-rhizome ontology’” (LATOUR 1999B: 19).

Drawing on this significance of the network topology today, the aim of this project is to explore network visualization further and take it to ‘another level’: Here the intention is to investigate how visual tropes of the network, can be translated from flat, two-dimensional into three-dimensional, physical representations. Can the translation of relational data into materiality facilitate the comprehension of complex, dynamic contexts?

Concepts and tools from graph theory and social network analysis partially inform this investigation. However, the approach mentioned above, does not aim at the development of yet another network layout algorithm, but rather at gaining insight into the dynamics of urban controversies through the identification and analysis of pattern. These insights should provide the basis for a meaningful transformation of the initially gathered data.

This investigation is guided by the following question: How to translate the process of negotiation, as in developments over time, into a physical representation? “Escaping flatland” (TUFTE 1990: 12FF).

APPROACH AND METHODOLOGY

After tackling development plans of Berlin's former-airport-turned-park Tempelhofer Feld in a previous research (SCHIRNER 2015), another contested site in Berlin provides the case study data of this thesis project: Mauerpark. Within this publication also referred to as *MPK*—Mauerpark is a park located in the northern part of the German capital. The MPK controversy revolves around the planned construction of a residential complex with about 700 apartments on a 3.5 hectares piece of land located at the edge of the park. Going on for more than 20 years this controversy culminated in October 2015. It is in the nature of controversy that it is not clear whether this resolution will remain to be the final status though. It is intended to map the controversy as it unfolded during the years 2013, 2014, and 2015. Due to the complexity of the issue, this thesis explores the topic of MPK development without any claim to comprehensiveness. Within the scope of this thesis, physical data visualization is used as an analytical as well as a communication tool to observe, study, process, grasp and communicate complex phenomena.

The work on this project passes through three stages: First Mauerpark controversy is examined broadly and in-depth, leading to the compilation of the data set. The collection of the data is followed by its exploration and analysis on the lookout for interesting negotiation patterns. Here, extensive model-making experiments facilitate the identification of such patterns—along the lines of 'making things as the key to understanding and gaining insight'.

For the purpose of practicability a modular system is developed to facilitate and ease the otherwise (even more) laborious process of assembling, disassembling, adapting, reconfiguring. The nature of the research topic poses difficulties to its documentation since its intention is to leave the 'flatland' and explore spatialities. Nevertheless, this publication contains reproductions of data physicalizations in form of photographs and graphic illustrations in order to support the communication of findings.

AREA EXPANSION MAUERPARK

- ① Initial area of Mauerpark since 1990
- ② Expansion of the park – adding 2 hectares in 2005
- ③ Establishing a connection between Brunnenviertel and the park in 2013
- ④ Planned park expansion – adding 5 hectares in 2016
- ⑤ Commercial area leased to small businesses
- ⑥ Building plot for a new residential complex (planned start of construction: 2016)

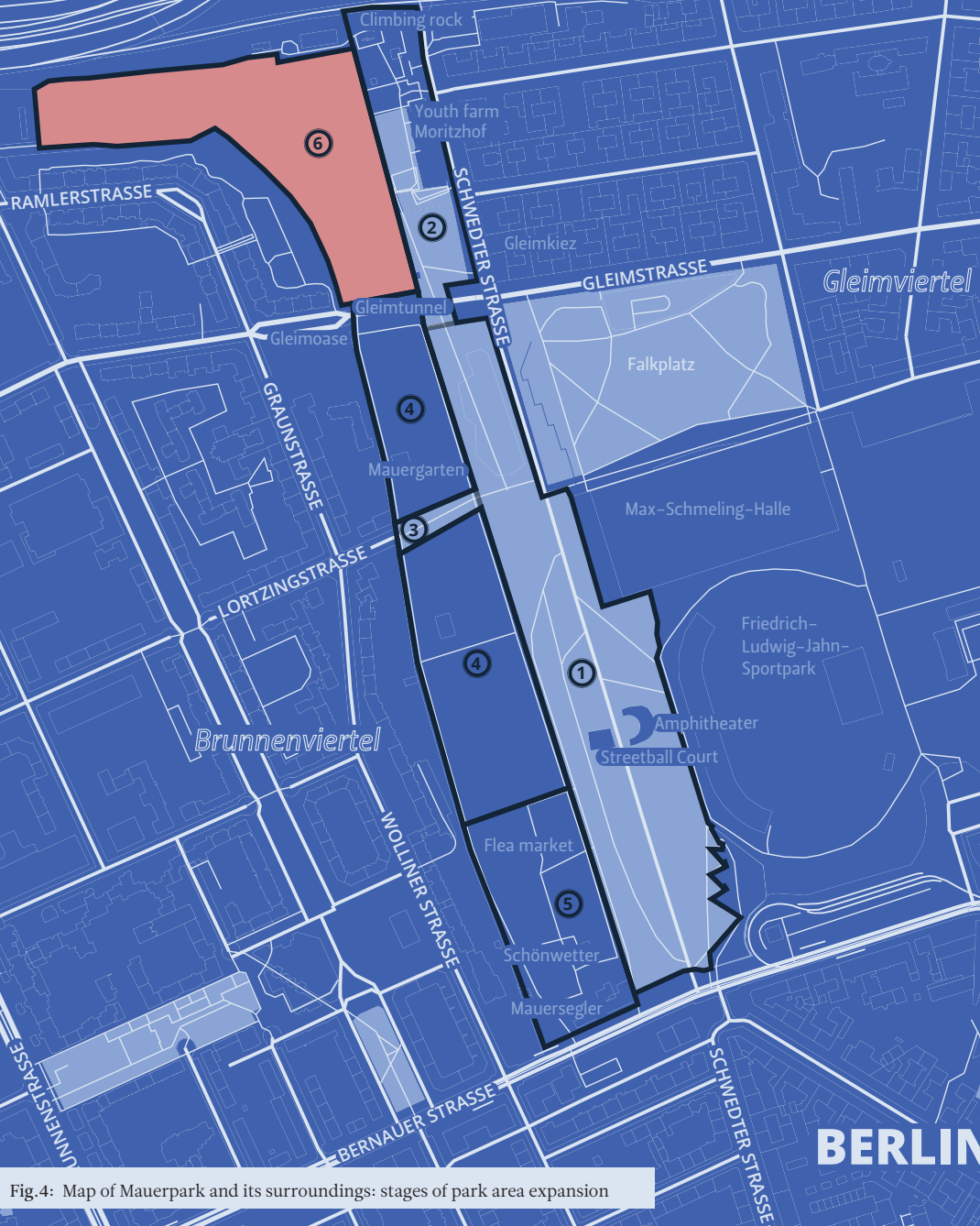


Fig. 4: Map of Mauerpark and its surroundings: stages of park area expansion

BERLIN

PART 1: MAUERPARK

1.1 BETWEEN THE DEATH ZONE, BEAR PIT KARAOKE, REAL ESTATE AND GREEN CORRIDORS

4 The information provided in this section has been compiled from websites from the dataset → TABLE 4.

Mauerpark is an eight-hectare public park, roughly 100 meters in width, stretching 1500 meters along both sides of the street Schwedter Straße—from Bernauer Straße and Eberswalder Straße in the south to the S-Bahn tracks in the north⁴ → FIG. 4. The street section between Bernauer Straße and Gleimstraße is closed for traffic. Here the western edge of Schwedter Straße constitutes the border between the Berlin neighborhoods Brunnenviertel and Gleimviertel, the districts Gesundbrunnen (formerly Wedding) and Prenzlauer Berg, the boroughs Mitte and Pankow and hence even between two states for more than 40 years (1949–1990): Mauerpark is located on a part of the former so-called Death Strip along the Berlin Wall—separating the Russian from the French sector, East from West Berlin/Germany.

Within two and a half decades this piece of land has been transformed from a no-man's land into a popular meeting and recreational space for locals as well as visitors. Its narrow grassland becomes a dusty field during summer months, which reminds one of

festival grounds; so does the general atmosphere on a sunny summer Sunday afternoon: Irishman Joe Hatchiban utilizes the 1000-seat amphitheater with his *Bearpit Karaoke*. The street-ball court and the climbing wall are busy, musicians from around the world perform within earshot, making a few extra bucks. Remaining wall fragments serve as graffiti canvas, five giant swings on top of the slope on the eastern edge do not come to a halt. Community projects such as the urban garden *Mauergarten* and the youth farm *Moritzhof* are well established. A flea market, which attracts tens of thousands visitors each Sunday, the beer gardens/beach bars *Mauersegler* and *Schönwetter* are revitalizing a former industrial zone, located on the western edge.

MAUERPARK CONTROVERSY

What is the fuss about Mauerpark development? It may evoke images of extensive construction sites for a couple of months, followed by towering homes with vast glass surfaces and roof terraces, using Mauerpark as a generous front garden.

At this stage, the controversy revolves around a building plot of 3.7 hectares, located north of Gleimtunnel, bordered by residential buildings along Graun- and Ramlerstraße, the S-Bahn tracks, and the northern section of Mauerpark with *Moritzhof* → FIGS. 4/5. The scope of the development project includes the construction of a residential complex with more than 700 apartments and a nursery for up to 80 children. Apartment types range from condos (194) over rental apartments (244) to apartments suitable for elderly (43) and students (219) (STARKE 2015: 1).

Real estate development company *Groth Group* acquired the building land from the real estate firm *CA Immo* in October 2012 and intended to start building in 2016. However, the current plan represents already the 17th version of the development project (STARKE 2015: 4).

This fact also tells something about the intensity, the fate of this site has been negotiated during recent years. Many valid points

have been raised supporting and opposing the erection of the buildings up to seven stories in height → FIG. 6: On the one hand the severe housing shortage in Berlin, on the other hand the interruption of the green belt by the buildings, blocking the flow of cold air. Another argument is the expected impact on the rent level in the neighboring Brunnenviertel, where rents are still significantly lower than in Prenzlauer Berg, on the other side of Mauerpark—or than in the future *Mauerpark-Quartier*. One particularly delicate detail is the fact that lower-rent senior and student housing is facing the S-Bahn tracks and hence functions in the design as noise barrier for the other buildings.

At this stage, this brief overview should be sufficient as the issues tackled will be explored in all detail as the project unfolds further.



Fig.5: Prof. Carsten Lorenzen, Copenhagen:
Site Plan Mauerpark development (March 2013)
©Groth Group, 2013

Fig.6: Nöfer Architects, Berlin: Exemplary
perspective view of block C (March 2013)
©Groth Group, 2013

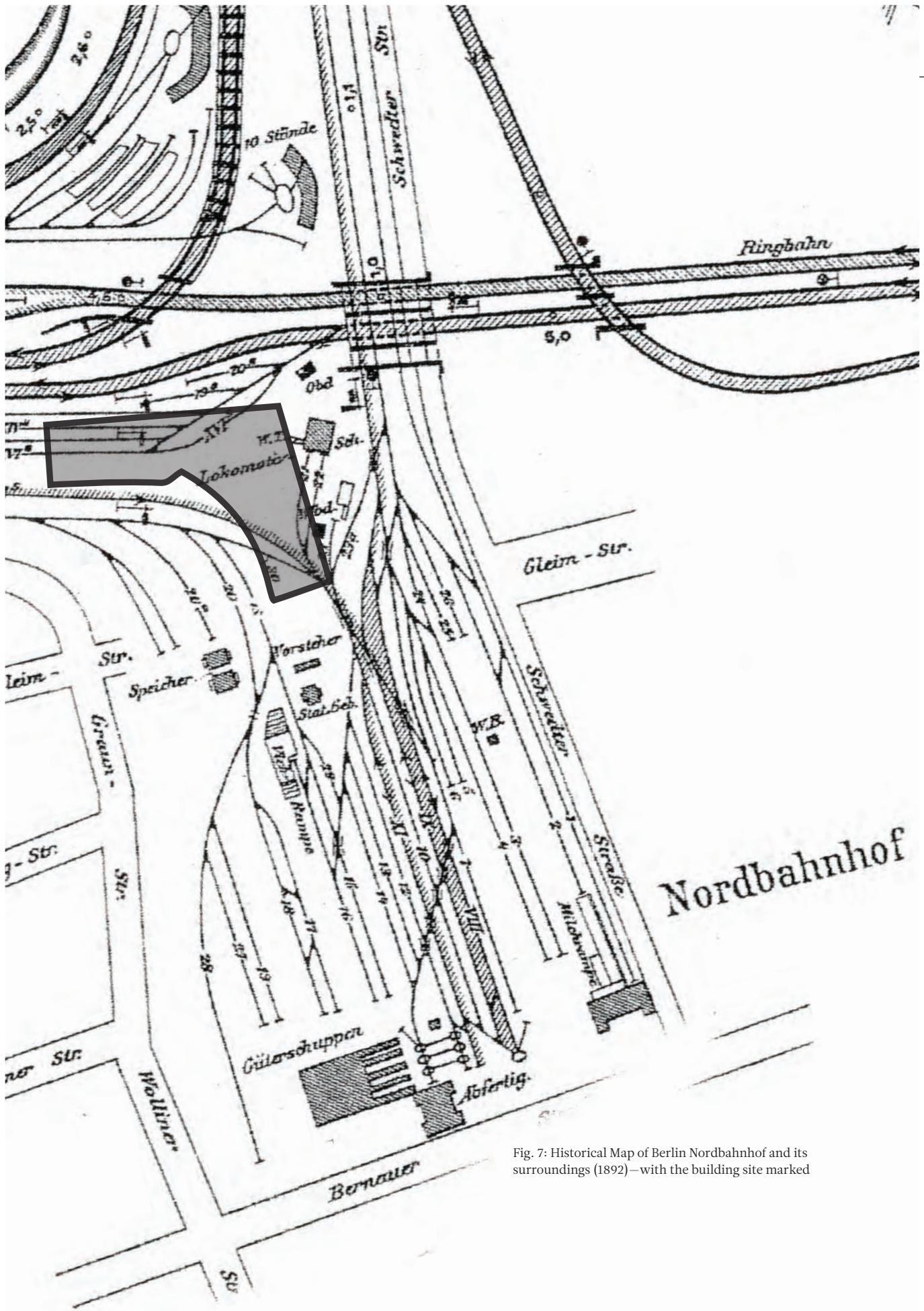


Fig. 7: Historical Map of Berlin Nordbahnhof and its surroundings (1892) – with the building site marked

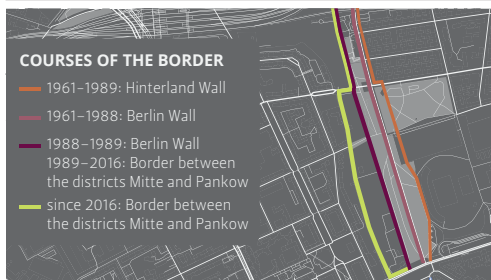
HISTORICAL OVERVIEW

Before its incorporation into Berlin, at the beginning of the 19th century, the area around today's Mauerpark was used as farmland. In 1825, the site east of Schwedter Straße was bought by the Prussian military and converted into a parade and drill ground. Later, it increasingly served as sports and playing field for the Berlin soccer club Hertha BSC as well as the general public. In 1951, the football and athletics stadium "Jahn-Sportpark" was built on its ground.

A quarter century later, the area west of Schwedter Straße was transformed into the train station *Nordbahnhof*, a terminus station of the north-south-link, connecting Berlin and the Baltic Sea → FIG. 7. Until 1985—with an exception of a couple of years during the 1890s—this station was exclusively used as freight yard. Today, Gleimtunnel is the most prominent visible remaining feature of this time—still recognizable as railway structure and therefore acknowledged as a historic monument.

Fig. 8: The course of the Berlin Wall along Schwedter Straße before and after the shift of borders (1989)

Fig. 9: The westward shifts of the border between 1988 and 2016



Between 1961 and 1989, the space between Jahn-Stadium (East Berlin) and freight yard (West Berlin) was occupied by the inner German border: the Berlin Wall

and the adjacent Death Strip.

The difference in elevation between those two sites posed difficulties to the surveillance of the border → FIG. 8.

A territorial exchange in 1988 resulted in the shifting of the border by about 50 meters westward → FIG. 9.

The Death Strip expanded.

After the Fall of the Berlin Wall and the Reunification of Germany during 1989/90 the open space along Schwedter Straße was used as a public green space while watchtowers were still

standing → FIG. 10. Gleimtunnel, the aforementioned tunnel construction, which was blocked during the years of division, was reopened and served as one of few connections between the neighborhoods Gesundbrunnen and Prenzlauer Berg.



Fig. 10: Gerd Danigel: Mauerpark (1990)

Based on a design by landscape architect Gustav Lange the park was laid out in 1992. This transformation was completed in 1994 and partially funded by *Allianz Umweltstiftung*, a foundation concerned with environmental protection. The foundation supported the project with 2.3 million euros and demanded the extension of Mauerpark area by two hectares before 2010 in return. This deal and its conditions were specified in a contract (“Mauerpark-Vertrag”) between *Allianz Umweltstiftung* and the City of Berlin in 1993. Originally, the former railway area was designated to become the western extension of Mauerpark, though the owner of the property *Vivico Real Estate GmbH* did not plan to give it away for little money, while the Senate of Berlin did not have the financial means to purchase it. *Vivico Real Estate*, a state-owned divestment company, was founded in 2001 with the purpose of selling former railway property profitably. However, the area in question was

specified as green space in Berlin's land use plan in 1994.

Originally less than seven hectares in size, Mauerpark grew to about eight hectares with the addition of the area north of Gleimstraße in 2005. Consequently Gleimstraße divides the park into a southern and a northern part. The campaign *Aktion Landnahme* (German for: operation land acquisition) started by the citizens association *Gleimviertel e.V.* in November 2007 aimed at taking over unused spaces of a commercial area at the western side by planting trees on site.

In January 2011, *Vivico* called—in cooperation with Berlin's urban planning department—for entries for an urban design competition for the development concept for two building plots at Mauerpark; both on the western edge, one north, one south. The results were announced April the same year: no first place was awarded, but two second places (*zanderroth architekten*, Berlin/Prof. Carsten Lorenzen, Copenhagen) as well as one third place. Later this year, state-owned *Vivico Real Estate* was bought by *CA Immo*, a privately owned real estate company.

In October 2012, the Senate of Berlin passed the "Urban Development Contract", specifying the future land use of the former railway property negotiated between the landowner *CA Immo*, the Senate of Berlin and the District of Mitte: *Groth Group* purchased 3.7 hectares north of Gleimtunnel and is granted development rights. In return the City of Berlin was promised to receive five hectares of land, stretching from Bernauer Straße to Gleimstraße, which would enable the expansion of Mauerpark and thus the fulfillment of the "Mauerpark Contract" from 1993. It was agreed that the land should remain undeveloped and that additional two hectares are leased to flea market organizers as well as restaurants and bars. These changes resulted in a significant increase of connectivity between Brunnenviertel and the parklands. The neighborhood, now bordering the western edge of the park, used to be cut off by a fenced area almost along its entire length.

Even though the City of Berlin received the property as a gift from *CA Immo*, the annexation had its price: For instance, the reimbursement for loss of rental income adding up to 1.5 million euros or

the cutting of the green corridor, serving as a fresh air supply channel, caused by the planned development next to *Moritzhof*.

Early 2013, a broad opposition became visible. Citizens initiative *Mauerpark-Allianz* was founded, which aims at linking the two neighborhoods east and west of the park as well as a number of different activist groups and engaged individuals more closely.

At the beginning of 2015, the controversy entered a critical phase. During a one-month review Berlin citizens got the opportunity to voice objections to the proposed development plans for the area north of Gleimtunnel, which were filed under *1-64a VE*. At the end of the mentioned period citizens' initiative *Mauerpark-Allianz* delivered a petition with 39.000 signatures to the responsible district authorities. The following day Berlin Senate declared the area in question as a site of extraordinary significance for the urban planning process and took over the case. Andreas Geisel, Senator for Urban Development and the Environment, argued that a construction project of such dimension can not be negotiated by local residents solely, it is rather of interest to the entire city and its urban development; following the motto "when it becomes necessary to drain the swamp, you don't stand around asking the frogs"⁵. This move resulted in a shift of responsibility from district authorities to state level. Hence, the petition for a referendum on district level became invalid and was to be repeated on a state level, resembling the model of Tempelhofer Feld in 2014. On October 8, 2015, Berlin Parliament approved the development plans *1-64a VE*, an important step to be taken. The year 2016 started with the announcement of the plan to shift the district border again by 100 meters to the west, in order to ensure consistency concerning park maintenance and clear responsibilities of district municipalities → FIG. 9.

As such overview indicates, Mauerpark can be considered a place of urban memory with an eventful history. Negotiation over this contested piece of land appears highly complex involving stakeholders from different backgrounds and times, pursuing divergent goals.

⁵ Quote by Erwin Huber, a German conservative politician, commenting on the missing dialogue with public officials, farmers, teachers, students regarding steep pay cuts (*Süddeutsche Zeitung*, 14 January 2004, p. 3).

1.2 CONTROVERSY DATA

DATA COLLECTION

Guided by the question who and what is involved in the debate concerning the development plans at the edge of Mauerpark, the web is queried for relevant content to get an overview of the controversy. In the context of this thesis the term *actor* describes equally human and non-human entities as suggested by Bruno Latour (2005). The intention is to follow the controversy as it unfolds. *Googlescraper*⁶, a tool developed by *Digital Methods Initiative* (DMI) in Amsterdam, facilitates this process of familiarization with the topic by harvesting URLs representing a diverse range of actors retrieved through two different Google search queries: *Mauerpark Bebauung*⁷ and *Mauerpark Stadtentwicklung*⁸ → APPENDIX TABLE 1. This broad analysis leads to the identification of 12 core actors, that serve as a starting point for the identification of additional actors, that are engaged in – and therefore matter for – the controversy → TABLE 2.

⁶ *Googlescraper* (also known as Lippmannian Device) batch queries Google and makes the result available in CSV format. Also see: wiki.digitalmethods.net/Dmi/ToolGooglescraper
^{7/8} German terms for 'Mauerpark (urban) development'

Table 2: Starting Points – Core Actors

#	Query	URL
MS04 MB02	Mauerpark Stadtentwicklung Mauerpark Bebauung	mauerpark.info
MS11 MB04	Mauerpark Stadtentwicklung Mauerpark Bebauung	mauerpark-allianz.de
MS33 MB13	Mauerpark Stadtentwicklung Mauerpark Bebauung	prenzlberger-stimme.de
MS10	Mauerpark Stadtentwicklung	nets-berlin.de
MS15	Mauerpark Stadtentwicklung	gruenzuege-fuer-berlin.de
MS20	Mauerpark Stadtentwicklung	brunnenviertel-ackerstrasse.de
MS37	Mauerpark Stadtentwicklung	pruefstein-lichterfelde-sued.de
MB08	Mauerpark Bebauung	gleimviertel.de
MB25	Mauerpark Bebauung	welt-buerger-park.de
MB34	Mauerpark Bebauung	kieze-im-dialog.de
MB38	Mauerpark Bebauung	update.mauerpark-im-dialog.de
-	-	grothgruppe.de

Table 4: Data Set—Initial and Crawled Actors

#	Title	Description
C01	Berlin Senate	Berlin – Official City Portal of the German Capital
C02	Freunde des Mauerparks	Freunde des Mauerparks e.V. Information portal on Mauerpark in Berlin
C03	Mauerpark-Allianz	Mauerpark-Allianz Your voice for 100% Mauerpark
C04	Brunnenviertel-Brunnenstrasse	Quartiersmanagement Program for participatory development of ‘disadvantaged’ neighborhoods
C05	Welt-Bürger-Park	Mauerpark Stiftung Welt-Bürger-Park Mauerpark Foundation
C06	Grünzüge für Berlin	Berliner Netzwerk für grüne Korridore Berlin Network for Green Corridors
C07	Gleimviertel	Bürgerverein Gleimviertel Citizens’ association
C08	Jugendfarm Moritzhof	Youth farm for children and teens between 6 and 16 years
C09	Prenzlberger Stimme	Prenzlberg’s Voice The first online news and opinion magazine from Prenzlauer Berg
C10	Al Thälmannpark	Anwohnerinitiative Ernst-Thälmann-Park Neighborhood Initiative How do we want to live?
C11	Kieze im Dialog	Neighborhoods in Dialogue Mauerpark as link between two neighborhoods
C12	Bürgerinitiativen-Netzwerk	Citizens Initiatives Network Guide and Networking for Citizens Initiatives
C13	Prenzlauer Berg Nachrichten	Prenzlauer Berg Nachrichten — The local paper for Prenzlauer Berg
C14	Parliament Berlin	Berlin House of Representatives
C15	THF 100	THF 100 Referendum 100% Tempelhofer Feld
C16	Prüfstein Lichterfelde-Süd	Citizens portal for a human-oriented urban development in Lichterfelde-Süd (Berlin)
C17	Mauergarten	Intercultural community garden at Mauerpark Berlin
C18	Brunnenviertel	Brunnenviertel e.V. Neighborhood association For a better cooperation in the neighborhood
C19	Groth Group	Real Estate Development Company
C20	Teddy 2.0	Campaign More spaces for culture, education, kids and teens — more green for everyone
C21	Futurberlin	Portal for urban development of Berlin
C22	Brunnenviertel-Ackerstrasse	Quartiersmanagement Program for participatory development of ‘disadvantaged’ neighborhoods
C23	Degewo	Municipal housing association managing more than 75.000 homes across Berlin
C24	Grüne Liga Berlin	GRÜNE LIGA Berlin e.V. National Network of Ecological Initiatives
C25	Kleingärtnerverein Oeynhausen	Allotment Garden Association in Oeynhausen (Southwest of Berlin)
C26	Oeynhausen Retten	Citizens Initiative “Save Oeynhausen”
C27	SWUP GmbH	Landscape Architecture, Landscape Planning, Urban Planning and Mediation
C28	Quartiersmanagement Berlin	Social City Program for participatory development of ‘disadvantaged’ neighborhoods
C29	Gleimkiez	Neighborhood Initiative Ideas for our neighborhood
C30	Prenzlberger Ansichten	Prenzlberger View Points Neighborhood Journal
C31	Architektenkammer Berlin	Berlin Board of Architects
C32	Mauerpark im Dialog	Mauerpark in Dialogue An initiative by Groth Group
C33	Stiftung Naturschutz Berlin	Nature and Biodiversity Conservation Foundation Berlin
C34	NABU	National Nature and Biodiversity Conservation Union
C35	NETS Berlin	Network for Social Urban Development
C36	Gleimoase	Traffic Island and Sculpture Park An oasis located on Gleimstraße revitalized in 2010

URL	InDegree	Inlinks	Outlinks	Actor Type	Actor Concern	Actor Position
berlin.de	22	19	2	Public Authority	Housing	Pro
mauerpark.info	12	9	9	Activist	Community	Contra
mauerpark-allianz.de	11	9	10	Activist	Urban Transformation	Contra
brunnenviertel-brunnenstrasse.de	11	9	1	Public Authority	Urban Transformation	Neutral
welt-buerger-park.de	10	7	14	Activist	History	Contra
gruenzuege-fuer-berlin.de	10	7	6	Activist	Ecology	Contra
gleimviertel.de	9	9	14	Interest Group	Community	Contra
hjugendfarm-moritzhof.de	9	7	4	Interest Group	Community	Contra
prenzlberger-stimme.de	9	7	3	Interest Group	Participation	Contra
thaelmannpark.wordpress.com	9	7	0	Activist	Urban Transformation	Contra
kieze-im-dialog.de	8	4	7	Activist	Community	Contra
bin-berlin.org	8	6	0	Activist	Participation	Contra
prenzlauerberg-nachrichten.de	8	6	1	Interest Group	Participation	Contra
parlament-berlin.de	7	7	0	Public Authority	Housing	Pro
hthf100.de	7	6	0	Activist	Ecology	Contra
pruefstein-lichterfelde-sued.de	6	3	15	Activist	Ecology	Contra
mauergarten.net	6	4	7	Interest Group	Ecology	Neutral
brunnenviertel.de	6	5	1	Public Authority	Community	Neutral
grothgruppe.de	6	4	0	Building Sector	Real Estate	Pro
teddyzweinull.de	5	3	5	Activist	Urban Transformation	Contra
futurberlin.de	5	3	7	Independent Expert	Urban Transformation	Contra
brunnenviertel-ackerstrasse.de	5	3	3	Interest Group	Urban Transformation	Pro
degewo.de	5	4	0	Public Authority	Real Estate	Neutral
grueneliga-berlin.de	5	5	0	Interest Group	Ecology	Contra
kleingaertnerverein-oeynhausen.de	5	4	0	Activist	Ecology	Contra
oeynhausen-retten.de	5	4	0	Activist	Ecology	Contra
swup.de	5	3	1	Independent Expert	Urban Transformation	Neutral
quartiersmanagement-berlin.de	4	2	2	Public Authority	Urban Transformation	Neutral
gleimkiez.de	4	2	5	Public Authority	Community	Neutral
prenzlberger-ansichten.de	4	3	0	Interest Group	Participation	Contra
ak-berlin.de	4	2	1	Independent Expert	Housing	Neutral
update.mauerpark-im-dialog.de	3	2	2	Building Sector	Real Estate	Pro
stiftung-naturschutz.de	3	2	0	Interest Group	Ecology	Neutral
nabu.de	3	2	0	Interest Group	Ecology	Contra
nets-berlin.de	2	1	7	Activist	Participation	Contra
gleim-oase.de	2	2	0	Interest Group	Ecology	Neutral

This step includes crawling their respective web presences in order to identify hyperlinks, which reference these additional relevant players in the debate. It is facilitated by the web corpus curation tool *Hyphe*, developed by *Médialab Sciences Po*. The data gathered through this partially manual process is then triangulated by sending the identical 12 initial URLs through a second web crawler—*Issuecrawler*. Developed by *Digital Methods Initiative* the software *Issuecrawler* carries out automated crawls. The result of both crawls—semi- and fully-automated—display strong congruence.

Prior to those crawls certain actors are blacklisted in order to minimize clutter and prevent a distortion of the actor network. This practice concerns actors that are irrelevant for the topic, but never-

theless appear regularly on websites, such as links to social media (e.g. Facebook, Twitter, Youtube, etc.) → TABLE 3.

Web crawling—the harvesting of hyperlinks—provides quantitative data, like the number of *inlinks* an actor receives or the number of *outlinks* an actor places. Furthermore the researcher is interested in qualitative data: A close reading of contents provided by actors on their websites—with regard to the actor type, the position the actor is taking, and which issues the actor is predominantly concerned with—provides qualitative insight. Entities are tagged and classified as activist, interest group, independent expert, or as public authority, as pro, neutral or contra, as concerned with ecology, urban transformation, housing, real estate, participation, community, or history.

At this stage, the exploration of Mauerpark controversy reaches a point at which it is feasible to state, that a fair amount of data has been collected, which allows for visualizing and analyzing the debate. Both, initial and crawled actors, constitute the corpus that serves as the basis for a range of subsequent experiments and explorations in the field of physical visualization → TABLE 4.

Table 3: Blacklist

#	URL
BL01	de-de.facebook.com
BL02	facebook.com
BL03	yelp.com
BL04	twitter.com
BL05	fotolia.com
BL06	amazon.com
BL07	pixelio.de
BL08	vimeo.com
BL09	disqus.com
BL10	youtube.com
BL11	e-recht24.de
BL12	de.wikipedia.com
BL13	wikipedia.com
BL14	de.statistica.com
BL15	foursquare.com
BL16	creativecommons.org
BL17	idealo.de
BL18	flug.idealo.de
BL19	finanzen.net
BL20	zanox.com
BL21	ikiosk.de

PRELIMINARY VISUALIZATION

The displayed visualization →FIG. 11 should provide a first overview of the assemblage. It depicts a snapshot of the controversy from early October 2015, two days before the negotiation reached its peak (as on October 8, the decision, to go ahead with the building plan *1-64a VE*, had been taken by the Berlin House of Representatives). It only represents a snapshot, due to the fact, that Mauerpark is “a site of struggle, a relational effect that recursively generates and reproduces itself” (LAW 1992: 386). According to John Law, the third influential figure shaping *Actor-network theory* (along with Bruno Latour and Michel Callon), it remains in the nature of processes that “no version of the social order, no organization, and no agent, is ever complete, autonomous, and final” (IBID.: 386F.).

Network representations provide a means to visualize relational data. Nodes, also called vertices, represent entities, here URLs, which are connected by a set of edges, or links, that visualize relationships. Here each relationship is constituted by a hyperlink. The visualization naturally represents only a limited range of the actors engaged in the Mauerpark controversy in order to make the physical implementation feasible. The extended network →FIG. 12 could pose difficulties to the process of physicalization. Hence, it is decided to zoom out and only include most active, most relevant entities. In the field of data visualization (print and interactive media) data points in vast numbers can be generated and controlled through the deployment of code. Such substantial support is not (yet) available for the creation of physical data representations.

The layout of the network is generated by a force-directed algorithm—in this case *ForceAtlas2*⁹, which is the default algorithm implemented by *Hyphe* (M. JACOMY, PERSONAL COMMUNICATION, FEBRUARY 26, 2016). Its NSEW orientation was chosen randomly informed by the format of the book. The positions of the nodes are determined through calculating forces taking into account two rules, based on the simulation

⁹ *ForceAtlas2* is a continuous force-directed algorithm for network spatialization. Its speciality is to “turn structural proximities into visual proximities, facilitating the analysis [...] of social networks” (JACOMY ET AL. 2016: 2).

MAUERPARK ACTOR-NETWORK DIAGRAM: INITIAL AND CRAWLED ACTORS

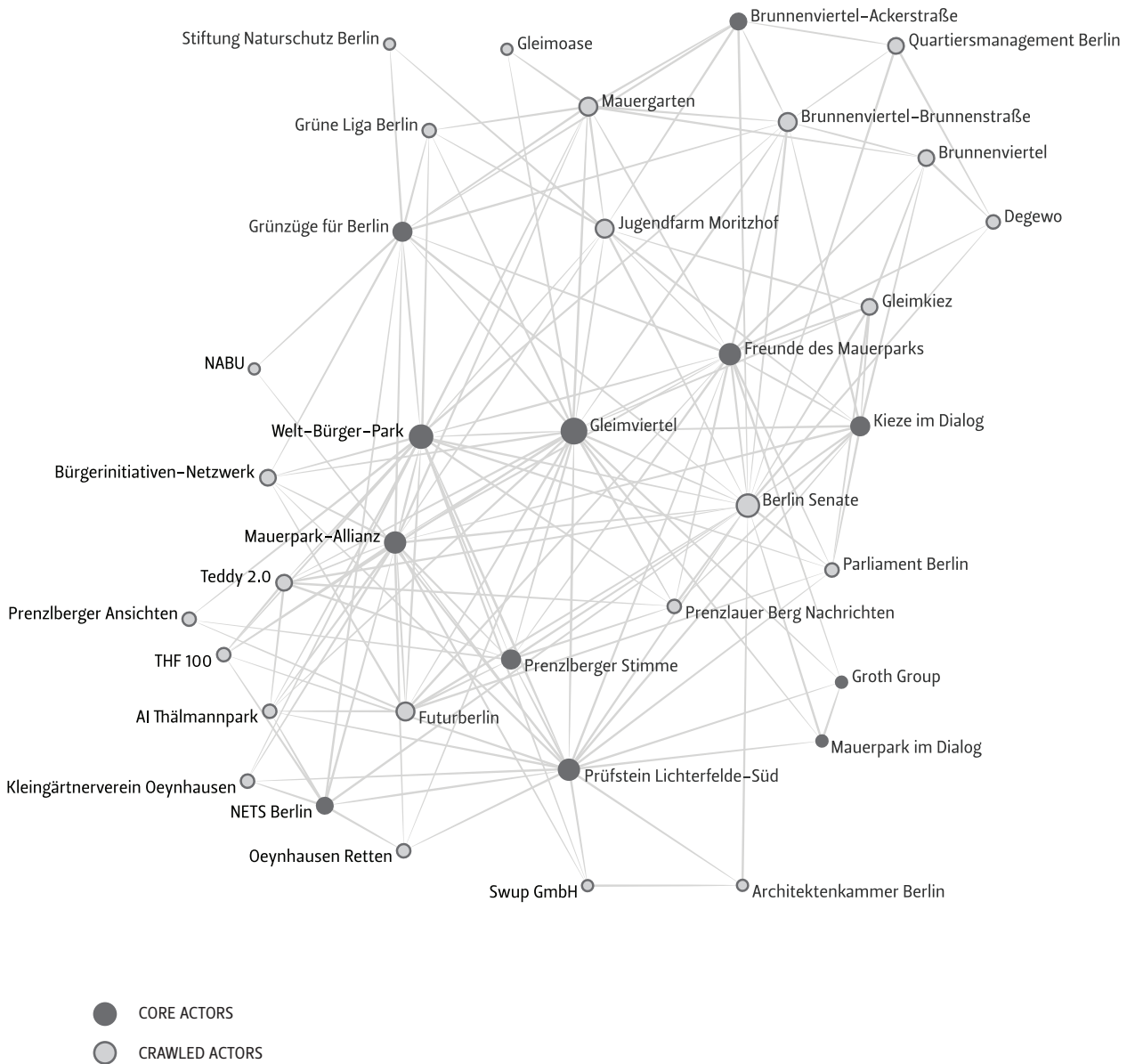


Fig. 11: Focused Mauerpark Network

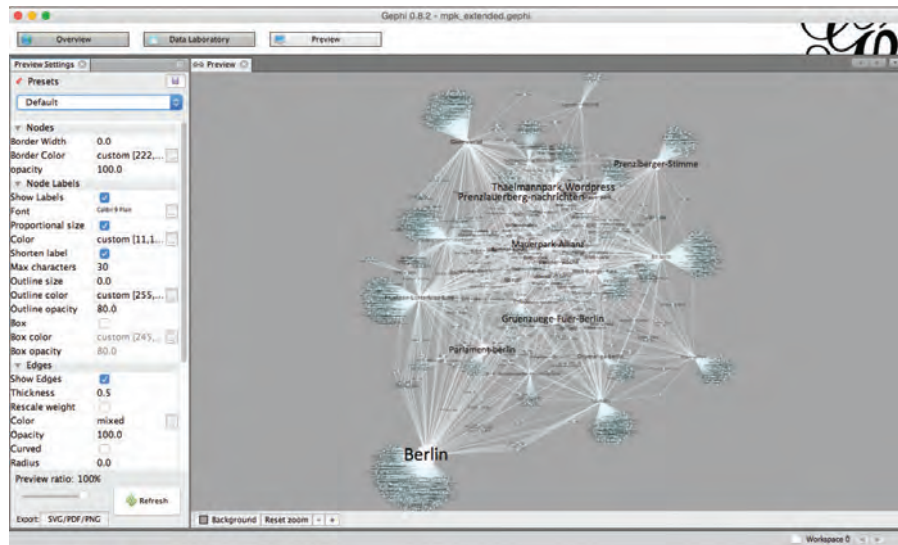


Fig. 12: Extended Mauerpark Network (screenshot)

of a physical system: In general nodes repel each other, while edges cause an attraction between each two connected nodes, edges behave like springs → FIG.13. Hence, the distance of actors depends on all the connections an actor has within the network (JACOMY ET AL. 2014). For instance, if a node is connected to a number of nodes placed on one side of the laid out network, it would not end up on the entirely opposite side. Additionally, network computation aims at minimizing the number of intersecting edges. Therefore it can be concluded, that the position of an actor within the assemblage is defined by its connections.

This force-directed approach generates network layouts that

are not set in stone, but can differ insignificantly. The overall appearance of the graph representation will not alter much from iteration to iteration though.

The resulting network, mapping the Mauerpark controversy, exceeds initial expectations and facilitates a first interpretation of the data, which will be explored within the following section along with the clarification of relevant terminology.

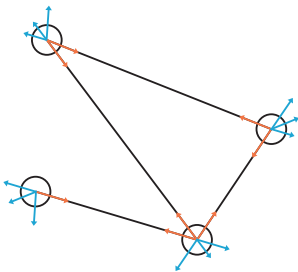


Fig. 13: Forces that have to be calculated during the spatialization of a force-directed network layout.

1.3 NETWORK : WORKNET

Based on the fact that the data set, underlying this controversy, is of relational nature, this chapter is dedicated to different network approaches and concepts and their potential relevance for the further analysis of the data and its visualization. These include methods borrowed from graph theory that facilitate social network analysis (SNA); on the other hand, *Actor-Network Theory* – and their mutual (in)compatibilities.

GLOSSARY

A network consists of two basic ingredients: a set of nodes that are interconnected by a set of edges. The *size* of a network is described by the number of nodes it contains; the focused Mauerpark (MPK) network contains 36 nodes → FIG. 11, an extended version around 1900 → FIG. 12. Another related parameter is the *density* of a graph, which outlines the ratio of number of edges to number of nodes. The division into modules, into defined clusters, is specified by the level of *modularity* of a graph. The measure of network heterogeneity can vary between the formation of hub nodes and an even distribution of edges among the nodes. The focused MPK network displays a tendency towards the latter, while the extended version resembles the former.

Network edges may be *directed* or *undirected*. MPK network is a *directed graph*, in which an edge points from one vertex to another, displaying an orientation. A number of MPK actors do reference each other, while the majority of connections are one-directional. The direction of an edge has an impact on the *diameter* of a network. The *diameter* of a network is the longest distance between any two nodes

in the network, which adds up to 9 in the big network, and 6 in the focused one. If the focused graph would be undirected its diameter would be 3, due to the fact that the direction of an edge does not have to be taken into consideration, due to the absence of ‘one-way streets’. The diameter is calculated by adding the weights of the edges that form the *shortest path* between the two most distant nodes. The *weight* of an edge represents the strength of a connection. Without treatment weights of controversy edges are consistently 1, as there is no information provided on the quality of the relationship, other than the mere existence of a hyperlink.

The equivalent measure for actors is the *degree* of a node, which describes the number of edges connected to it. In the MPK network the size of each node indicates its degree → FIGS. 11/12. The more edges are connected to a node the bigger its size, the higher its degree. In a directed network it can also be distinguished between *in-degree* and *out-degree*. MPK actor *Gleimviertel* [C07], with 23 connections, is an entity with high *degree centrality*.

Other measures of node centrality are *betweenness* and *closeness*. *Betweenness centrality* indicates how often a node appears on shortest paths between nodes in the network. *Closeness centrality* is a measure for the average distance from a given starting node to all other nodes in the network. *Distance* between two nodes is described by the number of edges that define the shortest path. Connected nodes have a distance of 1.0. Average distance in the focused MPK network is 2.13.

NETWORKING VS. WORKNETTING

In their paper “Actor-Network vs. Social Network Analysis vs. Digital Networks”, Venturini, Munk and Jacomy (2016) question the congruency of the three mentioned types of networks. The researchers argue that they are and are not congruent, suggest the more suitable term *worknet* (IBID.: 2), and conclude “there may be important similarities that makes

the use of graph convenient for the study of actor-network, despite the many differences that separate them. These differences should not be forget, but they should not block us either” (VENTURINI ET AL. 2016: 14). Bruno Latour voices dissatisfaction with the term *network* being associated with the *Actor-network theory*. He argues that the connotation of the term *network* has changed tremendously during recent decades by stating that “the word network [...] clearly meant a series of transformations—translations, transductions—which could not be captured by any of the traditional terms of social theory. With the new popularization of the word network, it now means transport without deformation, an instantaneous, unmediated access to every piece of information” (LATOUR 1999B: 15).

As a way out of this dilemma, Law and Mol (2001) suggest to use “fluid spaces” or “fire spaces” instead of the expression *network*, while Latour proposes—not entirely seriously—to replace *Actor-network theory* with “actant-rhizome ontology” (LATOUR 1999B: 19). Another attempt to escape the confusion around the network concept is the introduction of the term *worknet*, as suggested by Bruno Latour (2010) and revisited by Venturini et al. (2016: 2): “It’s the work, and the movement, and the flow, and the changes” (LATOUR 2005:143) that matters. It is the traces “act-ants” leave (on the forest floor) while negotiating an issue, forming a vast network (INGOLD 2008: 210).

According to the explorations of Venturini et al. (2016) objections to the confusion of the three network types (digital, social and actor) can be summed up in four arguments: First, when studying a phenomenon only through digital media, the research is exposed to the risk of not capturing it in its entirety due to the “partiality and bias of digital inscriptions” (VENTURINI ET AL. 2016: 5).

Second, the insufficient capability of graphs to handle qualitative data, that leads to disregarding the “heterogeneity of nodes and edges” (IBID.: 6), which is one of ANT’s distinct features.

Third, the “reversibility of Actor-Network” (IBID.: 7), which implies that actors can consist of networks as well as networks may be

actors and consequently the disapproval of familiar network structures. However, methods used in social network analysis are partially considered applicable to ANT as well (IBID.: 8).

And fourth, the most significant objection to graph representations is the disregarding of the “dynamics of relational change” (IBID.: 9), which is considered to be one of the most crucial capacities of actor-networks. ANT is not primarily concerned with the structure of an actor-network, but with its change over time, its dynamics: Networks “are the maze of trails left by children running through the uncut grass. Actions is [sic] not what flows through networks, actions is [sic] what makes networks and actors altogether” (IBID.).

Despite listed divergences, Venturini et al. (2016) also determine a number of similarities between *social network analysis* and *Actor-Network Theory*: Both have an ‘enemy’ in common: classical sociology (IBID.: 11). Both are driven by their interest in relationships and connections (and the lack thereof). They qualify their initial statement concerning the incompatibility of the network types and acknowledge that techniques of network analysis have the capacity to support the grasping of actor-networks, as long as no part, actor, connection is singled out and networks are studied as interdependent, “continuous but inhomogeneous fabric of social existence” (IBID.: 15).

Venturini et al. (2016: 13F) argue that the most significant link between SNA and ANT is the visual appearance of the network representation resulting from the force-directed network layout approach. Since such network spatialization gives meaning to the positioning of nodes and their distance from each other, the resulting layout reflects relationships between nodes: Network concepts, such as neighborhood, structural separation or clustering, provide information on the quality of relationships and hence have a “graphical meaning” (IBID.: 13).



PART 2: CONTROVERSY PATTERN

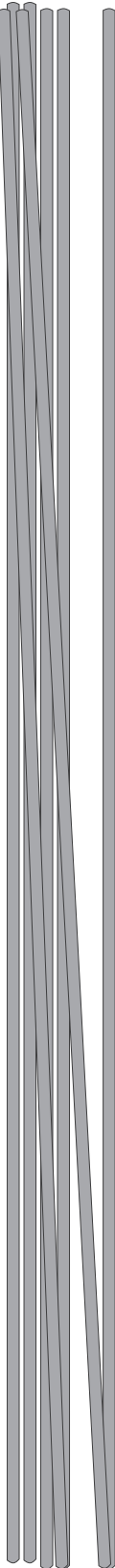
This chapter deals with the analysis of a controversial issue through the process of model-making. By turning the data set into physical structures the aim is to investigate whether adding a third dimension can support the analysis and the grasping of complex, interconnected, dynamic matters.

As commonly accepted, data visualization—the graphic representation of data—has that quality of the simultaneously all-encompassing, which raw data does not have—at least not to the human eye (BERTIN 1981; LIMA 2010; MUNZNER 2015). The first of three explorations intends to test whether this theory holds true for the three-dimensional, physical representation of data. It seeks to find out to which extend tangibility can compete with the relevance of graphic representations in a saturated digital age.

Since controversy is a process that entails dynamic negotiations, its relational configuration is prone to change over time. The multiplicity of associations between human and non-human entities result in unstable assemblages that undergo continuous reconfiguration: “a *WORKnet*” (LATOUR 2010A, VENTURINI ET AL. 2016). These aspects inform the second set of experiments, which aim at capturing activity.

The third approach proposes to manually reorder physical network structures in the quest to gain insight into the controversy.

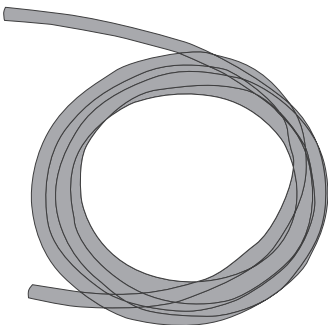
MATERIALS AND TOOLS



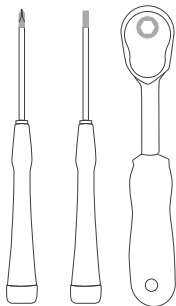
3mm Beech Rod



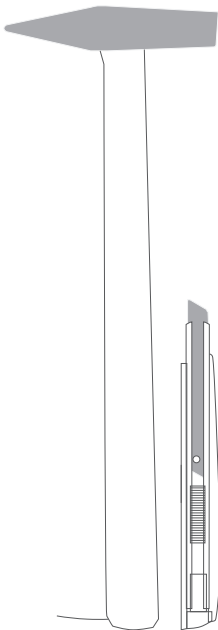
3/5mm Clear PVC Tube



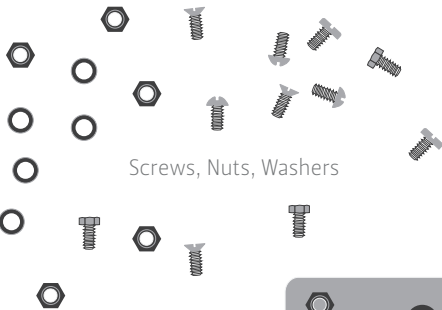
Screwdriver Ratchet



Hammer

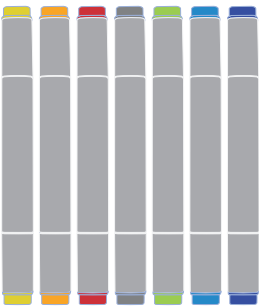
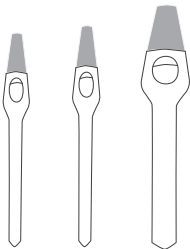


Cutter

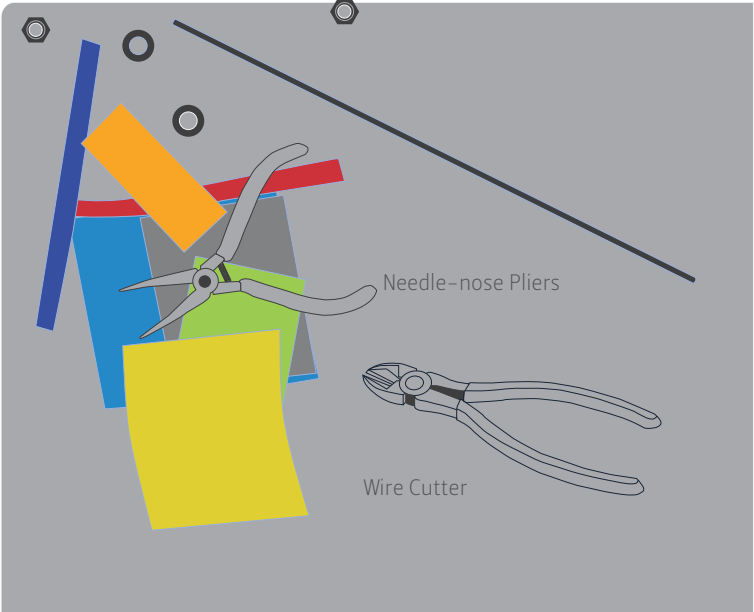


Screws, Nuts, Washers

Hollow Punch



Color Markers



Needle-nose Pliers

Wire Cutter

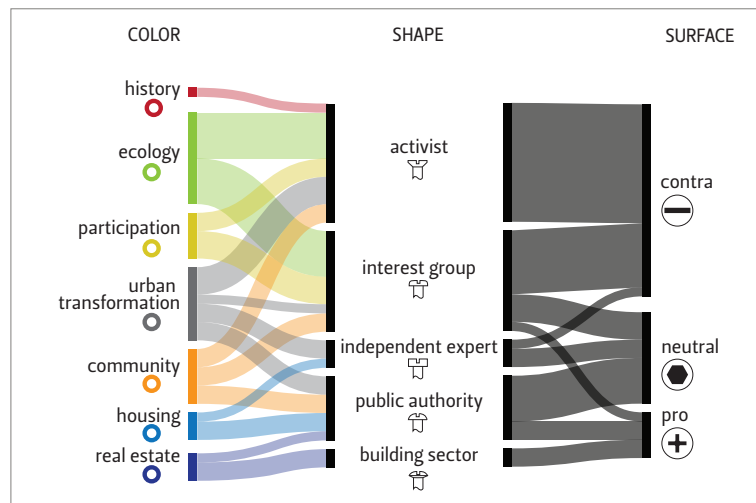
MODULAR SYSTEM FOR ENQUIRY

In order to facilitate this exploration a modular system is developed: The network structure, which is carried forward through the entire series of models, consists of edges and nodes. Links are made from wooden rods (beech)—three millimeter in diameter and cut to required lengths. Four centimeter long pieces of plastic tubes joined by screws, washers and nuts form the nodes → FIG. 15.

In order to facilitate this exploration a modular system is developed: The network structure, which is carried forward through the entire series of models, consists of edges and nodes. Links are made from wooden rods (beech)—three millimeter in diameter and cut to required lengths. Four centimeter long pieces of plastic tubes joined by screws, washers and nuts form the nodes → FIG. 16/17.

Further details about the actors is encoded using visual variables such as color, shape and texture: washers in varying colors provide information on the matter an actor is concerned with (e.g. ecology, real estate, participation, etc.), different shapes of screw heads provide information about the actor type (e.g. activist, public authority, etc.), and three screw drive shapes (“screw texture”) indicate the actors’ positions (pro, neutral, contra) → FIG. 18.

Fig. 14 (page 40):
Network Detail
Fig. 15 (left): Tools
and materials used
for model-making
Fig. 16 (left small top):
Node production:
Preparation of
components
Fig. 17 (left small bot-
tom): Finished node
Fig. 18: Diagram
visualizing 3 levels
of data encoding



*“Line as human
means to express
the relation between
points, something
that is entirely abstract
in the sense of not
existing materially
in nature.*

*Line as medium
indicates materially
the relation between
points and space,
expressing visually
human descriptive thought.*

Line as object to play with.”

GEGO, SABIDURA 4, CA.1965

2.1 TANGIBLE COMPLEXITY

DATA PHYSICALIZATION

Within the scope of her PhD, Yvonne Jansen (2013) investigates the potential of conveying information through physical representations of data. Jansen notes that while data objects—such as tally sticks¹⁰—played a role during pre-paper times, it was largely disregarded during recent years. Instead, the field of information and data visualization was focused on designing for print and screen.

Lately though, there is more and more work produced (PEARSON 2015, DRAGICEVIC & JANSEN 2014) as well as research undertaken (VANDE MOERE 2008, JANSEN, DRAGICEVIC & FEKETE 2012, LEE 2012, JANSEN 2013) exploring the capacity of data embodiments.

Data physicalizations range from data sculptures, like Nathalie Miebach's weather sculpture *Warm Winter*, an object based on data, which rather falls into the category data art → FIG. 19/20, to data-driven objects that facilitate the analysis of multivariate and complex matters, such as *emoto*, a data-driven project by Studio NAND, Moritz Stefaner and Drew Hemment visualizing sentiments voiced on Twitter in connection to the London 2012 Olympic Games → FIG. 21.

An empirical case study, carried out by Jansen (2013), provides insight into differences in the perception of data (in form of bar charts) depending on chosen visualization dimensions: 2D, 3D screen-based or physical 3D. User tests indicate that added value of physicalizing data include that they can be touched, they can be marked or pointed at (IBID.). Fingers are used as “cognitive and navigational aids” (IBID.:96). Additionally, data objects or sculptures are better suited to be watched together with other people and to discuss insights; if applicable, users can even situate themselves within the data representation (DRAGICEVIC



11 Programmable Matter is the science, engineering and design of physical matter that has the ability to change form and/or function in a programmable manner: selfassemblylab.net/research_projects.php

& JANSEN 2013B). Also physical rotation of (or walking around) the data embodiment outperforms the rotation of the three-dimensional screen-based version in terms of readability. Furthermore, Jansen ascribes a significant role to digital fabrication technologies, shape changing displays, and programmable matter¹¹ regarding the future of physical data visualization (JANSEN 2013: 154).

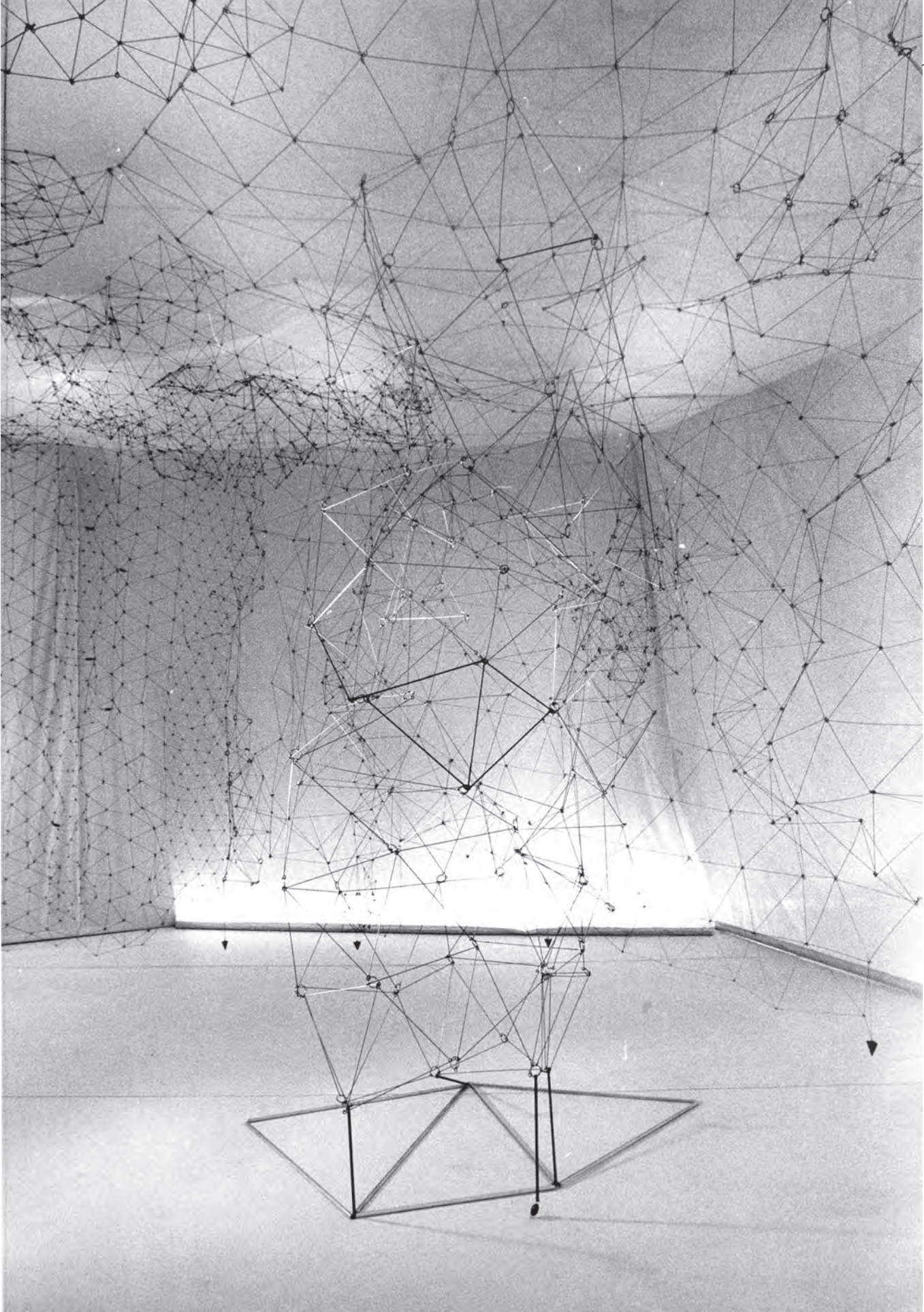
As Jansen tests the physical display of data in form of bar charts, this chapter explores whether such approach can be applied to a network as well. It aims at finding whether and to what extend the transformation of a flat network representation into a three-dimensional structure can facilitate and enhance the decoding of the underlying data.

Fig. 19: Nathalie Miebach: Warm Winter (detail) (2007)

Fig. 20: Data sculpture by Nathalie Miebach: Warm Winter (2007)

Fig. 21: Data installation by Moritz Stefaner, Drew Hemment and Studio NAND: emoto (2012)





GERTRUDE GOLDSCHMIDT: RETICULÁREA (1969)

*Thinking the Line*¹², *Line as Object*¹³, *Autobiography of a Line*¹⁴, *Questioning the Line*¹⁵. The titles of retrospective shows of Gertrude Goldschmidt's work during recent years reflect the focus of her explorations: The line as element is running through her oeuvre. Hailing from an architecture background, Gertrude Goldschmidt → FIG. 23—also known as Gego—investigates spatiality by means of objectified lines. She describes the nature and intention of her work as follows: “Thirty years ago, I was trained as an architect, committed to draw lines with a definite meaning, lines that determine forms or spaces as symbols of limits, never with a life of their own” (HUIZI & MANRIQUE 2005: 171). And she goes on:

*I discovered the charm of the line in and of itself—the line in space as well as the line drawn on a surface and the nothing between the lines and the sparkling when they cross, when they are interrupted when they are of different colors or different types. I discovered that sometimes the in-between line is as important as the line by itself. (IBID.: 167)*¹⁶

Gego studied architecture in Stuttgart from 1932 until 1938. After finishing her studies she left Germany and emigrated to Venezuela. In Caracas she started her broad exploration of the line, as an artist and as a teacher. In her position as a university professor in Caracas she encouraged free thinking among students. First exercises were confined to one design element: the line.

Even though her work is three-dimensional she vigorously refused the term sculpture: “Sculpture: Three-dimensional forms of solid material NEVER WHAT I DO!” (HUIZI & MANRIQUE 2005: 131). She was more interested in structure and transparency than form and volume (IBID.: 196). In her passionate search for transparency Gego created abstract spatial compositions, organic structures, net-like

- 12 Zentrum für Kunst und Medien (ZKM), 2006
- 13 Hamburger Kunsthalle, 2013/14
- 14 Dominique Lévy Gallery New York, 2015
- 15 The Museum of Fine Arts Houston, 2003

- 16 The defining elements of Gego's work as framed by herself during a two minutes long presentation introducing her work to teachers and other participants at a workshop she attended.

configurations: *Reticuláreas*, a series of meshes created between 1969 and the 1980s, made from stainless steel rods of 1 millimeter thickness and various lengths → FIG. 22.

This body of work evokes the concept of the *rhizome* by Gilles Deleuze and Felix Guattari, which has been outlined before. Such line of thought is supported by Birgit Kölle's reflections on Gego's mesh structure in her essay "No Day without a Line": "It is characteristic of the *Reticuláreas* to have no beginning and no end, no centre and no edges, no hierarchy, no balance. Everything is equal, linked together, infinite. Woven into an interrelated web, the modular configurations are linked one another by multiple joints and nodes [...]" (KÖLLE 2014: 23). Indeed, she was introduced to *rhizomatics* by Christian Thiel, a German architect and friend, who pointed out obvious structural correlations (THIEL 1983: 1). Though this happened only more than ten years after the creation of the *Reticulárea*.



Fig. 23: Gego during installation of *Reticulárea*, 1969, Museo de Bellas Artes, Caracas

EXPLORATION: PHYSICAL NETWORK LAYOUT

Cartographer Jaques Bertin distinguishes between two types of visual encoding variables: *planar* and *retinal*. *Planar* means the position of a data point, data line or data area, being defined by the x- and y-coordinates of the plane (BERTIN 2010: 42). *Retinal* variables—which concern the visual appearance of a data point, line or area—include size, value, texture, color, orientation, and shape a data point can take. Altogether there are eight variables → FIG. 25. The series of experiments in this section explores the question: What if, a ninth variable would become available by adding a third dimension? Bertin argues that due to the fact that a network itself “occupies the two planar dimensions, any other components must be represented by retinal variables” (BERTIN 2010: 269). Hence, he continues, “a network can only be perceived as a single image when two components are involved: one forming the network, and a second represented by an ordered retinal variable”. This applies to

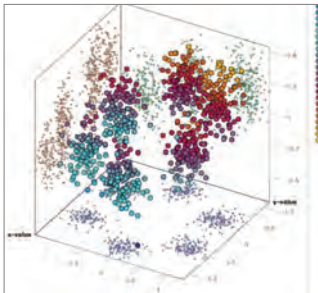
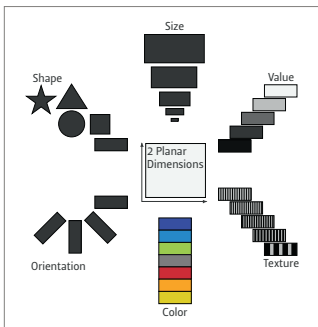


Fig. 24: Three-dimensional scatter plot revealing clusters

Fig. 25: Eight visual encoding variables as defined by Bertin



the plane. Going beyond planarity intends to replace or support the use of retinal variables by encoding data by means of position within Cartesian space.

Taking into account their positions (here: viewpoints on the controversy), their types, and concerns, MPK controversy actors are plotted on a continuum along the z-axis: Applying the method of *scatter plotting*, also used in 3D graphics → FIG. 24, the MPK data set is laid out with the aim to identify clusters. This approach is drawing on the statement that the visual perceptibility of concepts such as *centrality*, *betweenness*, and *density*, which are facilitated by force-spatialization, are “where the deepest bond between SNA and ANT is to be found” (JACOMY ET AL. 2016: 13F.). Is it possible to experience notions like *centrality* or *density* physically by adding another dimension?

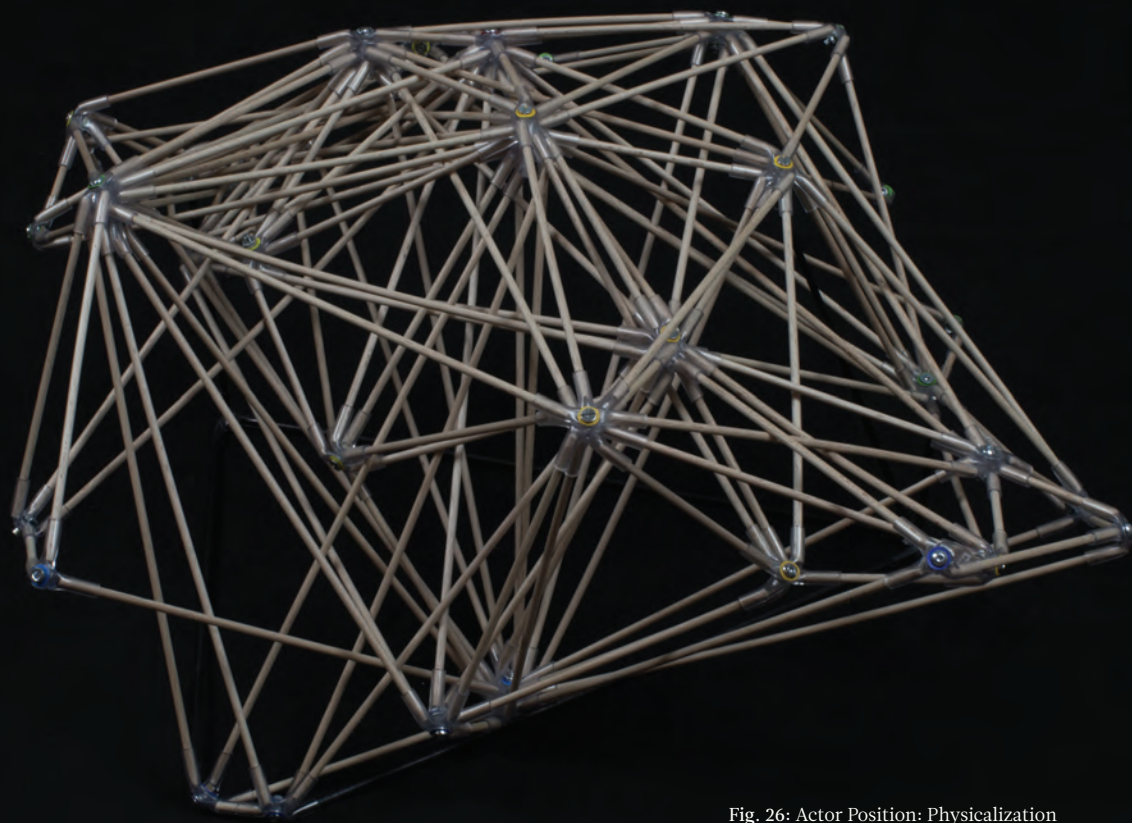


Fig. 26: Actor Position: Physicalization

ACTOR POSITION

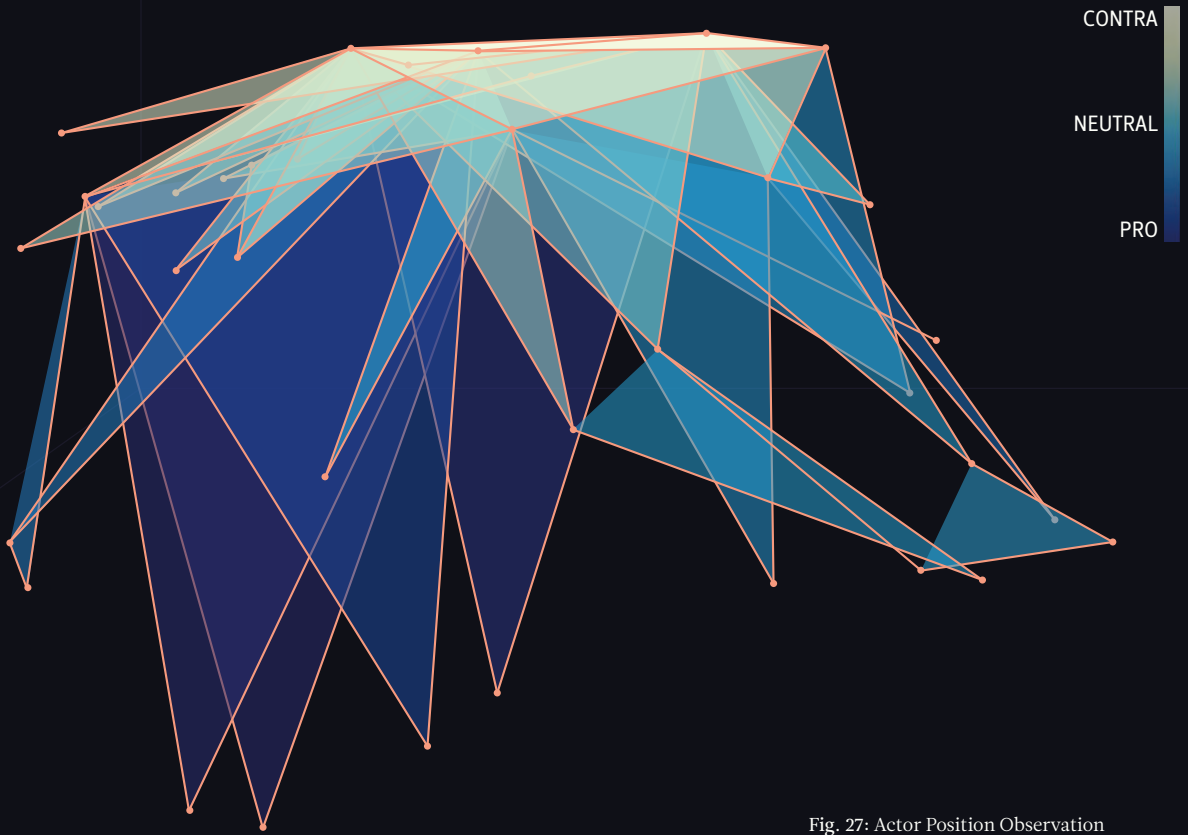


Fig. 27: Actor Position Observation

APPROACH

Positions in the Mauerpark controversy range from the support of the development plans in nearly all aspects to opposing it almost in its entirety—with a wide variety in-between. During this experiment, those positions are plotted along the vertical axis: Actors that voice the highest level of opposition to Mauerpark development plans are positioned at a value of 10, on one end of the continuum (here represented on top). Neutral actors at a value of 0 and actors that support the construction plans, without objections, are positioned at a value of -10, on the opposing end of the continuum representing the lowest level of opposition. The positions of the nodes within the structure generate the length of every single edge.

The manual configuration of the network structure starts on one end, here from the highest level of opposition, and works its way towards the supporters of MPK development on the opposing end.



Fig. 28: Actor Position Abstraction

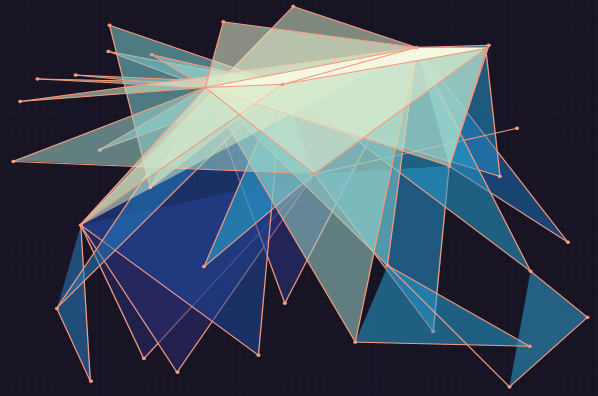


Fig. 29: Actor Position Observation: Top View

DATA SET

The data set draws on information from two sources: First the actor's mission statement, commonly found in the section "About us" on a website, can earn the actor a maximum of five points—either pro or contra. Concerning this statement, a clear positioning resulted in the adding of five points to the actor's account. This is the case, if for instance a citizen initiative was specifically launched to address the Mauerpark issue (i.e. *Mauerpark-Allianz* or Mauerpark foundation *Welt-Bürger-Park*). The statement in which an actor addresses development projects in general, mentioning Mauerpark among similar development projects, results in a lower score (two or three points).

The second source are five articles tackling the topic Mauerpark, which are published on an actor's website (one point per article). The procedure of the analysis started with searching for the term *Mauerpark* on each website, screening the first articles that appear and identifying the actor's position.

In case no "About us" section is provided on an actor website, ten (instead of five) articles on Mauerpark are analyzed. Hence, a maximum "score" of ten points can be achieved by each actor in the category position → TABLE 4.

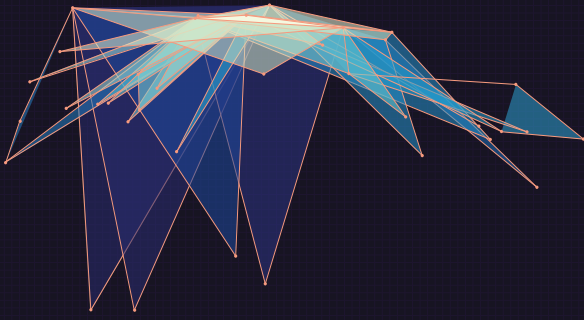


Fig. 30: Actor Position Observation: Front View

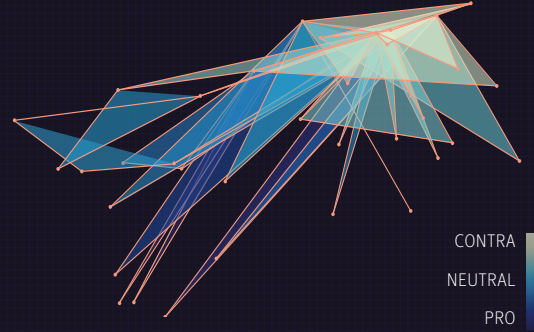
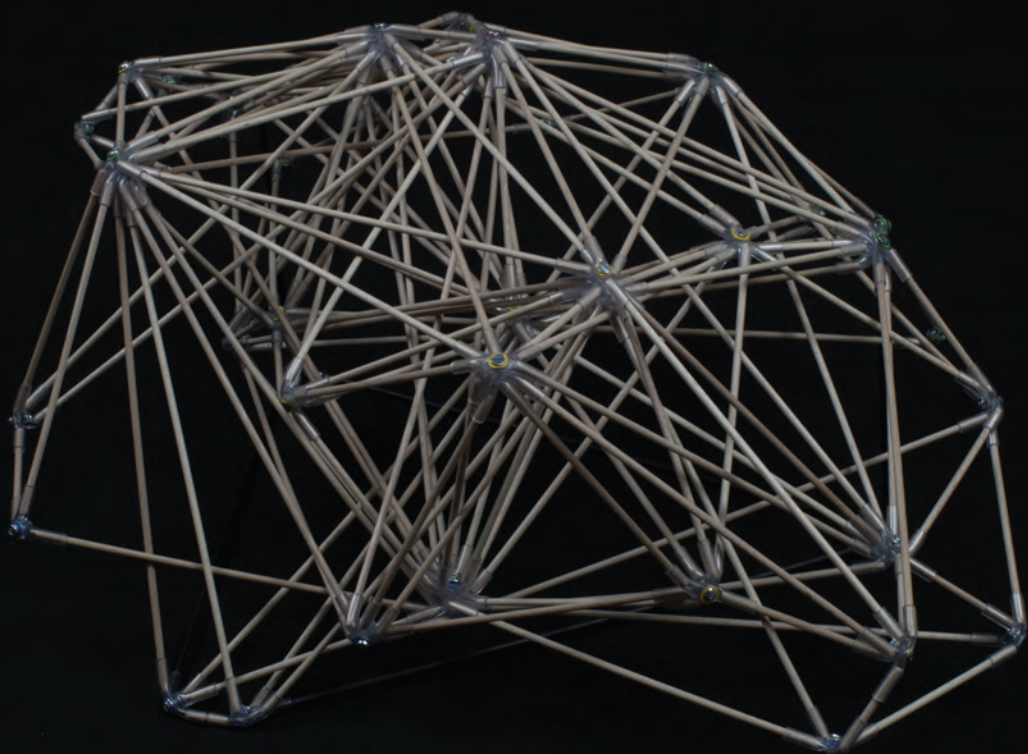


Fig. 31: Actor Position Observation: Side View (right)

ANALYSIS

The graphic observation of the spatial layout draws on the process of its construction → FIGS. 27–31. This approach is inspired by Gego's *Thinking the Line*. The depicted lines capture the movements made during the fabrication of the structure. Resulting triangular shapes are defined by the position of each actor itself and the positions of those two other actors, that demonstrate the highest level of opposition within the MPK controversy and thus are installed in the upper layers of the network structure. In such way, the connectivity across different viewpoints is explored. Are opposing actors linking equally to all points of view? Citizens' initiative *Mauerpark-Allianz* and *Welt-Bürger-Park* display a high degree of connectivity and therefore play a central role. To a similar extent this applies to *Grünzüge*, *Gleimviertel* and *Prüfstein Lichterfelde*.

The resulting formation takes the shape of a downward-facing bowl. Actors appear arranged in a ringlike manner encircling opposition. It displays a consistent structure, with two exceptions: Firstly, actors from Brunnenviertel are not directly connected to the rest. This is indicated by holes in an otherwise homogeneous mesh. Their connection is facilitated by intermediary actors, entangled with Mauerpark in a tight manner through practical engagement on site, such as the community gardening project *Mauergarten* and the youth farm *Moritzhof*. Also actors, whose mission it is to mediate between the two neighborhoods (*Freunde d. Mauerpark*, *Kieze im Dialog*), serve as "bridges". Secondly, the Senate of Berlin that breaks the formation by "sitting" inside the bowl and being connected to a wide variety of actors.



ACTOR TYPE

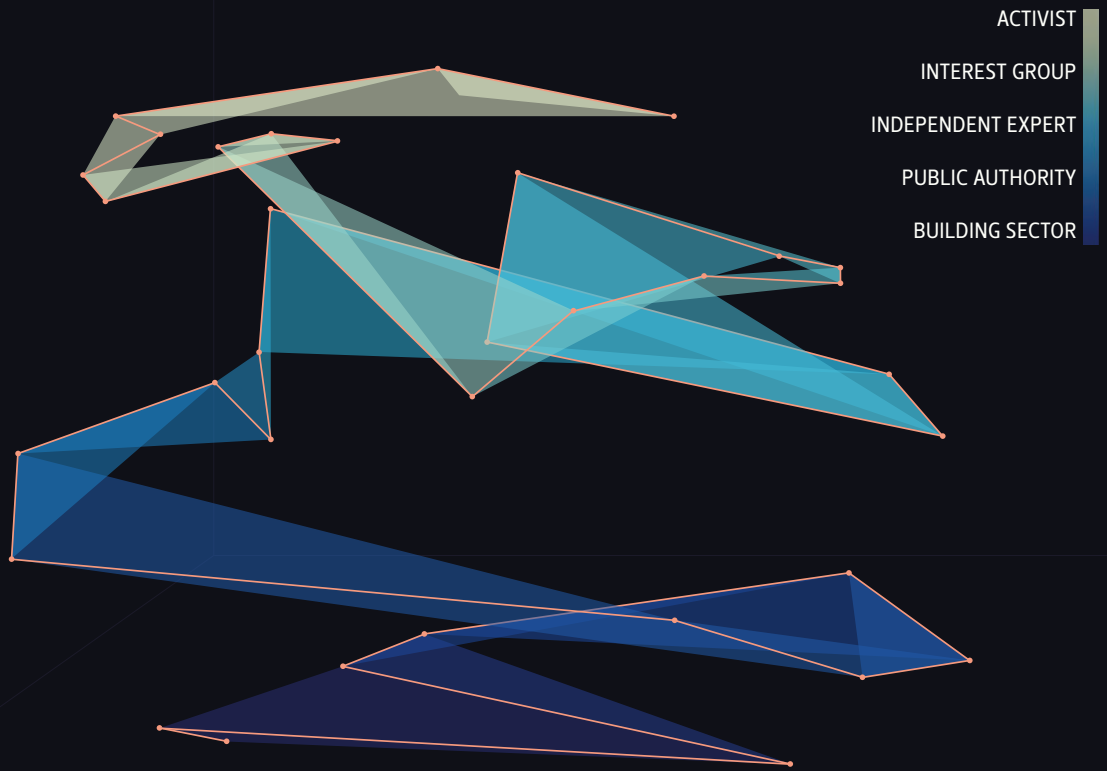


Fig. 33: Actor Type Observation

APPROACH

Actors involved in the MPK controversy are classified into five different categories: interest group, activist, public authority, actor from the building sector, and independent expert.

The conducted actor classification could have been more detailed, but this breakdown facilitates better analysis. Boundaries between actor types are fluid and in some cases actor classifications are inter- and overlapping or at least showing a tendency towards one or another. The conducted assignment is ambiguous. This notion of hybridity informs the plotting of the actor types as a continuum along the vertical axis.



Fig. 34: Actor Type Abstraction

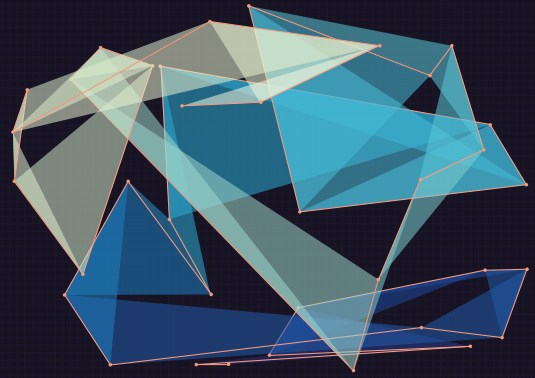


Fig. 35: Actor Type Observation: Top View

DATA SET

Activists and interest groups are not easily distinguishable from each other, because “both strive for power and do not feel the need to legitimize their claims” (BAUR 2011: 116). Therefore, a brief classification should be provided: Both act within civil society in the “sphere of public claims” (BAUR 2011: 120), while interest groups are more engaged in the “sphere of particular (economic) interests” (IBID.), activists tend to be drawn towards the “sphere of un-civility” (IBID.). Independent experts are familiar with the negotiated issue, but are less or not at all actively engaged in the controversy. Public authorities pool actors that are entangled with administrative and executive bodies of the City of Berlin. Actors from the building sector are engaged in the field of real estate development.

Based on the underlying pro/neutral/contra-classification, which—looking at the big picture—positions activists on one end and the building sector on the other, this experiment intends to implement a second sorting criterion; taking into consideration actor types and their tendency towards hybridity.

This is done by further differentiating within each of the five actor categories. Taking the activist category as an example, it is distinguished between a full-blown activist and an activist that partly displays characteristics of an interest group. Or an interest group that may either tend towards activism or independent expertise or even a public authority. This classification lines up actors in a certain sequence, which is translated into physicality → TABLE 4.

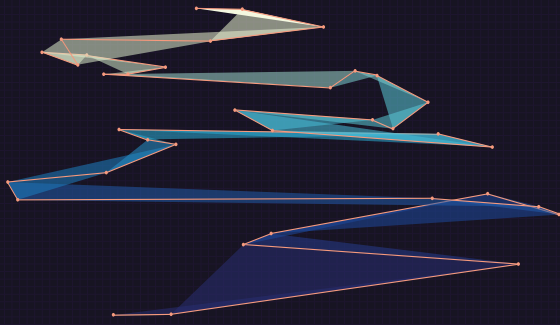


Fig. 36: Actor Type Observation: Front View

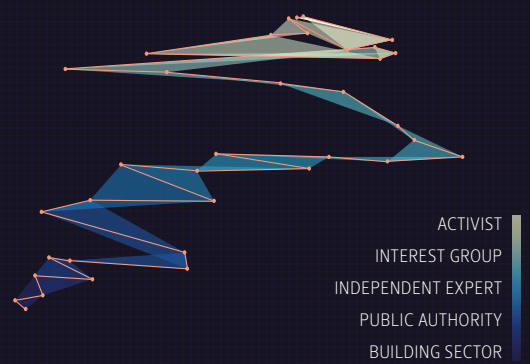


Fig. 37: Actor Type Observation: Side View (right)

ANALYSIS

The generation of graphical representations is again inspired by Gego's *Thinking and Questioning the Line* → FIGS. 33-37: The choice of visualization is informed by the production process, the process of assembling the network edge by edge. The formation of the controversy plotted vertically according to actor type displays similarity with the previous physicalization, but looks more ordered. It appears to be spiraling down in a sorted manner, like beads on a string. While actors in the first embodiment of controversy are hooked up mainly to four or five opposing actors in an alternating manner, this assemblage displays sequence.

Also here, full-blown activist groups like *Mauerpark-Allianz* and *Welt-Bürger-Park* are located on one end and the real estate developer *Groth Group* is located on the other end. Actor type clusters can be determined: The activist cluster is located in one corner, the cluster of interest groups in another corner, joining the activists' side. Independent experts, public authorities, and building sectors occupy the other side, being distinguishable from each other.

One actor is visibly breaking the pattern: *Kieze im Dialog*, an interest group, whose mission it is to mediate between the two neighborhoods, bordering *Mauerpark* to the east and west. It reaches out into the sphere of public authority, visualizing its focus: *mediation*.

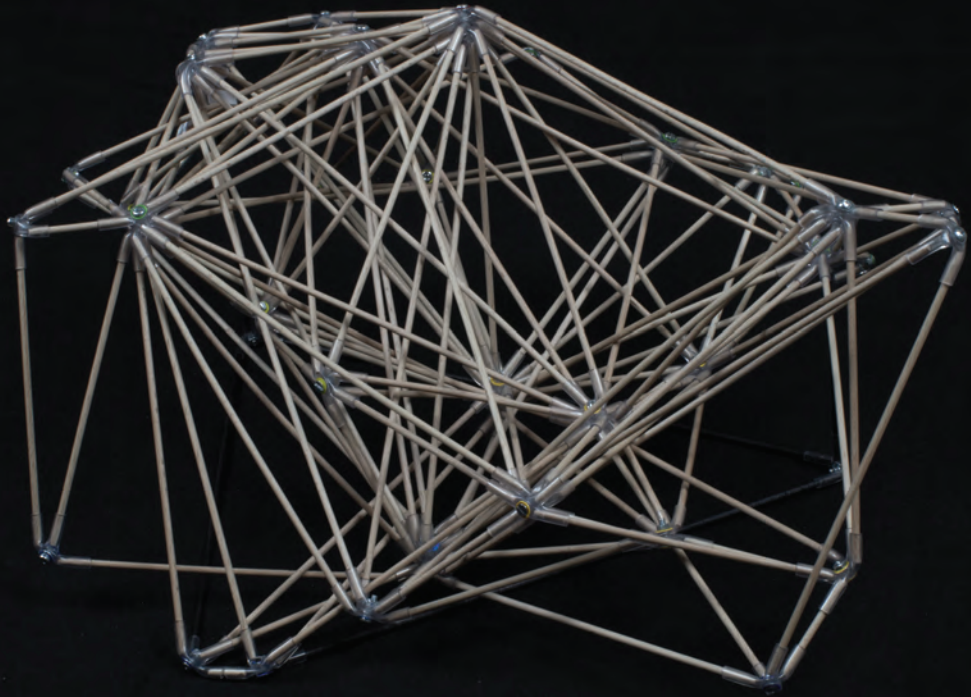


Fig. 38: Actor Concern: Physicalization

ACTOR CONCERN

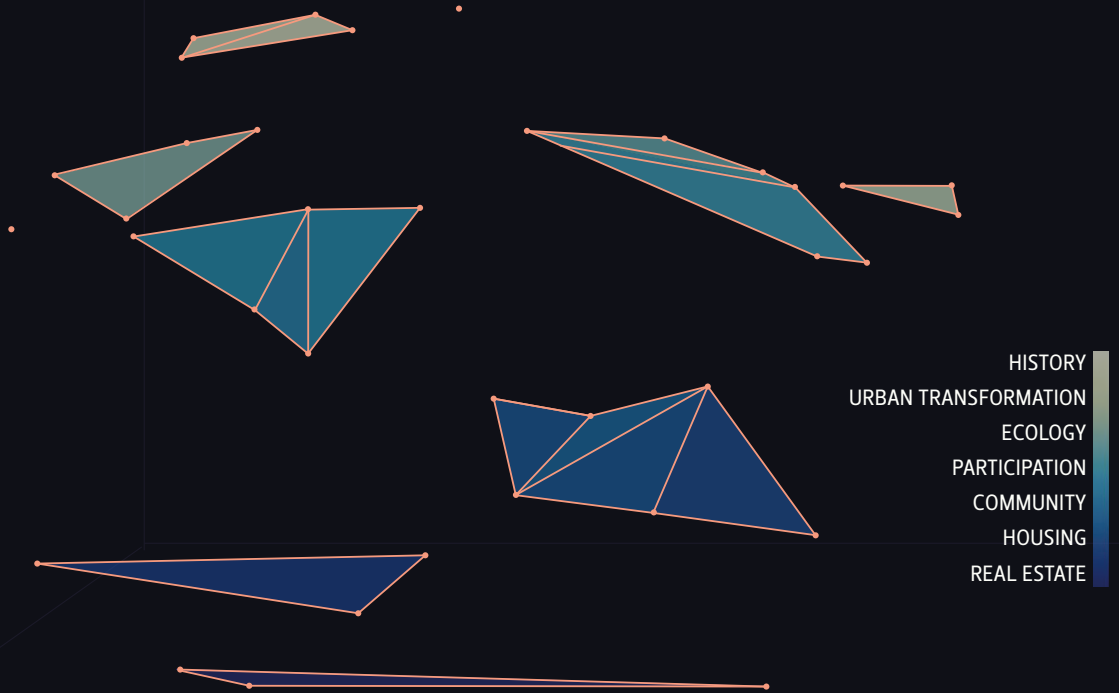


Fig. 39: Actor Concern Observation

APPROACH

Issues addressed by actors involved in the Mauerpark controversy include history, urban transformation, ecology, participation, community, housing, and real estate.

These issues are plotted again along the vertical axis. Actors, that belong to the same concern category and are located in close proximity to each other within the network, form a cluster. Clusters are illustrated through lines enclosing areas and hence visually connecting the actors → FIG. 39.



Fig. 40: Actor Concern Abstraction

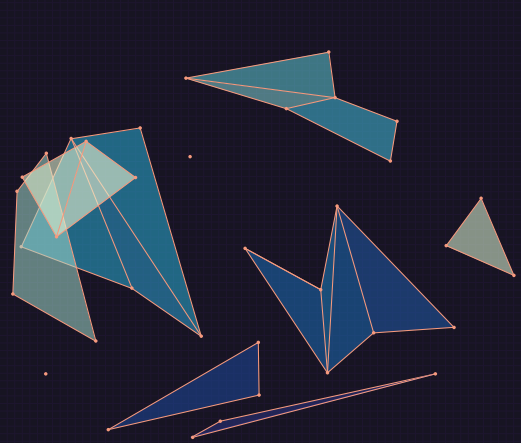


Fig. 41: Actor Concern: Top View

DATA SET

Actors predominantly concerned with historical issues acknowledge the role of Mauerpark within a historical context regarding division and overcoming the division. The category urban transformation tackles the constant and complex process of change the urban undergoes. Environmental aspects related to MPK development are pooled under ecology. Participation takes into consideration the involvement of entities and their engagement regarding Mauerpark, while community addresses the connecting and collaborative qualities Mauerpark has. Housing and real estate are both concerned with the built environment—while housing addresses it from an urban development standpoint, real estate does so from an economical point of view.

In order to facilitate comparability, the overall order of actor concerns (along the vertical dimension) follow the underlying order predefined by the sequence of actor positions. Again boundaries between actor concerns are blurry since most actors address more than one concern. For this iteration the predominant concern of each actor is identified, which groups actors into the categories, specified in the previous section. The actor’s secondary interest defines its position within its own category. For instance, one question that was asked: “Does an actor, who is predominantly concerned with urban transformation, show more interest in historical matters or rather ecological or community issues?”

The information needed for this categorization was gathered through close reading and scanning of contents provided by web entities

→ TABLE 4.

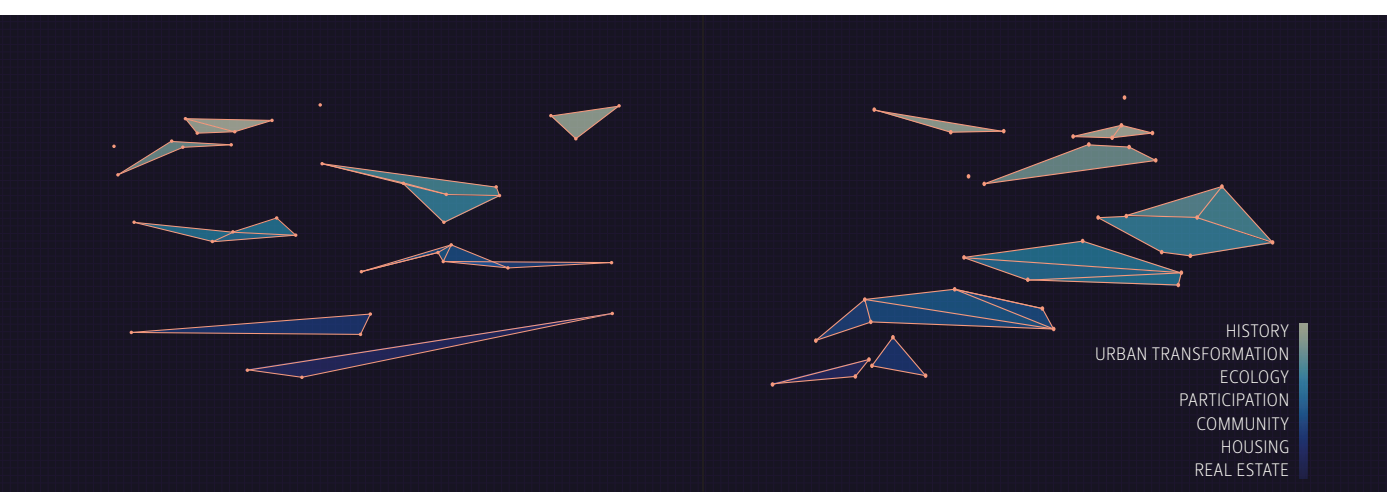


Fig. 42: Actor Concern Observation: Front View

Fig. 43: Actor Concern Observation: Side View (right)

ANALYSIS

This controversy plot of issues flowing through and hence configuring the net reveals the formation of issue clusters. Actors that share concerns can be grouped due to their proximity within the network, resulting in visually distinguishable spheres. Those clusters form issue networks among themselves. Concluding it can be argued that actor concerns become actors themselves, since “any entity can be seized either as an actor (a corpuscle) or as a network (a wave)” (LATOUR 2010A: 800).

The visual analysis of actor concerns → FIGS. 39–43 evokes the notion of *plateaus*, also resembling a concept introduced by Deleuze and Guattari in *A Thousand Plateaus*: “We call a ‘plateau’ any multiplicity connected to other multiplicities” (DELEUZE & GUATTARI 1987: 2). Deleuze and Guattari refer to *plateaus* as convergence of entities from diverse backgrounds that “bring an activity to a pitch of intensity” (IBID.).

The top view of the actor network → FIG. 41 reveals a density and overlapping of actor concerns (urban transformation, ecology, participation) in the activism sphere, while the rest of the network displays clear boundaries between clusters. Two of the three issues (urban transformation, ecology) form a second issue cluster each outside the activism sphere, while the sole occurrence of *participation* within the sphere of activism indicates that it is a native concern to the realm of activism.

Only two actors do not join one of the clusters: One (*Welt-Bürger-Park*) due to the fact that it is the only representative of the concern *history*. Another (*Futurberlin*) does not display connectivity to the cluster *urban transformation* due to distance.

*“Give me a gun and
I will make all buildings move.”*

LATOUR & YANEVA, 2008

2.2 CAPTURING ACTIVITY

VISUALIZING DYNAMICS

Within the field of data visualization, techniques typically deployed to display temporal developments are *small multiples* and *animation*. *Small multiples* were introduced by Jacques Bertin (1981) and revisited by Edward Tufte, who notes “at the heart of quantitative reasoning is a

single question: Compared to what?

Small multiple designs, multivariate and data bountiful, answer directly by visually enforcing comparisons of changes, of the differences among objects, of the scope of alternatives” (TUFTE 1990: 67). Placing small data representations that share context, design, and scale, but display varying time frames or contents next to each other or in a grid facilitates comparison and pattern recognition → FIGS. 44/45. *Animation*, on the other hand, uses each small multiple and treats it as a single frame of an animated sequence of multiple frames. Compared to

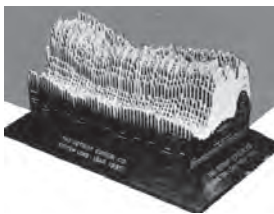
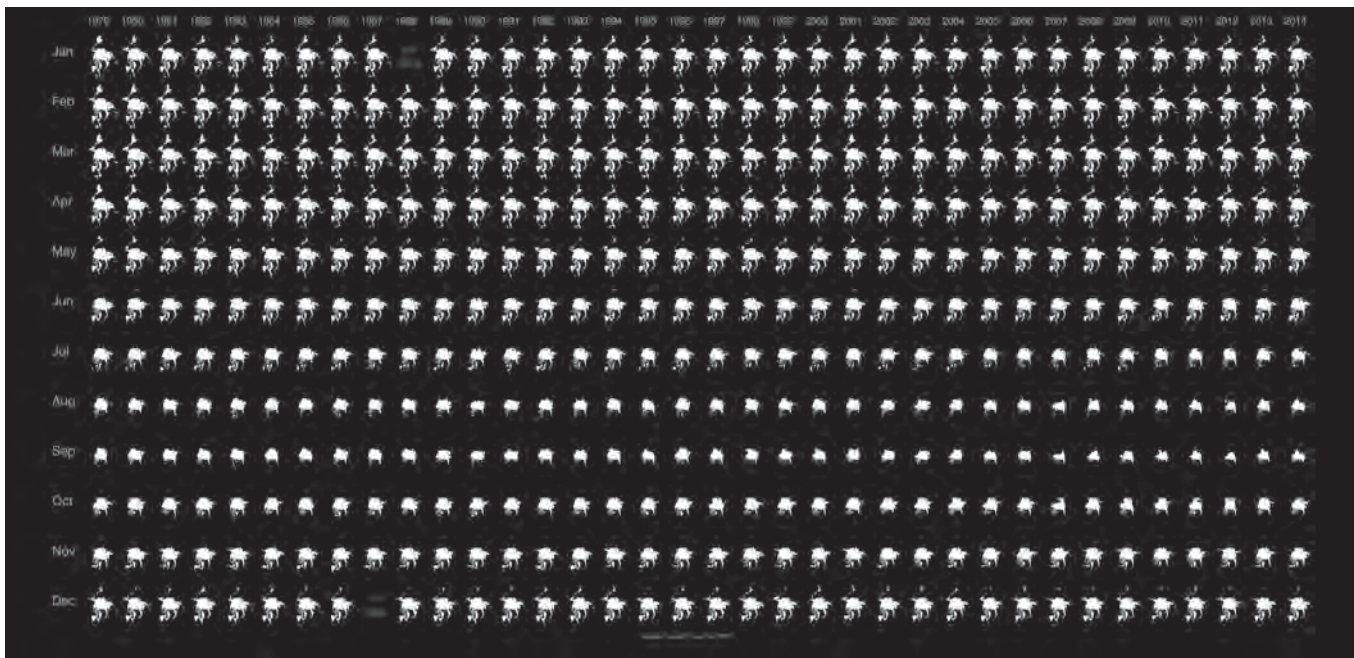


Fig. 44 (top): Detroit Edison Company: Power Consumption, 1935: 365 days, 17500 data points

Fig. 45: Area covered by sea ice in the Arctic by month (vertical axis) between 1979 and 2014 (horizontal axis)



the side-by-side view, *animation* is considered to be less effective in conveying information, due to change blindness to areas, that are out of focus, as well as high efforts necessary to memorize frames that do not adjoin the current frame (MUNZNER 2015: 133). According to Munzner, the possibility to control the play-back (play, pause, rewind, replay) slightly increases the efficiency in change-tracking.

In the realm of physical visualization small multiples also find application as the physicalization of day-by-day power consumption of *Detroit Edison Company* shows → FIG. 44. The power consumption that occurred during one day got translated into a curve, which was cut out of a sheet of wood (BRINTON 1939: 355). 365 of these data slices, placed next to each other in sequential order, physically represent the power consumption during an entire year.



Fig. 46: Étienne-Jules Marey: *Le vol des Oiseaux* (Chronophotography, 1890)
 Fig. 47: Étienne-Jules Marey: *Flight of a Gull* (Bronze sculpture based on photographs, 1887)



ÉTIENNE-JULES MAREY: LE VOL DES OISEAUX (1890)

A similar approach had been taken by physiologist Étienne-Jules Marey → FIG. 46, some decades earlier, in the medium photography: *Chronophotography*, invented and coined by Marey, is a method used to capture motion sequences that are either too fast, too slow or too complex to be grasped by the human eye (BERGER 1985). Complexity is broken down into small comprehensible units.

Other practitioners in the field were Ottomar Anschütz and Eadweard Muybridge. All three men are considered pioneers of cinematography. In 1882, Marey developed a special device, an instrument that is reminiscent of a gun or rifle—both in shape and handling: *Le fusil photographique* → FIGS. 48/49. This chronophotographic gun was capable of taking twelve consecutive frames in one second. Hence, it was able of capturing different phases of movements. Images were recorded by a circular, rotating photographic plate, which later got replaced by a strip of photographic paper.

Driven by an interest in animal motion, his extensive movement studies of horses, insects, dogs, cats, fish etc., provided insights which were not available before. Marey's main focus of interest though was on the flight of birds: *Le Vol des Oiseaux* → FIG. 46. This body of work got published in 1890. Besides photographic works Marey also translated bird flight studies into physical representations, such as the bronze sculpture *Flight of a Gull* → FIG. 47.

Bruno Latour and Albena Yaneva, an anthropologist of architecture, reference Marey's photographic gun in a paper entitled "Give me a Gun and I will make Buildings Move: An ANT's View of Architecture". It outlines the potential application of the research method *Controversy Mapping* in the realm of architecture. They call for a theory or method resembling chronophotography that is capable of capturing the complex processes and map the multiplicities of engaged entities involved in the creation of architecture, as "a building is not a static object, but a moving project" (LATOUR & ALBENA 2008: 80).



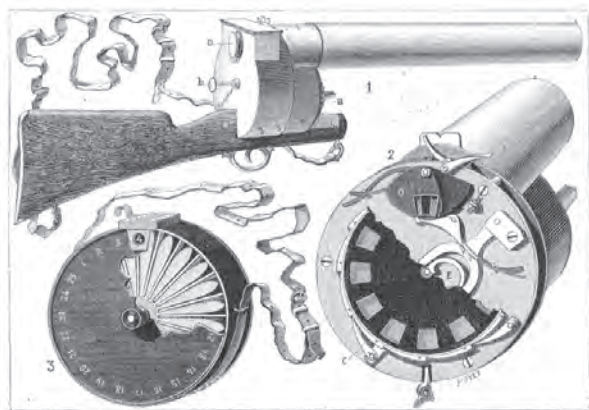


Fig. 3. Mécanisme du fusil photographique.
1. Vue d'ensemble de l'appareil. — 2. Vue de l'obturateur et du disque à lentille. — 3. Boîte contenant vingt-cinq plaques sensibles.

Fig. 48: Illustration of the chronophotographic gun from *La Nature* n. 464, 22 April 1882, p. 326

Fig. 49: Louis Poyet: *Le Fusil photographique* (1882)

Fig. 50 (right): *Small Multiples in Architecture: Topological Grid* by Shohei Matsukawa (2010)

EXPLORATION: PHYSICAL VISUALIZATION OF NEGOTIATION

As mentioned before, the process of controversy is prone to change over time. The main objective of this experiment is the exploration of ever-shifting power relations by tracing associations between actors.

This process is driven by “the dialectic established between scientific and technical research on one side and social reconfiguration on the other: it is decided to undertake investigations that result in the identification of new possible states of the world [...]” (CALLON 2001: 27). It is a dynamic negotiation between experts and layperson, mutually cross-fertilizing each other, which produces insights and knowledge along the way.

Drawing on the suggestion of Latour and Yaneva (2008), to display the different stages a controversy (which is concerned with the built environment) passes through, the intention of this section is to capture the dynamics of the Mauerpark actor network during the process of negotiation. The aim is the creation of multiple snapshots instead of one complex map. In order to facilitate comparability these experiments rely again on the previously deployed network layout. Negotiations around Mauerpark construction plans are explored at three different zoom levels: First of all, looking at the overall picture over a period of three years, between 2013 and 2015. A second experiment zooms in to a seasonal level—deploying *small multiples*—investigating the situation during different times of a year. And a third exploration drills down to the argument level, capturing the flow of arguments addressing the Mauerpark construction plans.



ACTOR ACTIVITY 1

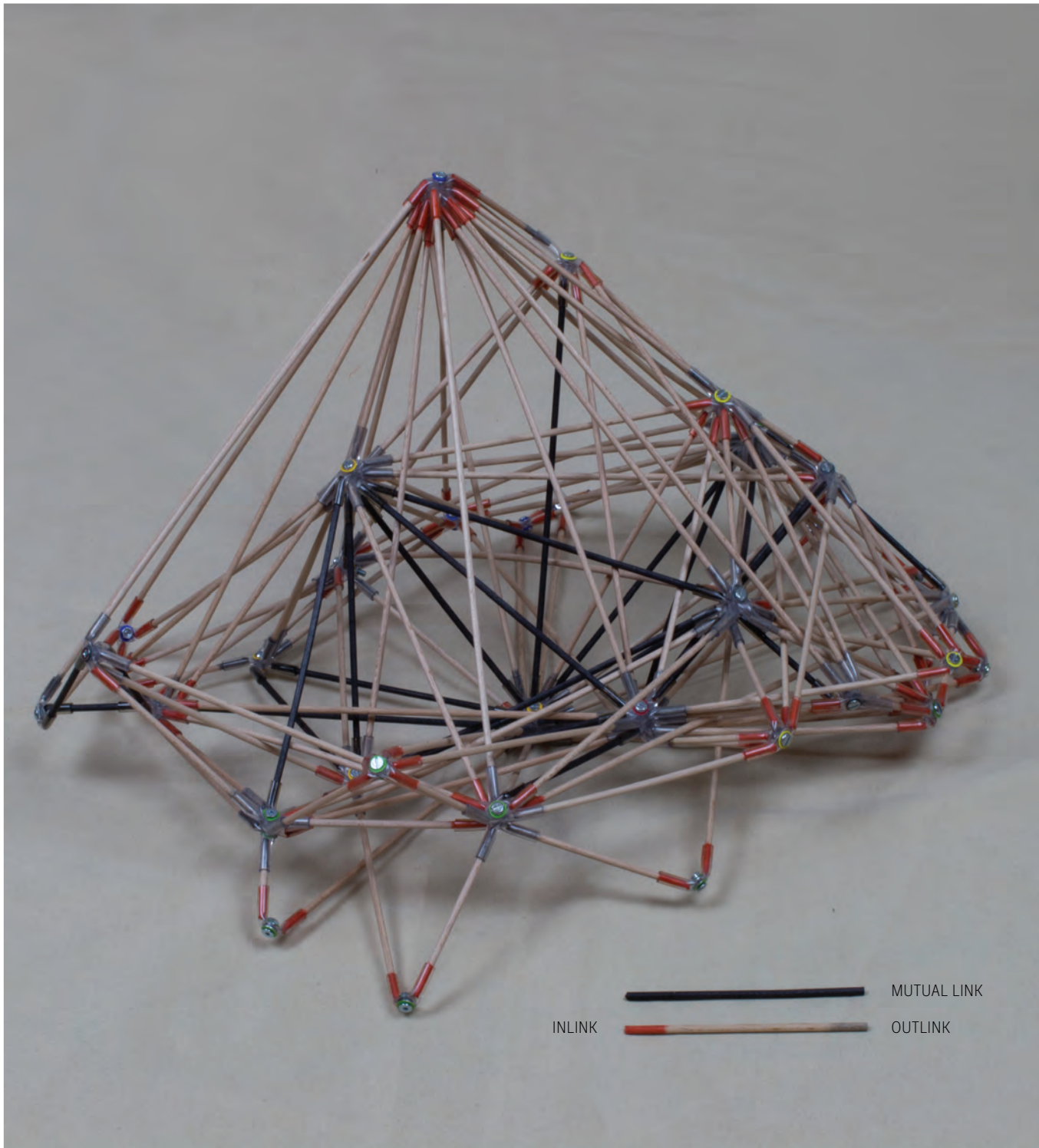
APPROACH

This experiment explores two aspects of activity: One aspect studied is the overall level of activity performed by the actor-network over the course of three years, between January 1, 2013 and December 31, 2015. This investigation draws on all articles published on the topic *Mauerpark* by involved actors during this period, which are plotted along the vertical axis.

Additionally, another aspect of activity is investigated by determining the nature of engagement. Edges, which represent connections between two actors, can be directed, and therefore visualize the actors' engagement in the controversy, which can be either active (in case an web entity links to another web entity) or passive (in case a web entity is being linked to by another entity) or both (in case web entities reference each other). The type of engagement is visualized by color-coded edges. Drawing on the previously undertaken experiments the approach of this transformation is of static nature.

DATA SET

The data set concerning the overall activity is compiled through scraping all articles addressing the controversy over the period of three years by querying for *Mauerpark Bebauung* and *Mauerpark Stadtentwicklung* using *Googlescraper*. Assigned activity levels range from 0 to 20 → TABLE 6. The data set containing information about the nature of engagement is compiled during the crawling of web entities, as described in chapter 1.





INLINK



MUTUAL LINK

OUTLINK

ANALYSIS

The activity level of involved actors is translated into position (height) of the nodes in the third dimension, based on the underlying network layout. The result is a three-dimensional heat map. The Senate of Berlin displays the highest level of activity and therefore constitutes the highest point of the structure. Actors in close proximity to the Senate are also comparatively active. So are actors from the the activism sphere.

The resulting structure takes a cone-like shape, which is fading out towards the edges, where actors with low levels of activity are positioned. It displays a very regular, consistent configuration with a number of irregular spikes (e.g. *Quartiersmanagement Brunnenviertel-Ackerstraße, Grüne Liga Berlin*).

Similar to actors that show low activity, passive actors—that are predominantly linked to by other actors (red ends)—gather along the edge of the assemblage. Active actors, that are predominantly linking out (grey ends), are positioned more centrally. Actors that are referencing each other (black)—linking out and being linked to—are located most centrally. This configuration of interlinking actors demonstrates a notion of *skeleton* or *backbone* concerning the assemblage.

It is not surprising, but still worth noting, that community actors are highly inter-linked among each other. A similar situation can be observed among actors from Brunnenviertel.

ACTOR ACTIVITY 2

APPROACH

Strictly speaking, a fourth dimension is added in this experiment: time. This approach explores the matter of how actor activity is evolving over a period of three years. For this approach, the data set is queried one detail level deeper. Articles published online on the topic by the actors are compiled quarterly while applying the same approach as in the previous exploration: Actors contributing to the negotiation and their relations among each other are shown as two-dimensional network (top view), while the level of activity is represented by the position of actors along the z-axis (side view). The fourth dimension, the development of the controversy from January 2013 through December 2015, is represented using aforementioned *small multiples*. Each multiple, represents one yearly quarter, thus providing insight into seasonal pattern: winter, spring, summer, autumn. Each row of multiples displays one year, hence seasons are arranged vertically next to each other → FIG. 53.

DATASET

The datasets are compiled through batch querying Google for the previously defined search terms for each of the different periods, using *Googlescraper*. The resulting twelve lists, containing all articles that are published online and address the topics *Mauerpark Bebauung* or *Stadtentwicklung*, are filtered for contents published by the assigned actors → TABLE 7. All arguments (or articles) published during a period of three months by one of these actor are counted and determine the actor's position—translating actor activity into elevation. A high level of activity translates into high elevation → TABLE 6.

Actors that remain silent during one entire season are not included in the respective physicalization.

Fig. 53: Actor Activity per Season: Small Multiples (Top and Side View) covering the period from January 1, 2013 through December 31, 2015



Top View

2013



Side View



Top View

2014



Side View



Top View

2015



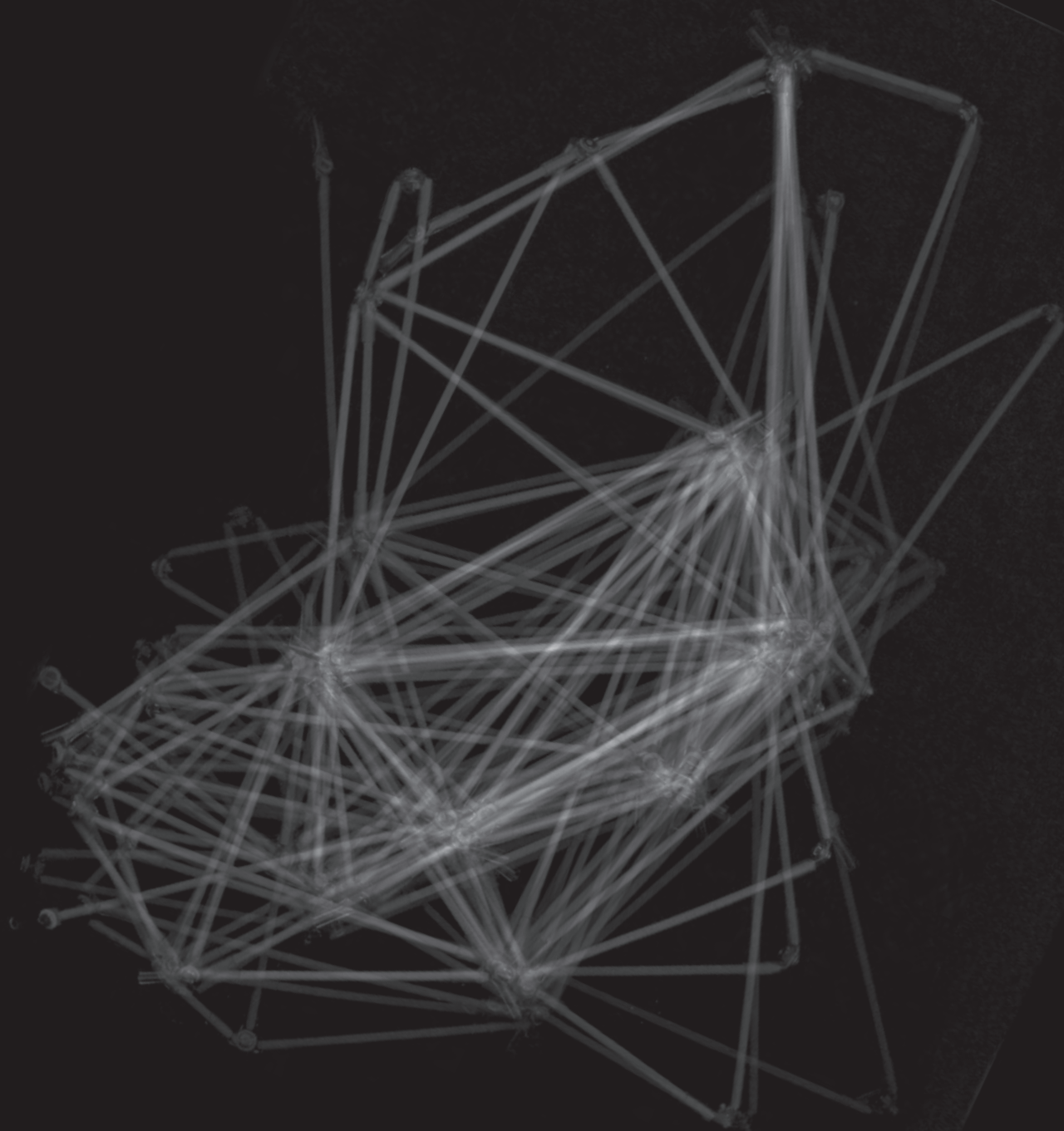
Side View

JAIN-MAR

APR-JUN

JUL-SEP

OCT-DEC



ANALYSIS

Some actors remain completely silent throughout the entire three years, which results in their exclusion from these physical representations. Interestingly, a significant proportion of actors concerned with community matters are among this group of inactive. This finding is derived from the structural hole manifested in the superimposition of all twelve seasonal representations → FIG. 54, which emerges in the area bordered by the dense, busy spot at the centre, Brunnenviertel actors and environmental actors. Nevertheless, this representation shows a striking similarity with the physicalization created during the previous investigation of overall actor activity → FIG. 52.

On the other hand, there are some core actors that stay consistently active (almost) throughout the entire period of three years, such as Berlin Senate, citizens' association *Freunde des Mauerparks*, citizens' initiative *Mauerpark-Allianz* and the blog *Futurberlin*, which covers the urban development of the German capital. Also the local news portals *Prenzlauer Berg Nachrichten* and *Prenzlberger Stimme* are contributing much. All of these actors are positioned in immediate vicinity to each other.

The occurrence of seasonal negotiation pattern is not confirmed by the results of this experiment: In 2013 Mauerpark development plans are discussed more intensely during winter and summer, in 2015 during spring and autumn, and basically all year during 2014. From this it can be concluded that the level of actor activity dynamics, and an important event taking place, are in direct causal dependence: During the first quarter of 2013 it was the failed attempt to initiate a referendum, which triggered a vivid negotiation. Another explanation would be that the time frame specified for the observation is not long enough.

ACTOR ACTIVITY 3

APPROACH

The approach of this experiment is to—once more—drill one level deeper, down to the argument level. Here it is intended to shed light on two aspects: Firstly, it aims at exploring the concerns addressed by involved actors over the course of three years. Of specific interest here is the sequence and frequency these arguments are surfacing. Data is encoded by coloring the edges, according to the concern addressed (history, ecology, housing, etc.) by the actor (node) an argument (edge) is originating from.

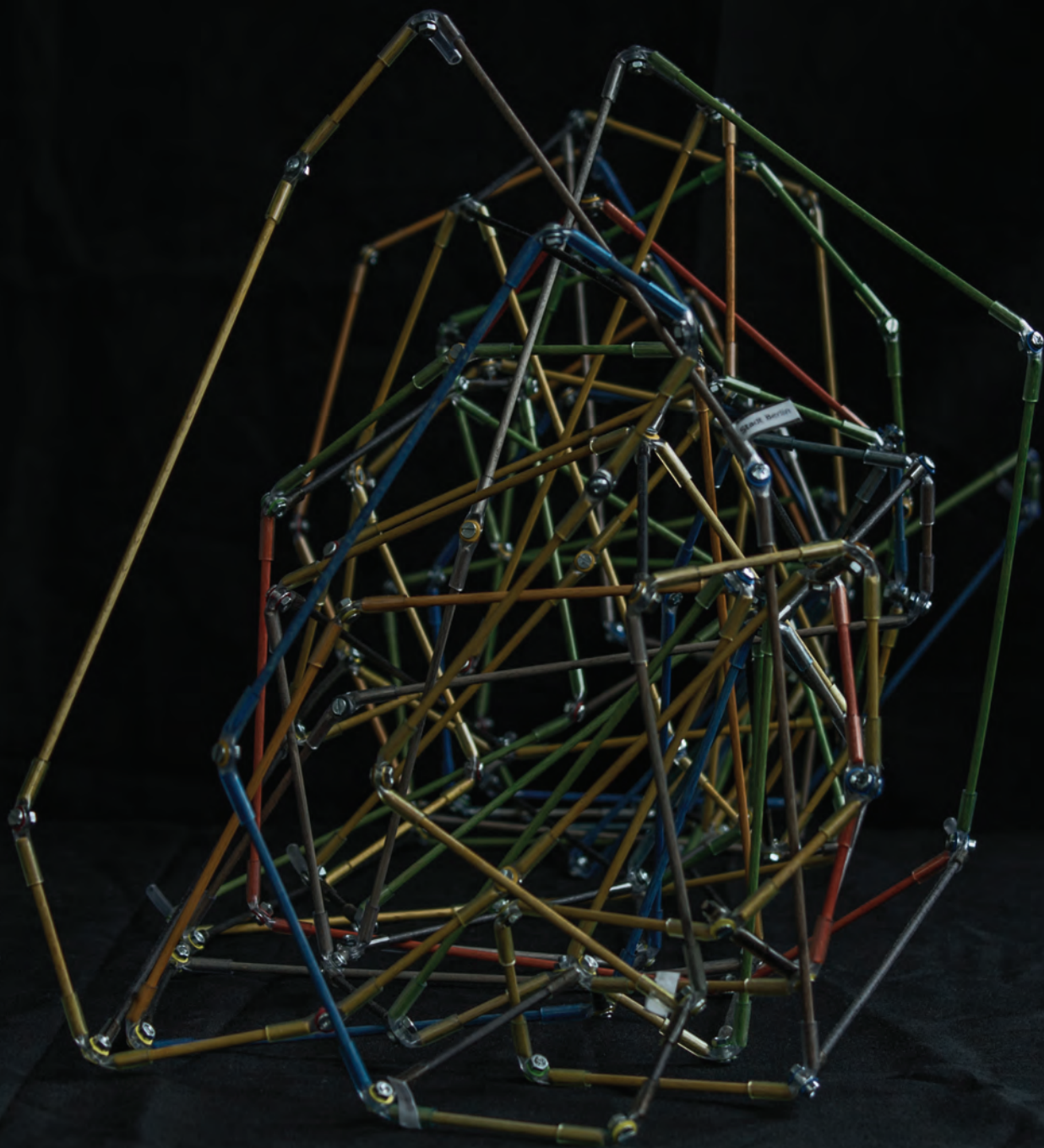
A second objective is to find out how the negotiation moves within the assemblage. Are there activity hot spots that are more busy during certain periods by negotiating the matter at stake amongst its own clusters? Or is the entirety of the assemblage involved in the negotiation of the controversy steadily but consistently, with the arguments bouncing back and forth, being thrown from one side to the other? For comparative reasons the positioning of the individual nodes is again based on the initial network layout.

DATA SET

The dataset is compiled by conducting a Google search on the terms *Mauerpark Bebauung* and *Mauerpark Stadtentwicklung*. All results published by actors engaged in the controversy during the period of January 1, 2013 and December 31, 2015 are taken into consideration and are entered into a list. In this way one can specify their sequential order, which is based on the publishing date. The concern addressed in an article, blog post or press release is determined through reading it → TABLE 7.



- HISTORY
- URBAN TRANSFORMATION
- ECOLOGY
- PARTICIPATION
- COMMUNITY
- HOUSING
- REAL ESTATE



- HISTORY
- URBAN TRANSFORMATION
- ECOLOGY
- PARTICIPATION
- COMMUNITY
- HOUSING
- REAL ESTATE

ANALYSIS

This physicalization does provide insight into the sequence of concerns addressed. While the overall situation appears to be quite heterogenous, one irregularity can be spotted: The negotiation is predominantly concerned with participation at certain stages during the development of the controversy, which is revealed by striking clusters of yellow edges → FIG. 55. This configuration is periodically recurring, which indicates that the negotiation shows the tendency to shift from a content-related discussion to a meta-level. This confirms the statement of urban planner André Franke, blogging at *Futurberlin*, who claims that “urban consolidation and the organized protest against it became a meta topic in Berlin” (FRANKE 2015). Is the topic of *participation* brought up at times during which the actual negotiation is fading away, as a means to keep the debate alive? Or is it triggered by specific events during which insufficient participation is experienced? The data set suggests that rather the latter applies: On February 15, 2013, *Groth Group* presented their Mauerpark development plans during a press conference. This event made actors, that are campaigning against these plans, question their commitment. In January 2014, an information lack regarding the plans to install an underground wastewater retention basin beneath Mauerpark is addressed. In October 2014, the merging of five citizens’ initiatives to a network for social urban development (*NETS*) is discussed.

Other than the mentioned exceptions the physical representation of the controversy appears to be whimsical, which hints at a diverse range of concerns being addressed. The resulting configuration indicates that sometimes the negotiating appears to be more focused among four or five central actors, while the remaining times it keeps the entire assemblage occupied → FIG. 56. The distribution of edges along the time axis → FIG. 55 shows some level of clustering. Hence, there are activity peaks, manifested as high densities of consecutive edges as well as lows of activity, recognizable as holes in the edge structure.

*“This is a fundamental point,
because it is the internal mobility of the image
which characterizes modern graphics.*

*A graphic is no longer drawn once and for all;
it is constructed and reconstructed (manipulated)
until all the relationships
which lie within it have been perceived”*

JACQUES BERTIN, 1981, P. 5

2.3 CURATING SPATIALITY

INSIGHT THROUGH MANIPULATION

Which impact does the possibility to manipulate data points of a physical information visualization have on its capability to convey information and to facilitate the decoding process? This question is investigated by a number of practitioners and researchers, which assign sense-making capacities to such form of interaction (BERTIN 2010; JANSEN & DRAGICEVIC 2013 ; PERIN ET AL. 2015). It is their tangibility and adjustability that makes rearrangeable data representations powerful and justifies their use.

In the field of screen-based two-dimensional information visualization interaction is a widely recognized and accepted concept and a powerful method to explore complex data sets (SEGEL & HEER 2010; MUNZNER 2015). Possible interactions include, for instance, the sorting, filtering, ranking, and grouping of entities or altering encoding parameter. They facilitate the familiarization with the data and consequently with the matter at stake. Also the intensive engagement with the data plays a significant role with the viewer diving into the data. Yet, it can be argued that the screen prevents a full dive into and hence does not allow a limitless interaction with the data in order to unfold its full potential.

On a similar note, Bret Victor (2011)—a former interface designer at Apple—calls in an essay, titled “A Brief Rant on the Future of Interaction Design”, for thinking beyond “sliding around Pictures Under Glass” due to the fact that “we live in a three-dimensional world”. He continues: “[...] our hands are designed for moving and rotating objects in three dimensions, for picking up objects and placing them over, under, beside, and inside each other.” Hence Victor raises the question:

Our hands feel things, and our hands manipulate things.

*Why aim for anything less than a dynamic medium
that we can see, feel, and manipulate?* (VICTOR 2011)

Deriving from this line of reasoning, it may be asked what would happen, if the user of a physical data visualization would not only be able to touch the data representation but also to manipulate it, to place data points “over, under, beside, and inside each other”? Would such an interaction approach facilitate the process of gaining insight? Even more speculatively, the question of whether the weight of objects could become an additional (tenth) encoding variable that could be explored?

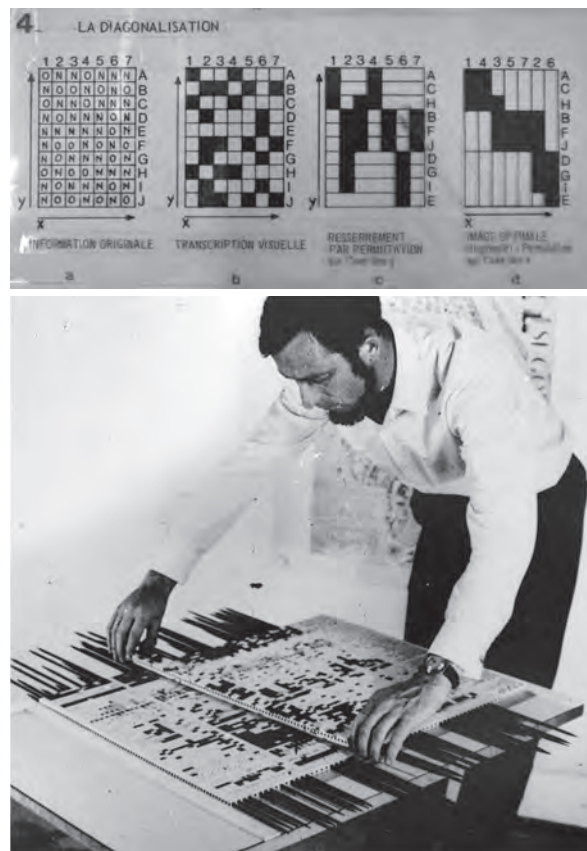


Fig. 57: Jacques Bertin: Matrix Reordering Process, 1968
Fig. 58: Serge Bonin: Matrix Manipulation

JACQUES BERTIN: REORDERABLE MATRIX (1968)

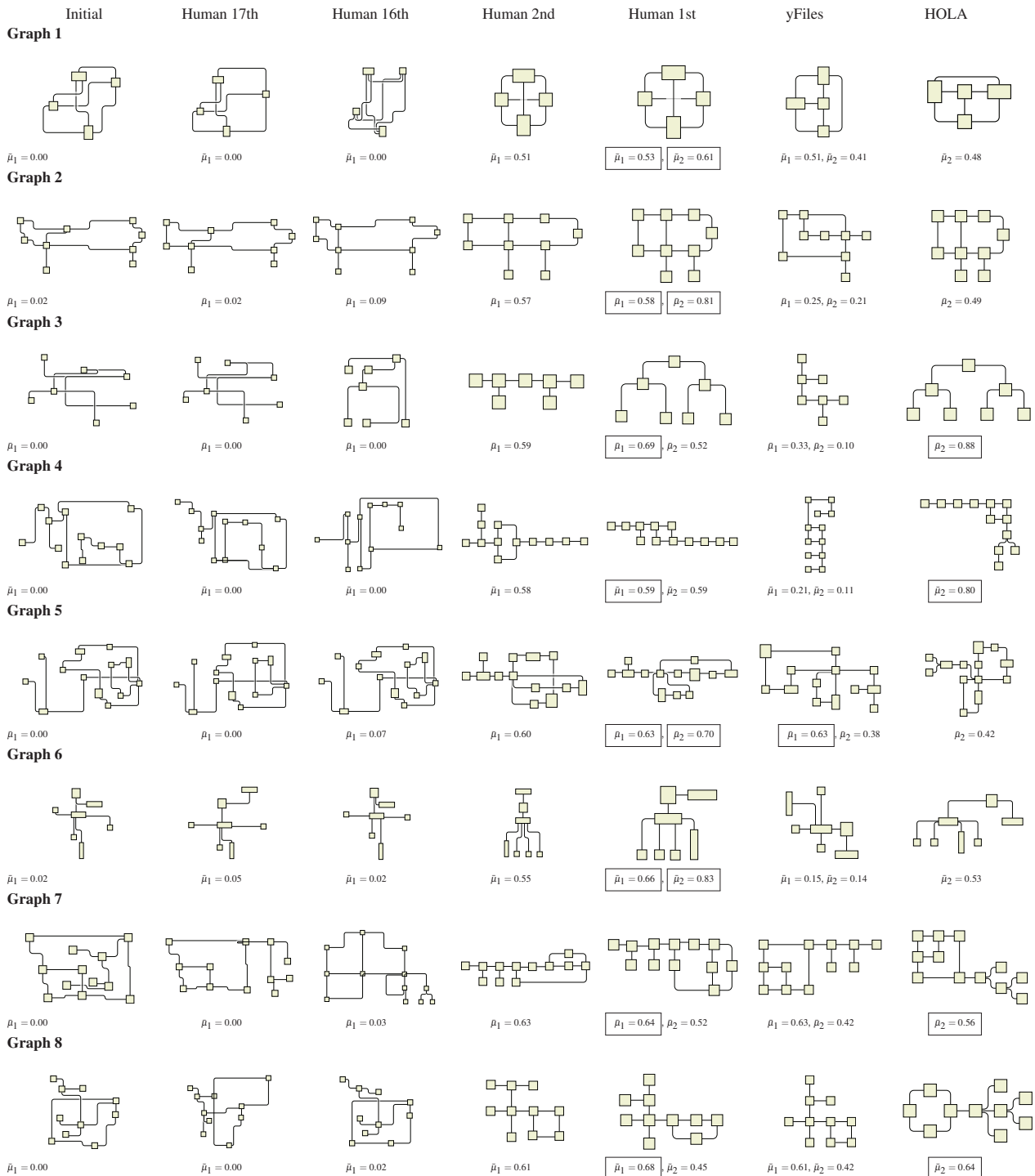
“Reordering, often called sorting, is a powerful choice for finding patterns in a dataset by interactively changing the attribute that is used to order the data” (MUNZNER 2015: 245).

Jacques Bertin, a French cartographer, was active during the second half of last century and deeply invested in developing a graphical language for information visualization. He explored this approach extensively with his “reorderable matrices”. Figure 57 illustrates the process of reordering of exemplary data: The data set contains information about the availability of public facilities such as colleges, police stations or veterinarians (vertical dimension). In a number of unspecified locations (horizontal dimension) they are represented in matrix form, which appears initially unordered (1). The nature of the data is binary (2): an entity is either available (black cell) or not available (empty cell). The sorting of rows guided by the intention to place matching or visually similar rows next to each other reveals first indications of the existence of pattern (3). The second round of sorting takes the columns of the matrix into account and results in an ordered matrix (4). Such ordered representation enables the identification of groups and their classification—here locations—ranging from urban to rural.

In 1968, Bertin began to develop a device, which facilitates matrix ordering, called *Dominos* → FIG. 58. This instrument consists of movable modules that are encoded with data and placed on vertical as well as horizontal rods like beads on a string. The removal of the rods connecting columns enables the sorting across rows and vice versa. The fact that the instrument is physical, qualified it for the use in educational and museum settings (PERIN ET AL. 2015).

On the occasion of the anniversary of *IEEE VIS conference* in Paris in 2014 a couple of researchers developed a replica of Bertin’s matrices using digital fabrication technologies → FIG. 61. It was exhibited during the conference and encouraged visitors to use it. It turned out to be a success (PERIN ET AL. 2015).

PART 2: CONTROVERSY PATTERN



EXPLORATION: INTERACTIVE NETWORK DATA PHYSICALIZATION

The experiment in this section will explore whether the manipulation of physical data representations can be applied to material network representations as well. Since the guiding interest lies in the investigation of the assemblage's relationality, this exploration intends to study edge pattern occurring as a result of the manipulation. The chosen set-up differs from the previous settings: a radial arrangement of actors, which are positioned in a space defined by three walls. Within this confined space, manipulation takes place in form of actors (nodes) being ordered based on different criteria such as actor type, level of activity, concerns being addressed or their position towards the controversy. Such circular layout, also called radial convergence, is a common approach to visualize relational data → FIG. 60 (BERTIN 2010; LIMA 2011).

John Law explores the role of strategy and network ordering within *Actor-network theory* in a paper from 1992. The theoretical framework “treats social relations, including power and organization, as network effects” (LAW 1992: 379). Another distinct feature of ANT is that

these social networks (society, a machine, a company, a park) consist of “diverse (not simply human) materials” (IBID.: 380). Drawing on this notion of heterogeneity, Law argues that the production of knowledge and insight through a network is “also a matter of organizing and ordering those materials” (IBID.: 381). At this, patterning is attributed a key role (IBID.: 386).

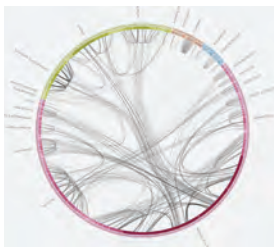


Fig. 60: Moritz Stefaner: Citation pattern among scientific journals from different fields (2009).

Fig. 59 (left): 8 graphs, 7 different layouts each. From left: initial layout followed by the two worst and the two best manual layouts. Last two columns show an automatic layout by yFiles and the proposal by the researchers.

Having in mind the complexity of previous representations, the question arises whether the ordering and organization of the Mauerpark assemblage could facilitate its analysis and provide additional insights.

Research addressing network manipulation, but in the field of cognition, has been undertaken by a research group at Monash University in Melbourne.

	FINLAND	NETHERLANDS	CANADA	AUSTRALIA	SWITZERLAND	UNITED STATES	FRANCE
MOST PEOPLE CAN BE TRUSTED							
ABORTION IS JUSTIFIABLE							
HOMOSEXUALITY IS JUSTIFIABLE							
USE INTERNET & E-MAIL AS INFO SOURCE							
AGE WHEN EDUCATION COMPLETED							
RECENTLY SIGNED A PETITION							
USE DAILY NEWSPAPER AS INFO SOURCE							
WILLING TO FIGHT IN WAR FOR MY COUNTRY							
AUTHORITY SHOULD BE MORE RESPECTED							
GOD IS IMPORTANT IN MY LIFE							
NON-IMMIGRANTS SHOULD HAVE JOB PRIORITY							
CHILDREN SHOULD LEARN HARD WORK							
DON'T WANT PEOPLE WITH AIDS AS NEIGHBORS							
DON'T WANT HOMOSEXUALS AS NEIGHBORS							
MALES SHOULD HAVE JOB PRIORITY							
DON'T WANT UNMARRIED COUPLES AS NEIGHBORS							
RECENTLY JOINED A BOYCOTT							
MEMBER OF RELIGIOUS ORGANIZATION							

MEMBER OF NON-RELIGIOUS ORGANIZATION							
--------------------------------------	--	--	--	--	--	--	--

Steve Kieffer, Tim Dwyer, Kim Marriott, and Michael Wybrow (2016) compared how humans arrange two-dimensional, flat networks to the layouts produced by algorithms → FIG. 59. Their paper “HOLA: Human-like Orthogonal Network Layout” received the best paper award at *InfoVis*¹⁷ 2015. The undertaken reordering of network representations underwent eight stages of adjustments conducted by participants of a user study. Kieffer et al. (2016: 350) claim that “currently no automatic layout algorithm produces layout of comparable quality to that which a human can produce with careful manual adjustment”. They point out that knowledge thereof has not yet been taken into consideration regarding algorithm design. Hence, Kieffer et al. intend to bridge that gap. Findings include that participants tend to create clusters and compactness, if possible nodes are placed on a grid and symmetrically. Edge crossings and bends are avoided. Even though this study focuses on orthogonal layouts, which consist of edges with horizontal and vertical orientation, it is fair to conclude that an approach, taking into account “human capabilities” (VICTOR 2011), could be applied to force-directed or radial network layouts as well. This hypothesis provides a starting point for the following experiment.

¹⁷ IEEE Information Visualization Conference, which took place in Chicago in October 2015

Fig. 61: DIY BertinMatrix:
Physical Matrix, a large-scale
replica of Jacques Bertin's
physical devices

APPROACH

This experiment explores the mapping of data points in a space defined by three walls. These three segregated areas provide the opportunity to group actors based on different criteria and analyze their relationships constituting through sorting. This ordering of data points, motivated by the intention to reveal pattern and clusters, is commonly known as *seriation* (HEER, BOSTOCK & OGIEVETSKY 2013). This exploration is disregarding actors from the activist spectrum for a number of reasons: mainly due to time restrictions, but also in order to reduce the complexity level. More secondary reasons for their dismissal are their attitude, their dominance, and their predictability. The color of the edges represents the concern and is preassigned by its direction. The concern of the actor, that is being linked to, defines the color of the edge. Ordering is performed based on the previously defined and applied classifications: actor type, position, and concern; additionally taking into consideration their respective levels of activity. Activity levels are translated into elevation from level zero and the distance from the associated wall.

DATA SET

This study is based on the original dataset consisting of a list of actors, attributed characteristics and properties, and the relationships they maintain amongst each other → TABLES 4 & 5.

ANALYSIS

These representations are an altered, modified version of the initial network representation, motivated by the hypothesis that manipulation of the configuration may provide additional insights and are decodable more easily.

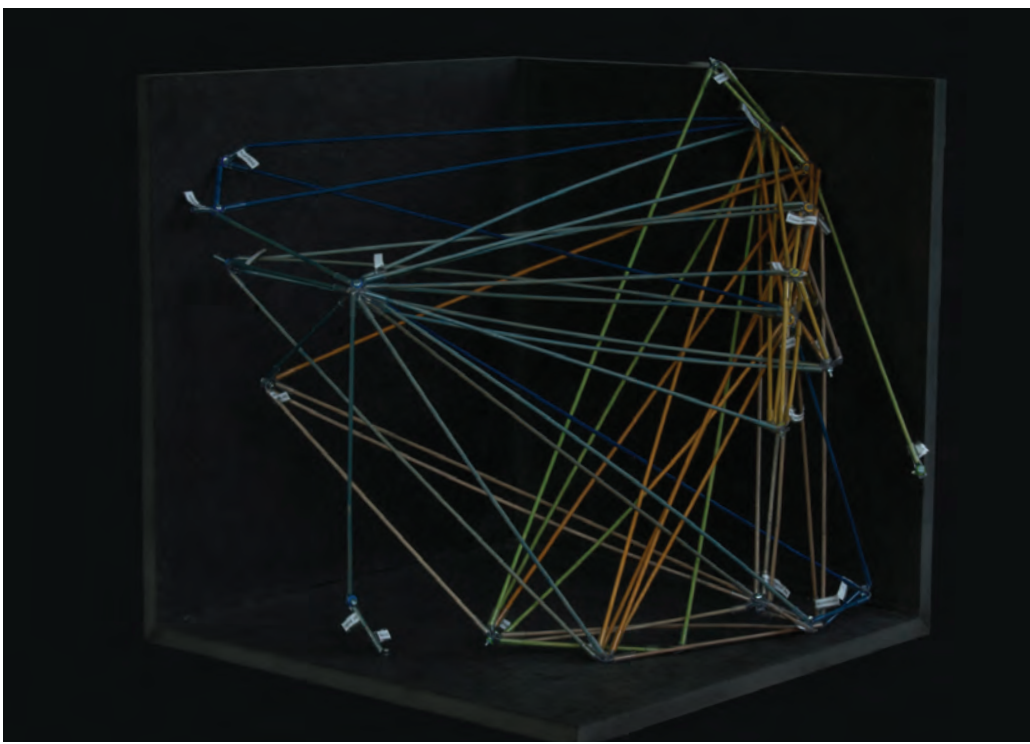


Fig. 62: Network Ordering: Actor Position

ACTOR POSITION

In this first ordering, actors are grouped based on their position (encoded into screw drive shapes). Pro actors are placed on the left wall, neutral actors at the bottom, contra actors on the right wall. The resulting configuration → FIG. 62 indicates that contra actors, that are concerned with participation, do not have any connection to the neutral spectrum and seem to function as a bridge or mediator between proponent actors and the opposing spectrum. This is interesting insofar as these entities are journalistic products that are addressing local and neighborhood issues, and are primarily published digitally. The resulting formation suggests that they are taking up contrary opinions and offer viewpoints from the two ends of the spectrum. They are positioned close to the neutral actor group. It can be argued that such structure is based on their affiliation to the practice of journalism and associated standards and also their local focus and origin, being from Prenzlauer Berg.

Concerns predominantly negotiated among opposition and neutral parties are ecology, community, and urban transformation. The most active flow is noticeable among opposition actors themselves. Between proponents and neutral/contra actors the flow seems to be one-directional. Neutral actors display an overall low level of activity.

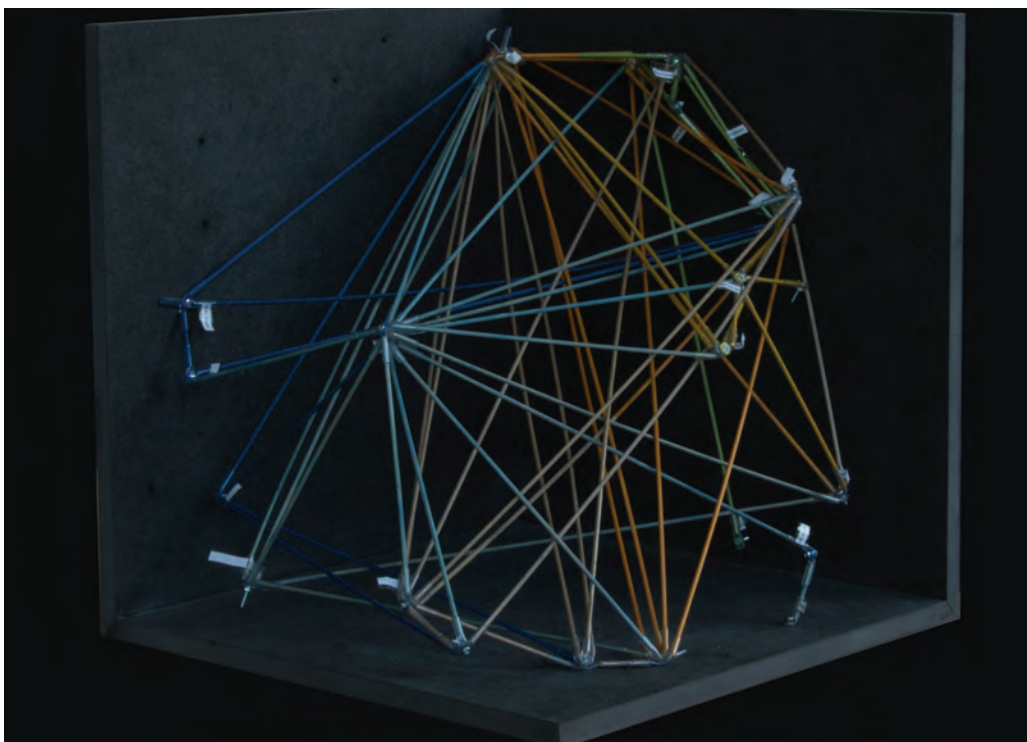


Fig. 63: Network Ordering: Actor Type

ACTOR TYPE

This configuration shows the actors grouped by their type (encoded into bolt forms). Building sector actors are placed on the left wall, public authority at the bottom left, independent experts at the bottom right, and interest groups on the right wall → FIG. 63.

It shows a strict separation of concerns related to community, participation, and ecology from the sphere of building sector and public authorities. While in the other two experiments there is at least one outlier, reaching out into the sphere of stakeholders campaigning for the development of Mauerpark, here a clear boundary is visible. This setup reveals the high level of influence of the two mentioned actor groups: Topics that matter to them are communicated to interest groups and independent actors, while equivalent information does not flow the other way around. The level of activity shown by building sector and public authority actors, derived from the volume of contents published digitally, is low overall—with one exception: Senate of Berlin. This stakeholder though is showing an exceptional high level of activity. This circumstance is translated into an elevated position, which makes it appear closer to actors from the opposition. Interest groups as well as independent experts show on average a higher level of activity.

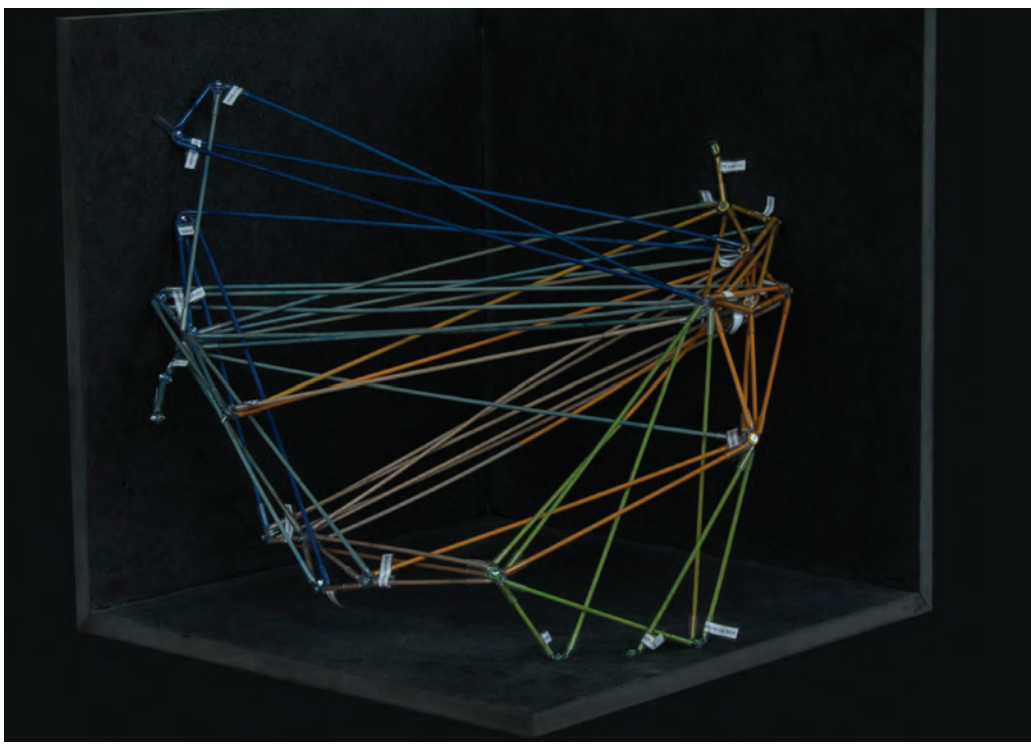


Fig. 64: Network Ordering: Actor Concern

ACTOR CONCERN

The third round of ordering resulted in the configuration pictured above. Here entities are grouped and ordered based on their concern (encoded into washer color): Real estate, housing, urban transformation, ecology, community, and participation (from left to right via the bottom) → FIG. 64.

Community and *participation* are concerns negotiated amongst a small, closed group of actors on one side. On the other side there are the topics housing, urban transformation, and real estate that seem to be negotiated globally. Ecological issues are addressed by their own actors as well as community actors. This circumstance is based on the relevance these topics are ascribed to by all stakeholders involved. Furthermore, *participation* and *community* seem to be local issues.

Concerning activity, actors addressing participation display the highest level thereof—apart from the Senate of Berlin. It can be argued, that participation lies in its nature. The lowest level of activity is displayed by stakeholders concerned with matters related to real estate. The resulting configuration suggests that the youth farm *Moritzhof*—similar to the community garden *Mauergarten*—is equally concerned with ecology and community by positioning itself right between the two. *Mauergarten* additionally shows an affiliation to Brunnenviertel actors.

REFLECTION

The models created during the experiments are not capable of conveying information about the Mauerpark controversy, that is easily decodable by a concerned outsider, yet this is not their intended purpose. The production of these models was guided by the aim to develop a system, that enables the researcher to gain deep insight into the controversy; to develop a physical representation that facilitates a broad analysis. Additionally, the models succeed at serving as thinking aids, as helpful reference to turn to, once memory needs to be refreshed.

Thus, insights gained consequently enable the development of meaningful transformations. Concluding this chapter, advantages and disadvantages of the approach applied should be discussed.

The three models built for the first experiment facilitate a comparative analysis. For instance, it can be derived that controversy configurations based on actor type and actor position appear to be almost congruent, while the three-dimensional clustering based on actor concern provides a different picture. The resulting layout suggests the existence of a number of sub-controversies, each negotiated by a heterogeneous pool of human and non-human stakeholders.

The major insight gained through the undertaken experiment is the special position taken by *Brunnenviertel* actors, which shows indications of being influenced, shaped, and channeled by the German

government's urban development program "Soziale Stadt" [Social City]: It can be argued that the analysis of the MPK controversy assigns a crucial role to actors from this neighborhood during the process of negotiation. This conclusion can be drawn based on the variable position of this actor group within the physical model. While positions of the other stakeholders tend to be stable, positions of *Brunnenviertel* actors seem to be still flexible, not yet established and hence they may provide the decisive impulse; they might have the capabilities to be the tip to the scales → FIGS. 65–68.

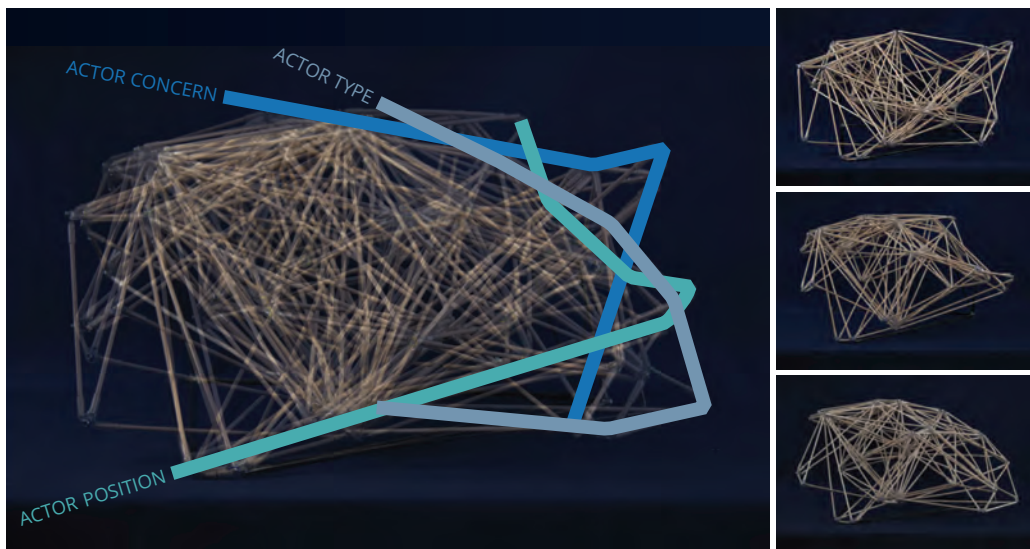


Fig. 65: Superimposition of photographs taken of the three models created during the first exploration.

Fig. 66: Actor configuration: Concern

Fig. 67: Actor configuration: Position

Fig. 68: Actor configuration: Type

One considerable strength is the models' capability to serve as thinking aids, which provide the opportunity to refer to the physical representation of the controversy in order to review facts straightforward without the necessity to look up—sometimes extensive—web presences of involved entities.

Additionally, this approach helps to learn more comprehensively about entities and their characteristics. It supports their correct categorization and re-categorization. With the given homogeneity of

the assemblage, outliers—entities that break an otherwise consistent formation by taking a position well above or below its neighboring entities—might point out, that this entity has been misclassified and could do with a more in-depth exploration and possibly an adaptation regarding its classification. For instance, *Mauergarten*: The community gardening project set up at Mauerpark has been initially classified as an actor concerned with ecological matters. However, the initial inventory of the situation, carried out during the first set of explorations, indicates that it also fits the categories community or urban transformation. Why? Due to the fact that it is positioned right at the border between ecology, community, and urban transformation, while being surrounded by actors belonging to the same actor type (interest group), its position regarding the controversy rather resembles the position voiced by the majority of community actors (neutral). And yes, its concern is a combination of ecological, community as well as urban issues—showing a slight trend towards community.

A considerable weakness of this approach appears to be the perspective distortion occurring specifically in the flat representation within this printed documentation, but in the original physical models to a certain extent as well. This shortcoming reduces the efficiency of translation from “distal stimuli (physical presentations) [...] into proximal stimuli (retinal images)” (JANSEN & DRAGICEVIC 2013A: 2399). This process is further complicated by the overall complexity this approach entails.

Concluding it can be said that a modular connector system serves the purpose of analyzing a complex, relational and dynamic structure such as a controversy. It fails—at least in the current form—to provide and communicate insights to the concerned viewer.

APPENDIX

Table 1: Controversy Exploration

1/3

#	Query	URL
MS01	Mauerpark Stadtentwicklung	stadtentwicklung.berlin.de/umwelt/stadtgruen ... /mauerpark/index.shtml
MS02	Mauerpark Stadtentwicklung	berlin.de/rbmskzl/aktuelles/pressemitteilungen/2015/pressemitteilung ...
MS03	Mauerpark Stadtentwicklung	mauerpark.info/einspruch/stadtentwicklung/
MS04	Mauerpark Stadtentwicklung	mauerpark.info/
MS05	Mauerpark Stadtentwicklung	berliner-zeitung.de/berlin/stadtentwicklung-sozialwohnungen-oder-luxus ...
MS06	Mauerpark Stadtentwicklung	berliner-zeitung.de/berlin/stadtentwicklung-neues-wohnviertel-am-mauerpark ...
MS07	Mauerpark Stadtentwicklung	taz.de/!5148577/
MS08	Mauerpark Stadtentwicklung	tagesspiegel.de/berlin/stadtentwicklung-der-streit-um-den-mauerpark-ist- ...
MS09	Mauerpark Stadtentwicklung	pankower-allgemeine-zeitung.de/category/mauerpark/
MS10	Mauerpark Stadtentwicklung	nets-berlin.de/
MS11	Mauerpark Stadtentwicklung	mauerpark-allianz.de/wp-content/.../2015/08/GruenstattBeton_WEB.pdf
MS12	Mauerpark Stadtentwicklung	prenzlauerberg-nachrichten.de/politik/_/mauerpark-bebauungsplan-senat-...
MS13	Mauerpark Stadtentwicklung	thf100.de/tl_files/thf100/bilder/netzwerk%20soziale%20stadtentwicklung...
MS14	Mauerpark Stadtentwicklung	rbb-online.de/politik/beitrag/2015/03/senat-zieht-mauerpark-verfahren-...
MS15	Mauerpark Stadtentwicklung	gruenzuege-fuer-berlin.de/wp-content/.../2010/10/Stellungnahme_B-Plan...
MS16	Mauerpark Stadtentwicklung	de-de.facebook.com/mauerpark.allianz/posts/852450904827898
MS17	Mauerpark Stadtentwicklung	betterplace.org/de/projects/20900-100-mauerpark-keine-luxuswohnungen-...
MS18	Mauerpark Stadtentwicklung	landschaftsarchitektur-heute.de/themen/berliner-kulturlandschaften/berlin...
MS19	Mauerpark Stadtentwicklung	abendblatt-berlin.de/2014/09/05/flaechendeckend-vernetzt/
MS20	Mauerpark Stadtentwicklung	brunnenviertel-ackerstrasse.de/MauerparkBebauung
MS21	Mauerpark Stadtentwicklung	piratenfraktion-pankow.de/tag/mauerpark/
MS22	Mauerpark Stadtentwicklung	twitter.com/mauerpark/status/311485933293809666
MS23	Mauerpark Stadtentwicklung	gleimviertel.de/
MS24	Mauerpark Stadtentwicklung	haendewegvomwedding.blogspot.eu/?p=1156
MS25	Mauerpark Stadtentwicklung	piraten-mitte.de/?tag=stadtentwicklung
MS26	Mauerpark Stadtentwicklung	berlin.de/imperia/md/content/bamitte/plang/bauleitplanung/oeffentlich...
MS27	Mauerpark Stadtentwicklung	politik-mit-lenz.de/lokal_1_1_85_Informationen-zum-geplanten-Abwasser- ...
MS28	Mauerpark Stadtentwicklung	berlinonline.de/nachrichten/prenzlauer-berg/abwasser-speicher-unter- ...

Table 1: Controversy Exploration

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#	Query	URL
MS29	Mauerpark Stadtentwicklung	morgenpost.de/bezirke/mitte/article118361018/Bau-neuer-Luxuswohnungen-...
MS30	Mauerpark Stadtentwicklung	wasistlandschaft.de/was-ist-landschaftsarchitektur/galerie/mauerpark.html
MS31	Mauerpark Stadtentwicklung	spdfraktion-berlin.de/tags/stadtentwicklung
MS32	Mauerpark Stadtentwicklung	piratenpartei-pankow.de/tag/mauerpark/
MS33	Mauerpark Stadtentwicklung	prenzlberger-stimme.de/?p=84755
MS34	Mauerpark Stadtentwicklung	bvvmitte.pyxis.uberspace.de/redmine/issues/128
MS35	Mauerpark Stadtentwicklung	marthashof.net/medien/marthashof/news/mauerpark-fertigstellen-vergroesser...
MS36	Mauerpark Stadtentwicklung	spd-falkplatz-arnimplatz.de/index.php?mod=article&op=uebersicht&thema=39 ...
MS37	Mauerpark Stadtentwicklung	pruefstein-lichterfelde-sued.de/NETS/NETS_Dokus_01.html
MS38	Mauerpark Stadtentwicklung	futurberlin.de/
MS39	Mauerpark Stadtentwicklung	gruene-fraktion-pankow.de/archiv-wahlperioden/archiv-vi-wahlperiode/stadt...
MS40	Mauerpark Stadtentwicklung	gruene-fraktion-pankow.de/archiv-wahlperioden/archiv-vi-wahlperiode/stadt...
MS41	Mauerpark Stadtentwicklung	liberale.de/content/planspiel-zur-berliner-stadtentwicklung
MS42	Mauerpark Stadtentwicklung	spdpankow.de/index.php?nr=10936&menu=1
MS43	Mauerpark Stadtentwicklung	arcor.de/content/aktuell/regional_news/berlin_brandenburg/3289996,1,Senat...
MS44	Mauerpark Stadtentwicklung	gruene-pankow.de/lokales/mauerpark/
MS45	Mauerpark Stadtentwicklung	grueneliga-berlin.de/der-rabe-ralf/jahrgang-2015/mauerpark-streit-um- ...
MS46	Mauerpark Stadtentwicklung	de.wikipedia.org/wiki/Mauerpark
MS47	Mauerpark Stadtentwicklung	it.wikipedia.org/wiki/Mauerpark
MS48	Mauerpark Stadtentwicklung	focus.de/fotos/berlins-senator-fuer-stadtentwicklung-andreas-geisel_id_ ...
MS49	Mauerpark Stadtentwicklung	bmgev.de/mieterecho/320/19-mauerpark-jb.html
MS50	Mauerpark Stadtentwicklung	gruene-mitte.de/.../ein-einheitliches-parkmanagement-fuer-den-mauerpark
MB01	Mauerpark Bebauung	berliner-zeitung.de/berlin/die-plaene-fuer-den-mauerpark,10809148,119453...
MB02	Mauerpark Bebauung	mauerpark.info/
MB03	Mauerpark Bebauung	morgenpost.de/berlin/article138064140/So-hebelt-der-Senat-Buergerpro...
MB04	Mauerpark Bebauung	mauerpark-allianz.de/
MB05	Mauerpark Bebauung	rbb-online.de/politik/beitrag/2015/02/mauerpark-bebauungsplan-liegt-zur- ...
MB06	Mauerpark Bebauung	rbb-online.de/politik/beitrag/2015/07/protest-wohnungen-bauplaene-mauer...
MB07	Mauerpark Bebauung	grueneliga-berlin.de/der-rabe-ralf/jahrgang-2015/mauerpark-streit-um- ...
MB08	Mauerpark Bebauung	gleimviertel.de/
MB09	Mauerpark Bebauung	abendblatt-berlin.de/2015/03/13/senator-beendet-mauerpark-debatte/
MB10	Mauerpark Bebauung	tagesspiegel.de/berlin/700-wohnungen-statt-freiflaeche-senat-reisst-bau...
MB11	Mauerpark Bebauung	prenzlauerberg-nachrichten.de/politik/_/mauerpark-bebauungsplan-senat- ...
MB12	Mauerpark Bebauung	prenzlauerberg-nachrichten.de/politik/_/mauerpark-bebauungsplan-mauerpark...
MB13	Mauerpark Bebauung	prenzlberger-stimme.de/?p=83224
MB14	Mauerpark Bebauung	taz.de/!5030127/

Table 1: Controversy Exploration

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#	Query	URL
MB15	Mauerpark Bebauung	pankower-allgemeine-zeitung.de/2015/05/12/mauerpark-ausergewohnliche...
MB16	Mauerpark Bebauung	pankower-allgemeine-zeitung.de/2013/02/18/groth-plant-mauerpark-ohne- ...
MB17	Mauerpark Bebauung	weddingweiser.wordpress.com/2015/01/21/mauerpark-erweiterung-...
MB18	Mauerpark Bebauung	de-de.facebook.com/mauerpark.allianz/posts/836376199768702
MB19	Mauerpark Bebauung	linksunten.indymedia.org/de/node/151307
MB20	Mauerpark Bebauung	tip-berlin.de/kultur-und-freizeit-stadtleben-und-leute/kundgebung-gegen- ...
MB21	Mauerpark Bebauung	m3park.de/argumente-und-einwendungen/
MB22	Mauerpark Bebauung	berliner-woche.de/gesundbrunnen/bauen/tausende-buerger-sind-gegen-die- ...
MB23	Mauerpark Bebauung	de.wikipedia.org/wiki/Mauerpark
MB24	Mauerpark Bebauung	berlin1.de/berliner-ideen/stadtgesprch/mauerpark-berlin-streit-um-die- ...
MB25	Mauerpark Bebauung	welt-buerger-park.de/
MB26	Mauerpark Bebauung	gruene-pankow.de/lokales/mauerpark/
MB27	Mauerpark Bebauung	dielinke-berlin-mitte.de/politik/aktuelles/detail/zurueck/archiv-64/ ...
MB28	Mauerpark Bebauung	berliner-kurier.de/kiez-stadt/senat-zieht-bebauungsplanung-an-sich- ...
MB29	Mauerpark Bebauung	wirbleibenalle.org/?cat=52
MB30	Mauerpark Bebauung	openpetition.de/petition/argumente/gegen-die-bebauung-der-erweiterungs...
MB31	Mauerpark Bebauung	berlinonline.de/nachrichten/prenzlauer-berg/senat-will-am-mauerpark- ...
MB32	Mauerpark Bebauung	haendewegvomwedding.blogspot.eu/?tag=mauerpark
MB33	Mauerpark Bebauung	habenundbrauchen.de/2015/02/haben-und-...-einwand-gegen-den-bebauung...
MB34	Mauerpark Bebauung	kieze-im-dialog.de/thema/mauerpark/
MB35	Mauerpark Bebauung	mauerparkblog.blogspot.com/
MB36	Mauerpark Bebauung	flickr.com/photos/mauerpark/3843361770
MB37	Mauerpark Bebauung	twitter.com/mauerpark
MB38	Mauerpark Bebauung	update.mauerpark-im-dialog.de/.../Thema/abstand-zur-geplanten-bebauung-...
MB39	Mauerpark Bebauung	piratenpartei-pankow.de/tag/mauerpark/
MB40	Mauerpark Bebauung	youtube.com/watch?v=nB6pMeHRCho...
MB41	Mauerpark Bebauung	bz-berlin.de/berlin/von-den-mauerpark-bauplaenen-kursieren-verzerzte-...
MB42	Mauerpark Bebauung	klaus-mindrup.de/veranstaltungen/informationsveranstaltung-geplanten-...
MB43	Mauerpark Bebauung	otto-direkt.de/meine-themen/mauerpark/
MB44	Mauerpark Bebauung	focus.de/regional/berlin/berliner-geschichten/serie-aussergewoehnlich-...
MB45	Mauerpark Bebauung	pruefstein-lichterfelde-sued.de/Themen/Lehrstueck_Mauerpark_Bln_8.html
MB46	Mauerpark Bebauung	die-linke-pankow.de/linksfraktion/themen/mauerpark/b_plan_1_64/
MB47	Mauerpark Bebauung	bln.fm/2015/02/mauerpark-jetzt-kommen-700-wohnungen/
MB48	Mauerpark Bebauung	spdpankow.de/index.php?nr=10936&menu=1
MB49	Mauerpark Bebauung	berliner-lokalnachrichten.de/aktuelles/naechste-runde-im-kampf-um-den-...
MB50	Mauerpark Bebauung	kiezsreiber.blogspot.com/2015/02/mauerpark-keine-bebauung.html

Table 5: Actor Explorations

#	Title	Actor Position	Actor Type	Actor Concern	Actor Activity
C01	Berlin Senate	+8	+6	+7	20
C02	Freunde des Mauerparks	-4	-4	+2	9
C03	Mauerpark-Allianz	-10	-9	-8	5.2
C04	Brunnenviertel-Brunnenstrasse	0	+5	-6	2
C05	Welt-Bürger-Park	-10	-9	-9	2
C06	Grünzüge für Berlin	-10	-8	-3	1.3
C07	Gleimviertel	-9	-1	+4	0
C08	Jugendfarm Moritzhof	-7.5	-3	+3	0
C09	Prenzlberger Stimme	-5	0	+1	11.6
C10	Al Thälmannpark	-5	-6	-7	0.6
C11	Kieze im Dialog	-5	-4	+2	2.6
C12	Bürgerinitiativen-Netzwerk	-9	-8	0	2
C13	Prenzlauer Berg Nachrichten	-3	0	+1	16.1
C14	Parlament Berlin	+6	+6	+7	3.2
C15	THF 100	-3.5	-6	-4	2.6
C16	Prüfstein Lichterfelde-Süd	-8	-7	-4	7.1
C17	Mauergarten	+1	-3	-1	0.6
C18	Brunnenviertel	0	+5	+5	0
C19	Groth Group	+10	+9	+9	1.3
C20	Teddy 2.0	-5	-6	-8	2
C21	Futurberlin	-4	+2	-8	9
C22	Brunnenviertel-Ackerstrasse	+3	-1	-6	7,1
C23	Degewo	-2	+7	+8	0.6
C24	Grüne Liga Berlin	-10	-2	-2	3.2
C25	Kleingärtnerverein Oeynhausen	-5	-7	-4	1.3
C26	Oeynhausen Retten	-5	-7	-4	0.6
C27	SWUP GmbH	+2	+3	-5	0
C28	Quartiersmanagement Berlin	0	+5	-6	1.3
C29	Gleimkiez	+1	+5	+4	0
C30	Prenzlberger Ansichten	-4	0	+1	5.8
C31	Architektenkammer Berlin	+2	+3	+6	3
C32	Mauerpark im Dialog	+10	+9	+9	1.3
C33	Stiftung Naturschutz Berlin	-3	-2	-2	1.3
C34	NABU	-7.5	-2	-2	0
C35	NETS Berlin	-8	-8	0	2.6
C36	Gleimoase	0	-1	-1	0

Table 6: Actor Activity – Overall | Development over time (2013–2015)

#	Total	1301	1302	1303	1304	1401	1402	1403	1404	1501	1502	1503	1504
C01	31	xx	x	xx	xxx	xx	xxxxx	xxxx	xx	xx	xxxx	xx	xx
C02	14	x	x	xxxx		xx	x	x	x	x		x	x
C03	8					x	x		xx	x	x	x	x
C04	3		x	x						x			
C05	3		x			x						x	
C06	2							x				x	
C07	0												
C08	0												
C09	18	xx	x	x	x	xx	xx	xx	xx		xxx	x	x
C10	1									x			
C11	4	xx		x		x							
C12	3	x		x		x							
C13	25	xxxx	xx	x	xx	xxx	xxx	x	xx	xx	x	xx	xx
C14	5			x	x		x				x		x
C15	4					x	xx		x				
C16	11	x		x			x		xxxx	xx	xx		
C17	1												x
C18	0												
C19	2						x						x
C20	3			x	x				x				
C21	14	x	xx	x				x	x	x	xxxx	x	xx
C22	11	x			x	x	xx	x	x		xx	x	x
C23	1							x					
C24	5					x			x		x	x	x
C25	2				x				x				
C26	1								x				
C27	0												
C28	2	x									x		
C29	0												
C30	9		x	xx			x	x		x		xx	x
C31	3	x		x				x					
C32	2									xx			
C33	2				x						x		
C34	0												
C35	4					x			x	x	x		
C36	0												

Table 7: Actor Activity – Arguments

#	Date	Actor	Title
AA01	09.01.2013	Prenzlauer Berg Nachrichten	Das war erst der Anfang
AA02	09.01.2013	Prenzlberger Stimme	Mauerpark-Filet an CDU-Großspender
AA03	03.02.2013	Brunnenviertel-Ackerstrasse	Februar 2013
AA04	11.02.2013	Prenzlauer Berg Nachrichten	Mauerpark: Vertrag mit Befreiheit
AA05	15.02.2013	Freunde des Mauerparks	Luxuswohnungen passen nicht zum Mauerpark!
AA06	15.02.2013	Kieze im Dialog	Groths Luxuswohnungen passen nicht zu Nachbarschaft
AA07	15.02.2013	Prenzlauer Berg Nachrichten	Mauerpark: Pläne vorgestellt
AA08	20.02.2013	Architektenkammer Berlin	Regionalteil Berlin Ausgabe 2/2013
AA09	01.03.2013	Quartiersmanagement Berlin	Handlungskonzept 2013 (PDF)
AA10	05.03.2013	Bürgerinitiativen-Netzwerk	Gut gegen Groth-Grauen im Mauerpark: am 11.März die ...
AA11	07.03.2013	Kieze im Dialog	Mauerpark Die Kieze im Dialog Page 3
AA12	08.03.2013	Prenzlauer Berg Nachrichten	Ideen für den Umbau der ...
AA13	10.03.2013	Prenzlberger Stimme	Tempo 30 und bunte Gehwegplatten
AA14	11.03.2013	Berlin Senate	Grünes Band Berlin – Senatsverwaltung für Stadtentwicklung
AA15	14.03.2013	Futurberlin	Der Stadtrat der aus der Hüfte schießt
AA16	16.03.2013	Prüfstein Lichtenfelde-Süd	khd-blog Prüfstein Lichtenfelde-Süd -- Aus Medien 15
AA17	26.03.2013	Berlin Senate	Download – Berlin.de
AA18	04.04.2013	Prenzlberger Ansichten	Der Bauherrscher: Klaus Groth
AA19	08.04.2013	Prenzlberger Stimme	Die Projekte des Klaus Mindrup (Teil 3)
AA20	10.04.2013	Berlin Senate	BerlinStrategie Stadtentwicklungskonzept Berlin 2030
AA21	22.05.2013	Prenzlauer Berg Nachrichten	Mauerpark: Die Gärtner kommen
AA22	29.05.2013	Prenzlauer Berg Nachrichten	Mauerpark: Anwälte gegen die Bürgerwerkstatt
AA23	30.05.2013	Freunde des Mauerparks	Mauerpark: Einschüchterung statt Bürgerbeteiligung
AA24	30.05.2013	Welt-Bürger-Park	Bezirksverordnetenversammlung Pankow von Berlin
AA25	11.06.2013	Futurberlin	Stadtentwicklungsprojekte in Berlin
AA26	11.06.2013	Futurberlin	Futurberlin zitiert
AA27	28.06.2013	Brunnenviertel-Brunnenstrasse	Liesenbrücke soll „Grünes Band Berlin“ ergänzen
AA28	01.07.2013	Architektenkammer Berlin	Regionalteil Berlin, Ausgabe 7/2013
AA29	11.07.2013	Grüne Liga Berlin	Terra preta – schwarze Erde
AA30	21.07.2013	Freunde des Mauerparks	Festakt zur Mauerpark-Erweiterung am 24. Juli 2013
AA31	24.07.2013	Freunde des Mauerparks	Seit über 10 Jahren begleiten die Freunde des Mauerparks e.V. die ...
AA32	25.07.2013	Prüfstein Lichtenfelde-Süd	khd-blog -- Lehrstück Mauerpark 5
AA33	30.07.2013	Prenzlberger Ansichten	Thälmannpark
AA34	30.07.2013	Prenzlberger Ansichten	Gehwege oder Parkplätze, Grünfläche oder Zaun
AA35	31.07.2013	Parlament Berlin	2014/2015 Haushaltsplan von Berlin für die Haushaltsjahre
AA36	01.08.2013	Berlin Senate	Download – Berlin.de

URL	Actor Concern	Actor Position
prenzlauerberg-nachrichten.de/alltag/_/das-war-erst-der-anfang-171018.html	Participation	CONTRA
prenzlberger-stimme.de/?p=56891	Real Estate	Contra
brunnenviertel-ackerstrasse.de/archive/201302	Participation	Neutral
prenzlauerberg-nachrichten.de/politik/_/mauerpark-vertrag-mit-interpretations...	Urban Transformation	Contra
mauerpark.info/2013/02/luxuswohnungen-passen-nicht-zum-mauerpark/	Participation	CONTRA
kieze-im-dialog.de/2013/02/groths-luxuswohnungen-passen-nicht-zu-nachbar...	Participation	CONTRA
prenzlauerberg-nachrichten.de/politik/_/mauerpark-plane-vorgestellt...	Participation	contra
ak-berlin.de/publicity/ak/internet.nsf/0/1CFE4FBAB7DBE0FEC1257C2F00458C6B/\$FILE/...	Urban Transformation	neutral
quartersmanagement-berlin.de/fileadmin/content-media/Bilder_2013/News_2013...	Participation	neutral
bin-berlin.org/wp/?p=1988	Participation	CONTRA
kieze-im-dialog.de/thema/mauerpark/page/3/	History	CONTRA
prenzlauerberg-nachrichten.de/alltag/_/ideen-fur-umbau-gesucht-171105.html	Participation	Neutral
prenzlberger-stimme.de/?p=60748	Participation	Neutral
stadtentwicklung.berlin.de/umwelt/landschaftsplanung/gruenes_band/download...	Ecology	Neutral
futurberlin.de/der-stadtrat-der-aus-der-huefte-schiesst/	Participation	Contra
http://pruefstein-lichterfelde-sued.de/Aus_Medien/AM_15.html	Ecology	CONTRA
berlin.de/ba-treptow-koepenick/_assets/aemter-und-se/ordnungsamt/ord/pdf	Community	Neutral
prenzlberger-ansichten.de/mauerpark/der-bauherrscher-klaus-groth/	Real Estate	Contra
prenzlberger-stimme.de/?p=61710	Real Estate	Contra
stadtentwicklung.berlin.de/planen/stadtentwicklungskonzept/de/statusbericht/	Urban Transformation	Pro
prenzlauerberg-nachrichten.de/alltag/_/mauerpark-die-gartner-kommen-171183.html	Community	Contra
prenzlauerberg-nachrichten.de/politik/_/mauerpark-anwalte-gegen-die-burgerwerk...	Participation	Contra
mauerpark.info/2013/05/mauerpark-einschucherung-statt-burgerbeteiligung/	Participation	Contra
welt-buerger-park.de/fileadmin/user_upload/Flyer_Tortenwerkstatt_13.04.2013...	Urban Transformation	CONTRA
futurberlin.de/stadtentwicklungsprojekte-berlin/	Urban Transformation	Neutral
futurberlin.de/zitate/	Urban Transformation	Contra
brunnenviertel-brunnenstrasse.de/Nachricht.aktuell0+M561c51abddf.0.html	Ecology	Neutral
ak-berlin.de/publicity/ak/internet.nsf/0/265BE3A117C412B7C1257C2F00458C1E/\$FILE...	History	Neutral
grueneliga-berlin.de/themen-projekte2/garten-nebenan/tipps-aus-der-gartenpraxis...	Ecology	Unrelated
mauerpark.info/2013/07/festakt-zur-mauerpark-erweiterung-am-24-juli-2013/	Community	Contra
mauerpark.info/page/8/	Community	Unrelated
pruefstein-lichterfelde-sued.de/Themen/Lehrstueck_Mauerpark_Bln_5.html	Urban Transformation	CONTRA
prenzlberger-ansichten.de/th%C3%A4lmannpark/	Urban Transformation	Contra
prenzlberger-ansichten.de/aus-den-kiezen/helmholtzkiez/gehwege-oder-parkplaetze...	Urban Transformation	Unrelated
parlament-berlin.de/ados/haupt-ausschuss.nsf/0/7E6EDECD26E7D348C1257C8D...	Urban Transformation	Pro
berlin.de/ba-pankow/politik-und-verwaltung/bezirksamt/beschluesse-des-bezirksamt...	Housing	PRO

Table 7: Actor Activity – Arguments

#	Date	Actor	Title
AA37	08.08.2013	Kieze im Dialog	Bürgerwerkstatt
AA38	27.08.2013	Prenzlberger Stimme	Mauerpark: Spalleks Wünsche überfordern Polizei
AA39	01.09.2013	Teddy 2.0	Durchgehender Grünzug entlang der Ringbahn
AA40	06.09.2013	Prenzlauer Berg Nachrichten	Gestank und Lärm
AA41	15.09.2013	Futurberlin	Senator Müller unterschreibt Absicht zur Feldrandbebauung
AA42	15.09.2013	Berlin Senate	Download – Berlin.de
AA43	17.09.2013	Freunde des Mauerparks	Abwasser-Stauraum unter dem Mauerpark geplant
AA44	18.09.2013	Bürgerinitiativen-Netzwerk	Picknicken, informieren und handeln für 100% Mauerpark
AA45	19.09.2013	Brunnenviertel-Brunnenstrasse	Kiezmagazin zum Thema Lernen erscheint
AA46	27.09.2013	Freunde des Mauerparks	„Keine Baugruben innerhalb des Mauerparks“
AA47	02.10.2013	Teddy 2.0	Mangelhafte Bürgerbeteiligung bei der Voruntersuchung
AA48	02.10.2013	Brunnenviertel-Ackerstrasse	Integriertes Handlungs- und Entwicklungskonzept 2013/14
AA49	02.10.2013	Prenzlauer Berg Nachrichten	Allee ohne Pappeln
AA50	02.10.2013	Parlament Berlin	17/1243 – Abgeordnetenhaus von Berlin
AA51	02.10.2013	Berlin Senate	Pressemitteilungen / Senatsverwaltung für Stadtentwicklung
AA52	02.10.2013	Berlin Senate	Eröffnungsfest zur Umgestaltung des Leopoldplatzes
AA53	06.11.2013	Berlin Senate	Mauerpark (Berlin Wall Park)
AA54	08.11.2013	Grüne Liga Berlin	Wettbewerbssieger « GRÜNE LIGA Berlin e.V. Netzwerk
AA55	11.11.2013	Prenzlauer Berg Nachrichten	Mauerpark: Polizei plant mit
AA56	06.12.2013	Prenzlberger Stimme	Rangierbahnhof Pankow: „Werkstattverfahren“ gescheitert
AA57	11.12.2013	Kleingärtnerverein Oeynhausen	Tagebuch Archiv 2013
AA58	13.12.2013	Grüne Liga Berlin	Umgestaltung zu grünen Oasen
AA59	18.12.2013	Stiftung Naturschutz Berlin	Abwasser-Speicher („Stauraum-Kanal“) im Mauerpark.
AA60	09.01.2014	Prenzlauer Berg Nachrichten	Der Mauerpark, fünf Winter, drei Millionen und ein Tunnel
AA61	13.01.2014	Welt-Bürger-Park	Welt Bürger Park: Termine
AA62	14.01.2014	Bürgerinitiativen-Netzwerk	“Jede nachfolgende Generation wird uns verfluchen, wenn ...
AA63	15.01.2014	Kieze im Dialog	Rainer Krüger Die Kieze im Dialog Page 3
AA64	22.01.2014	Prenzlauer Berg Nachrichten	Mehr Bäume wagen
AA65	22.01.2014	Prenzlberger Stimme	Pappelallee wird nicht entpappelt
AA66	31.01.2014	Prenzlauer Berg Nachrichten	Transparenz für den Mauerpark-Tunnel
AA67	03.02.2014	Prenzlberger Stimme	Mauerpark: Unruhe wegen Informationspanne
AA68	17.02.2014	Freunde des Mauerparks	Baumfällungen auf dem Falkplatz
AA69	27.02.2014	Grüne Liga Berlin	KRAUT UND RÜBEN IM KIEZ « GRÜNE LIGA Berlin e.V.
AA70	01.03.2014	Berlin Senate	Einreicher: Leiter der Abteilung Stadtentwicklung.
AA71	02.03.2014	Mauerpark-Allianz	Offener Brief der Mauerpark-Allianz
AA72	08.03.2014	Berlin Senate	Neubau Mittelbruchzeile

URL	Actor Concern	Actor Position
kieze-im-dialog.de/thema/burgerwerkstatt/	Real Estate	CONTRA
prenzlberger-stimme.de/?p=67471	Urban Transformation	Neutral
teddyzweinull.de/gruenzug/	Ecology	Contra
prenzlauerberg-nachrichten.de/politik/_/gestank-und-larm-171302.html	Ecology	CONTRA
futurberlin.de/senator-mueller-unterschreibt-absicht-zur-feldrandbebauung-in-tempel...	Housing	Neutral
berlin.de/ba-mitte/politik-und-verwaltung/bezirksamt/beschluesse-des-bezirksamts...	Ecology	Pro
mauerpark.info/page/7/	Participation	Contra
bin-berlin.org/	Participation	Contra
brunnenviertel-brunnenstrasse.de/Nachricht.aktuell0+M59581df4e32.0.html	Community	Neutral
mauerpark.info/2013/09/keine-baugruben-innerhalb-des-mauerparks/	Participation	Unrelated
teddyzweinull.de/mangelhafte-buergerbeteiligung-bei-der-voruntersuchung-thael...	Participation	Contra
brunnenviertel-ackerstrasse.de/sites/default/files/pictures/service/download...	Participation	Neutral
prenzlauerberg-nachrichten.de/alltag/_/allee-ohne-pappeln-171345.html	Participation	Neutral
parlament-berlin.de/ados/17/IIIPlen/vorgang/d17-1243.pdf	Real Estate	Pro
stadtentwicklung.berlin.de/aktuell/pressebox/archiv_volltext.shtml?arch_1310/	Participation	Pro
stadtentwicklung.berlin.de/aktuell/kalender/downloads/3132_leopoldplatz_flyer_ [...]	Participation	Pro
berlin.de/imperia/md/content/bapankow/amtfuerkulturundbildung/kunstundkultur [...]	History	Neutral
grueneliga-berlin.de/themen-projekte2/garten-nebenan/projektarchiv/berliner- [...]	Ecology	Neutral
prenzlauerberg-nachrichten.de/alltag/_/mauerpark-polizei-plant-mit-171372.html	Participation	Contra
prenzlberger-stimme.de/?p=70049	Participation	Neutral
kleingaertnerverein-oeynhausen.de/tagebuch/tagebuch-archiv-2013/	Ecology	Contra
grueneliga-berlin.de/?file_id=545	Ecology	Contra
stiftung-naturschutz.de/fileadmin/img/pdf/Kleine_Anfragen/ka17-12791.pdf	Ecology	Neutral
prenzlauerberg-nachrichten.de/alltag/_/mauerpark-stauwassertunnel-wasserbetriebe...	Participation	Neutral
welt-buerger-park.de/index.php?id=4	Participation	CONTRA
bin-berlin.org/wp/?p=2108	Participation	Contra
kieze-im-dialog.de/author/rkrueger/page/3/	Participation	Neutral
prenzlauerberg-nachrichten.de/alltag/_/pappelallee-umbau-stadtentwicklung-171447...	Participation	Neutral
prenzlberger-stimme.de/?p=72139	Participation	Neutral
prenzlauerberg-nachrichten.de/politik/_/mauerpark-tunnel-wasserbetriebe-171456...	Participation	Neutral
prenzlberger-stimme.de/?p=72334	Participation	Neutral
mauerpark.info/2014/02/baumfaellungen-auf-dem-falkplatz/	Ecology	Neutral
grueneliga-berlin.de/themen-projekte2/garten-nebenan/projektarchiv/berliner-...	Ecology	Neutral
berlin.de/ba-pankow/politik-und-verwaltung/bezirksamt/beschluesse-des-...	Real Estate	Contra
mauerpark-allianz.de/2014/03/offener-brief/	Real Estate	CONTRA
berlin.de/ba-reinickendorf/politik-und-verwaltung/aemter/strassen-und-gruen...	Urban Transformation	Neutral

Table 7: Actor Activity – Arguments

#	Date	Actor	Title
AA73	10.03.2014	Freunde des Mauerparks	Seit über 10 Jahren begleiten die Freunde des Mauerparks e.V.
AA74	25.03.2014	THF 100	Info-Broschüre – 100% Tempelhofer Feld
AA75	28.03.2014	NETS Berlin	Volksentscheid
AA76	28.03.2014	Brunnenviertel-Ackerstrasse	Die Erweiterung des Mauerparks auf Weddinger Seite als Grünfläche
AA77	09.04.2014	Prenzlauer Berg Nachrichten	Große Pläne für das Nasse
AA78	11.04.2014	Berlin Senate	Amtliche Information zum Volksentscheid
AA79	15.04.2014	Berlin Senate	Pressemitteilungen / Senatsverwaltung für Stadtentwicklung
AA80	22.04.2014	Prüfstein Lichterfelde-Süd	khd-blog Aktionsbündnis Lichterfelde-Süd -- Mitteilungen 7
AA81	25.04.2014	Brunnenviertel-Ackerstrasse	Umgestaltung des Lokspielplatzes in Bildern
AA82	05.05.2014	THF 100	Aus billigem Grünland wird teures Bauland, Investoren steuern „mit unsichtbar...
AA83	05.05.2014	Parlament Berlin	Senatsverwaltung für Stadtentwicklung und Umwelt. 5. Mai 2014.
AA84	05.05.2014	Prenzlberger Ansichten	Nasses Dreieck
AA85	12.05.2014	Prenzlauer Berg Nachrichten	Mauerpark: Pankow will pflegen, Mitte...
AA86	12.05.2014	Prenzlberger Stimme	Carsten Spallek: B-Plan Mauerpark wird geteilt, Gleimtunnel ...
AA87	13.05.2014	Berlin Senate	Umgestaltung des südlichen Mauerparks zur Grünfläche.
AA88	18.05.2014	Groth Group	Die Groth Gruppe plant nördlich des Gleimtunnels am Mauerpark ein
AA89	20.05.2014	Futurberlin	Schweizer „Velo-Sack“ an der Oranienburger gefunden
AA90	21.05.2014	Berlin Senate	Im Fokus: Zukunftsprojekte in Berlin
AA91	22.05.2014	Prenzlberger Stimme	Bötzow-Brauerei: Forschung, Kunst, Start-Ups und Bier
AA92	27.05.2014	Berlin Senate	Mauerpark: Plätze für Jugendliche schaffen, Standort wäre ideal für eine ...
AA93	01.06.2014	Grüne Liga Berlin	Ausgabe Juni/Juli 2014
AA94	16.06.2014	Mauerpark-Allianz	Textliche Festsetzungen – Mauerpark-Allianz
AA95	19.06.2014	Prenzlauer Berg Nachrichten	Wir haben bereits heute Klima-Probleme
AA96	02.07.2014	Prenzlauer Berg Nachrichten	Wohn-Raum Supermarkt – Prenzlauer Berg Nachrichten
AA97	12.07.2014	Berlin Senate	Weitere Bilder vom Mauerpark
AA98	16.07.2014	Berlin Senate	Wohnungsbau / Senatsverwaltung für Stadtentwicklung und ...
AA99	18.07.2014	Berlin Senate	Imagebroschüre Berlin Mitte Endfassung
AA100	24.07.2014	Futurberlin	Literaturliste – Futurberlin Futurberlin
AA101	30.07.2014	Prenzlberger Ansichten	Aus für Flohmarkt? – Prenzlberger Ansichten
AA102	02.08.2014	Grünzüge für Berlin	SPD – Grünzüge für Berlin
AA103	19.08.2014	Brunnenviertel-Ackerstrasse	August 2014 Quartiersmanagement Brunnenviertel ...
AA104	27.08.2014	Freunde des Mauerparks	Infoveranstaltung: Abwasser-Speicher im Mauerpark ...
AA105	29.08.2014	Degewo	stadtleben 2/2014 – Degewo
AA106	01.09.2014	Mauerpark-Allianz	Pressemitteilung – Mauerpark-Allianz
AA107	04.09.2014	Prenzlberger Stimme	Neues aus Bezirksamt und BVV (64) Prenzlberger Stimme
AA108	09.09.2014	Berlin Senate	Mitte von Berlin – Berlin.de

	URL	Actor Concern	Actor Position
	mauerpark.info/page/6/	Real Estate	CONTRA
	thf100.de/info-broschuere.html	Urban Transformation	Neutral
	nets-berlin.de/tag/volksentscheid/	Participation	Neutral
	brunnenviertel-ackerstrasse.de/archive/201403	Urban Transformation	Contra
	prenzlauerberg-nachrichten.de/alltag/_/nasses-dreieck-grunes-band-171524.html	Ecology	Neutral
	wahlen-berlin.de/abstimmungen/VE2014_TFeld/Brosch%C3%BCre_Tempelhof.pdf	Housing	Neutral
	stadtentwicklung.berlin.de/aktuell/pressebox/archiv_volltext.shtml?arch_1404...	Ecology	Neutral
	pruefstein-lichterfelde-sued.de/ALL/ALL_Mitteilungen_07.html	Real Estate	Contra
	brunnenviertel-ackerstrasse.de/archive/201404	Community	Neutral
ar...	thf100.de/kampagnenzeitung.html?file=tl_files/thf100/zeitung/seite4.pdf	Urban Transformation	CONTRA
	parlament-berlin.de/ados/17/Haupt/vorgang/h17-0110.B-v.pdf	Ecology	Pro
	prenzlberger-ansichten.de/gleimkiez-arnimplatz/nasses-dreieck/	Ecology	Neutral
	prenzlauerberg-nachrichten.de/politik/_/mauerpark-bebauungsplan-parkmanagement...	Urban Transformation	Contra
	prenzlberger-stimme.de/?p=76397	Urban Transformation	Neutral
	berlin.de/ba-mitte/politik-und-verwaltung/service-und-organisationseinheiten/...	Ecology	Pro
	grothgruppe.de/_Web/UI/news/News.aspx?lang=de-DE	Real Estate	PRO
	futurberlin.de/schweizer-velo-sack-an-der-oranienburger-gefunden/	Urban Transformation	Neutral
	stadtentwicklung.berlin.de/wir_ueber_uns/fokus/zukunftsprojekte/de/stadtentw...	Housing	PRO
	prenzlberger-stimme.de/?p=76352	Real Estate	Neutral
	berlin.de/jugendamt-pankow/_assets/gremien/spielplatzkommission/dokumente...	Community	Neutral
	grueneliga-berlin.de/wp-content/plugins/downloads-manager/upload/2014_06_raberaf...	Ecology	Neutral
	mauerpark-allianz.de/wp-content/uploads/2014/11/Anlage_9_Drs_1721_1-64a_VE_TF...	Housing	Pro
	prenzlauerberg-nachrichten.de/alltag/_/stadtklima-interview-dieter-scherer-...	Ecology	Contra
	prenzlauerberg-nachrichten.de/politik/_/wohnen-auf-supermarkten-171580.html	Housing	Contra
	stadtentwicklung.berlin.de/umwelt/stadtgruen/gruenanlagen/de/gruenanlagen_plaetze...	Community	Neutral
	stadtentwicklung.berlin.de/wohnen/wohnungsbau/de/schwerpunkte/standorte.shtml	Housing	Pro
	berlin.de/ba-mitte/service/publikationen/imagebroschure_berlin_mitte_endfassung...	Urban Transformation	Neutral
	futurberlin.de/literaturliste/	Urban Transformation	Neutral
	prenzlberger-ansichten.de/mauerpark/aus-f%C3%BCr-flohmarkt/	Participation	Contra
	gruenzuege-fuer-berlin.de/wp-content/uploads/2014/07/KA-SPD_Liesenbr%C3%BCcke...	Ecology	Neutral
	brunnenviertel-ackerstrasse.de/archive/201408	Community	Neutral
	mauerpark.info/2014/08/infoveranstaltung-abwasser-speicher-im-mauerpark/	Participation	Neutral
	degewo.de/dms/Downloads/Unternehmen/Mietermagazin-stadtleben/2014/degewo_jubila...	Urban Transformation	Neutral
	mauerpark-allianz.de/wp-content/uploads/2014/03/Pressemitteilung-Mauerpark-Allianz...	Participation	Contra
	prenzlberger-stimme.de/?p=80298	Participation	Neutral
	berlin.de/imperia/md/content/bamitte/bvv/32_bvv_unterlagen.pdf	Participation	Contra

Table 7: Actor Activity – Arguments

#	Date	Actor	Title
AA109	16.09.2014	Prenzlberger Stimme	Gudvanger Straße vor Wiedereröffnung: Viele Fahrräder ...
AA110	01.10.2014	Mauerpark-Allianz	Zeitungsartikel zum Netzwerk für soziale Stadtentwicklung ...
AA111	01.10.2014	Mauerpark-Allianz	Treffen des Netzwerks für soziale Stadtentwicklung (NETS)
AA112	17.10.2014	Prenzlauer Berg Nachrichten	120 Wohnungen mehr am Mauerpark – Prenzlauer Berg ...
AA113	21.10.2014	Berlin Senate	Download – Berlin.deba_ergebn_4_1_4_2_gb_aend_teilung_ve_plan.pdf
AA114	24.10.2014	Prüfstein Lichterfelde-Süd	khd-blog Prüfstein Lichterfelde-Süd -- Lehrstück Mauerpark 2
AA115	24.10.2014	Prüfstein Lichterfelde-Süd	khd-blog Prüfstein Lichterfelde-Süd -- Lehrstück Mauerpark 4
AA116	24.10.2014	Prüfstein Lichterfelde-Süd	khd-blog Prüfstein Lichterfelde-Süd -- Lehrstück Mauerpark 3
AA117	10.11.2014	THF 100	Pressemitteilung Berlin, 10.11.2014 „Berlin trägt wieder Filz ...
AA118	10.11.2014	NETS Berlin	Pressemitteilungen NETS
AA119	14.11.2014	Freunde des Mauerparks	Vorherige Seite – Freunde des Mauerparks eV
AA120	14.11.2014	Oeynhausen Retten	Download – Bürgerinitiative Schmargendorf braucht ...
AA121	19.11.2014	Prenzlberger Stimme	Großprojekt Elisabethaue: Bezirkspolitik hisst die weiße Fahne
AA122	19.11.2014	Teddy 2.0	Neues * teddyzweinn
AA123	19.11.2014	Brunnenviertel-Ackerstrasse	November 2014 Quartiersmanagement Brunnenviertel ...
AA124	19.11.2014	Prüfstein Lichterfelde-Süd	khd-blog Prüfstein Lichterfelde-Süd -- Lehrstück Mauerpark 7
AA125	19.11.2014	Teddy 2.0	Neues * teddyzweinn
AA126	27.11.2014	Kleingärtnerverein Oeynhausen	Tagebuch Archiv 2014 – Kleingärtnerverein Oeynhausen
AA127	01.12.2014	Prenzlauer Berg Nachrichten	Angst-Raum: Aus für Kieztreff am Helmholtzplatz
AA128	04.12.2014	Prenzlberger Stimme	Anwohner sollen über den „Dreiecksplatz“ an der ...
AA129	14.12.2014	Futurberlin	Tränen wein´ich in Übersee – Abschied von der Streetart ...
AA130	16.12.2014	Berlin Senate	Beschlüsse des Bezirksamtes Mitte von Berlin 2014 Teil 2 ...
AA131	06.01.2015	Prüfstein Lichterfelde-Süd	khd-blog Netzwerk Soziale Stadtentwicklung ...
AA132	14.01.2015	Prenzlauer Berg Nachrichten	Erste Pappeln fallen – Prenzlauer Berg Nachrichten
AA133	20.01.2015	Mauerpark im Dialog	Download Präsentation – Mauerpark im Dialog
AA134	25.01.2015	NETS Berlin	Mauerpark NETS
AA135	28.01.2015	Berlin Senate	Download – Berlin.de
AA136	01.02.2015	Prenzlberger Ansichten	Statt Luxus – 2-Klassen-Wohnen – Prenzlberger Ansichten
AA137	16.02.2015	Futurberlin	Heute im Angebot: Argumente gegen die Groth-Pläne im ...
AA138	18.02.2015	Grüne Liga Berlin	Sportplatzdschungel « GRÜNE LIGA Berlin e.V. Netzwerk ...
AA139	21.02.2015	Mauerpark-Allianz	Argumente Mauerpark-Allianz
AA140	23.02.2015	Mauerpark im Dialog	Mauerpark im Dialog Dialog
AA141	02.03.2015	Prüfstein Lichterfelde-Süd	khd-blog Prüfstein Lichterfelde-Süd -- Aus Medien 43
AA142	04.03.2015	Berlin Senate	Land Berlin übernimmt Planungsverfahren für den Mauerpark
AA143	17.03.2015	Freunde des Mauerparks	Antrag Bebauungsplan Mauerpark – Der Bezirk bleibt ...
AA144	17.03.2015	Al Thälmannpark	Verdichtung Anwohner-Initiative Ernst-Thälmann-Park

URL	Actor Concern	Actor Position
prenzlberger-stimme.de/?p=77954	Participation	Neutral
mauerpark-allianz.de/2014/10/zeitungsartikel-zum-netzwerk-fuer-soziale-stad...	Participation	CONTRA
mauerpark-allianz.de/veranstaltung/detail/treffen-des-netzwerks-fuer-soziale-stad...	Participation	Contra
prenzlauerberg-nachrichten.de/politik/_/mauerpark-bebauungsplan-spall...	Housing	Neutral
berlin.de/ba-mitte/politik-und-verwaltung/bezirksamt/beschluesse-des-bezirk...	Housing	Pro
pruefstein-lichterfelde-sued.de/Themen/Lehrstueck_Mauerpark_Bln_2.html	Real Estate	CONTRA
pruefstein-lichterfelde-sued.de/Themen/Lehrstueck_Mauerpark_Bln_4.html	Participation	CONTRA
pruefstein-lichterfelde-sued.de/Themen/Lehrstueck_Mauerpark_Bln_3.html	Real Estate	CONTRA
thf100.de/tl_files/thf100/bilder/netzwerk%20soziale%20stadtentwicklung%20berlin/...	Real Estate	CONTRA
nets-berlin.de/category/pressemitteilungen/	Participation	Contra
mauerpark.info/page/3/	Participation	Contra
oeynhausens-retten.de/app/download/8234815184/Pressemitteilung+zum+14.11.2014....	Participation	Contra
prenzlberger-stimme.de/?p=82633	Urban Transformation	Neutral
teddyzweinnull.de/neues/	Participation	Contra
brunnenviertel-ackerstrasse.de/archive/201411	Ecology	Neutral
pruefstein-lichterfelde-sued.de/Themen/Lehrstueck_Mauerpark_Bln_7.html	Real Estate	CONTRA
teddyzweinnull.de/neues/	Participation	Contra
kleingaertnerverein-oeynhausens.de/tagebuch/tagebuch-archiv-2014/	Real Estate	Contra
prenzlauerberg-nachrichten.de/politik/_/angst-raum-platzhaus-am-helmholtzplatz-...	Community	Neutral
prenzlberger-stimme.de/?p=82567	Participation	Neutral
futurberlin.de/traenen-weinich-in-uebersee-abschied-von-der-streetart-von-blu-an-der-...	Urban Transformation	Contra
berlin.de/ba-mitte/politik-und-verwaltung/bezirksamt/beschluesse-des-bezirk...	Housing	Pro
pruefstein-lichterfelde-sued.de/NETS/NETS_Dokus_01.html	Participation	Contra
prenzlauerberg-nachrichten.de/politik/_/pappelallee-umbau-tram-12-bvg-171693.html	Urban Transformation	Neutral
update.mauerpark-im-dialog.de/wp-content/uploads/2015/01/Praesentation.pdf	Real Estate	PRO
nets-berlin.de/2015/01/25/mauerpark-2/	Real Estate	CONTRA
berlin.de/ba-mitte/politik-und-verwaltung/bezirksamt/beschluesse-des-bezirk...	Urban Transformation	Neutral
prenzlberger-ansichten.de/mauerpark/statt-luxus-2-klassen-wohnen/	Urban Transformation	CONTRA
futurberlin.de/mauerpark-auslegung/	Participation	CONTRA
grueneliga-berlin.de/themen-projekte2/sportplatzdschungel/	Ecology	Neutral
mauerpark-allianz.de/argumente/	Participation	CONTRA
update.mauerpark-im-dialog.de/dialog/	Community	Pro
pruefstein-lichterfelde-sued.de/Aus_Medien/AM_43.html	Urban Transformation	PRO
stadtentwicklung.berlin.de/aktuell/pressebox/archiv_volltext.shtml?arch_1503/nach...	Housing	PRO
mauerpark.info/wp-content/uploads/2015/03/A1958-IV_B-Plan-Mauerpark.pdf	Urban Transformation	CONTRA
thaelmannpark.wordpress.com/category/verdichtung/	Participation	CONTRA

Table 7: Actor Activity – Arguments

#	Date	Actor	Title
AA145	18.03.2015	Brunnenviertel-Brunnenstrasse	12 – Quartiersmanagement Brunnenviertel-Brunnenstraße
AA146	20.03.2015	Prenzlauer Berg Nachrichten	Mauerpark: Bürger gegen Neubau – Prenzlauer Berg ...
AA147	14.04.2015	Futurberlin	Das Speed-Dating der Berliner Stadtentwicklung – F uturberlin
AA148	14.04.2015	Brunnenviertel-Ackerstrasse	April 2015 Quartiersmanagement Brunnenviertel ...
AA149	14.04.2015	Mauerpark-Allianz	Mauerpark-Allianz Deine Stimme für 100% Mauerpark ...
AA150	15.04.2015	Futurberlin	Großer Schritt für die Menschheit: Wohnen und Wohnen ...
AA151	16.04.2015	Prüfstein Lichterfelde-Süd	khd-blog Prüfstein Lichterfelde-Süd -- Aus Medien 45
AA152	18.04.2015	Berlin Senate	Grillplätze in den öffentlichen Grün – Senatsverwaltung für ...
AA153	21.04.2015	Prenzlauer Berg Nachrichten	Kaugummi-Bau am S-Bhf Prenzlauer Allee – Prenzlauer ...
AA154	22.04.2015	Futurberlin	Dialog Extrem #2: Auf Tuchfühlung mit der ... – F uturberlin
AA155	23.04.2015	Prenzlberger Stimme	Temporäre Spielstraße Gudvanger oder: Der Hürdenlauf ...
AA156	24.04.2015	Quartiersmanagement Berlin	Neue Terrasse am Stadtbad mit zahlreichen ...
AA157	28.04.2015	Berlin Senate	Download – Berlin.de
AA158	29.04.2015	Architektenkammer Berlin	DABregional 04 · 15 – Architektenkammer Berlin
AA159	05.05.2015	Prenzlberger Stimme	Thälmannpark: 50 Millionen für den Umbau und Kniefall vor ...
AA160	07.05.2015	Parliament Berlin	1618 D – Abgeordnetenhaus von Berlin
AA161	09.05.2015	Futurberlin	Touren am Tag der Städtebauförderung – F u t u r b e r l i n ...
AA162	14.05.2015	Prenzlberger Stimme	Mauerpark: Verlauf des Stauraumkanals steht schon lange fest
AA163	15.05.2015	Grüne Liga Berlin	Mauerpark – Streit um Bebauung
AA164	20.05.2015	Berlin Senate	Wilhelmstädter Magazin Nr. 3, Juni 2015 – Berlin
AA165	25.05.2015	Brunnenviertel-Ackerstrasse	Mai 2015 Quartiersmanagement Brunnenviertel
AA166	05.06.2015	Stiftung Naturschutz Berlin	Schriftliche Anfrage der Abgeordneten Silke Gebel (GRÜNE)
AA167	14.06.2015	NETS Berlin	Bauen Sie auf die Bürger Berlins und nicht gegen sie
AA168	18.06.2015	Berlin Senate	Download – Berlin
AA169	24.06.2015	Prüfstein Lichterfelde-Süd	khd-blog Prüfstein Lichterfelde-Süd -- Links & References
AA170	22.07.2015	Grünzüge für Berlin	Anlage (Hintergrund) zum offenen Brief
AA171	23.07.2015	Welt-Bürger-Park	Welt Bürger Park: Startseite
AA172	24.07.2015	Grüne Liga Berlin	Seminare und Workshops « GRÜNE LIGA Berlin e.V. ...
AA173	20.08.2015	Mauerpark-Allianz	Mauerpark-Allianz Deine Stimme für 100% Mauerpark ...
AA174	26.08.2015	Berlin Senate	Infoveranstaltung zum Bau eines Abwasserspeichers unter ...
AA175	27.08.2015	Freunde des Mauerparks	Informationsveranstaltung zum Abwasserspeicher Freunde ...
AA176	01.09.2015	Prenzlberger Ansichten	Lärmdemo gegen Neubau-Krach – Prenzlberger Ansichten
AA177	01.09.2015	Berlin Senate	Landschaftsprogramm einschließlich Artenschutzprogramm ...
AA178	03.09.2015	Prenzlauer Berg Nachrichten	Infos zum Abwasserspeicher im Mauerpark ... – Prenzlauer ...
AA179	09.09.2015	Prenzlauer Berg Nachrichten	Ausstellung zum Humannquartier eröffnet am – Prenzlauer ...
AA180	11.09.2015	Futurberlin	Bauen wie blöde – hier ein Überblick – F u t u r b e r l i n F ...

URL	Actor Concern	Actor Position
brunnenviertel-brunnenstrasse.de/Startseite.1+M57548f19676.0.html?&tx_ttnews%5B...	Urban Transformation	PRO
prenzlauerberg-nachrichten.de/politik/_/mauerpark-bebauungsplan-senat-pro...	Participation	CONTRA
futurberlin.de/dialog-extrem/	Participation	CONTRA
brunnenviertel-ackerstrasse.de/archive/201504?page=1	Community	Neutral
mauerpark-allianz.de/page/3/	Participation	CONTRA
futurberlin.de/stadtforum-wohnungsneubau/	Housing	Neutral
pruefstein-lichterfelde-sued.de/Aus_Medien/AM_45.html	Real Estate	Contra
stadtentwicklung.berlin.de/umwelt/stadtgruen/gruenanlagen/de/nutzungsmoeglichkeit...	Community	Neutral
prenzlauerberg-nachrichten.de/alltag/_/neuer-ausgang-prenzlauer-allee-171756....	Urban Transformation	Neutral
futurberlin.de/wohnungsbauleitstelle-berlin/	Housing	Pro
prenzlberger-stimme.de/?p=85363	Urban Transformation	Neutral
quartiersmanagement-berlin.de/nachrichtenarchiv/neue-terrasse-am-stattbad-mit-...	Community	Neutral
berlin.de/ba-mitte/politik-und-verwaltung/bezirksamt/beschluesse-des-bezirk...	Participation	Pro
ak-berlin.de/publicity/ak/internet.nsf/0/68677046C631E0F0C1257E830036EB98/\$FILE/...	Urban Transformation	PRO
prenzlberger-stimme.de/?p=86338	Real Estate	Contra
parlament-berlin.de/ados/17/Haupt/vorgang/h17-1618.D-v.pdf	Housing	PRO
futurberlin.de/staedtebaufoerderung-berlin/	Urban Transformation	Neutral
prenzlberger-stimme.de/?p=86789	Participation	Contra
grueneliga-berlin.de/der-rabe-ralf/jahrgang-2015/mauerpark-streit-um-bebauung/	Urban Transformation	CONTRA
berlin.de/ba-spandau/_assets/politik-und-verwaltung/aemter/stadtentwicklungsamt/...	Housing	Pro
brunnenviertel-ackerstrasse.de/archive/201505	Community	Neutral
stiftung-naturschutz.de/fileadmin/img/pdf/Kleine_Anfragen/S17-16097.pdf	Ecology	Neutral
nets-berlin.de/2015/06/14/bauen-sie-auf-die-buerger-berlins-und-nicht-gegen-sie-...	Participation	Contra
berlin.de/ba-mitte/politik-und-verwaltung/bezirksverordnetenversammlung/aktue...	Community	Pro
pruefstein-lichterfelde-sued.de/Lichterfelde_References.html	Urban Transformation	Contra
gruenzuege-fuer-berlin.de/wp-content/uploads/2015/07/Anlage_Hintergrund_zum_off...	Ecology	Contra
welt-buerger-park.de/	Urban Transformation	CONTRA
grueneliga-berlin.de/themen-projekte2/garten-nebenan/seminare-und-workshops/	Ecology	Neutral
mauerpark-allianz.de/page/2/	Urban Transformation	Contra
berlin.de/ba-pankow/aktuelles/pressemitteilungen/2015/pressemitteilung.357781.php	Participation	Neutral
mauerpark.info/2015/08/informationsveranstaltung-zum-abwasserspeicher/	Participation	Neutral
prenzlberger-ansichten.de/mauerpark/l%C3%A4rmdemo-gegen-neubau-krach/	Participation	CONTRA
stadtentwicklung.berlin.de/umwelt/landschaftsplanung/lapro/de/aendv/aktuell/ef/...	Community	Pro
prenzlauerberg-nachrichten.de/kurznachrichten/_/abwasserspeicher-mauerpark-18850...	Participation	Neutral
prenzlauerberg-nachrichten.de/kurznachrichten/_/ausstellung-schulerexpedition...	Urban Transformation	Neutral
futurberlin.de/bauen-in-berlin/	Housing	Neutral

Table 7: Actor Activity – Arguments

#	Date	Actor	Title
AA181	16.09.2015	Brunnenviertel-Ackerstrasse	Abgeordneten stimmen über Bau im Mauerpark ab ...
AA182	28.09.2015	Prenzlberger Stimme	Als der Mauerpark noch Mauerland war – Prenzlberger ...
AA183	29.09.2015	Prenzlberger Ansichten	Nachrichten – Prenzlberger Ansichten
AA184	08.10.2015	Freunde des Mauerparks	Freunde des Mauerparks eV: Mauerpark Berlin Park
AA185	15.10.2015	Berlin Senate	43. öffentliche Sitzung der Bezirksverordnetenversammlung Mitte von Berlin
AA185	17.10.2015	Groth Group	GROTH-Ingenieurbau: Referenzen aus dem Leistungsbereich
AA187	26.10.2015	Brunnenviertel-Ackerstrasse	Das Olof-Palme-Zentrum öffnet bald
AA188	28.10.2015	Prenzlauer Berg Nachrichten	Kinder-auf-Friedhof: Ein Experiment eskaliert
AA189	04.11.2015	Berlin Senate	Die Allianz Umweltstiftung spendet Berlin 125 Straßenbäume
AA190	12.11.2015	Parliament Berlin	Verordnung über die Festsetzung des vorhabenbezogenen Bebauungsplans ...
AA191	16.11.2015	Futurberlin	Über die Stadtentwicklung von Berlin und Paris
AA192	20.11.2015	Grüne Liga Berlin	Platz für den Mauergarten im Mauerpark in Berlin-Mitte
AA193	27.11.2015	Prenzlberger Stimme	170 Millionen für den Friedrich-Ludwig-Jahn-Sportpark
AA194	01.12.2015	Parliament Berlin	17/2608 – Abgeordnetenhaus von Berlin
AA195	02.12.2015	Prenzlberger Stimme	Kandidatenwahl mit Selbstkritik
AA196	02.12.2015	Berlin Senate	Erweiterung Gedenkstätte Berliner Mauer an der Bernauer Straße
AA197	07.12.2015	Mauergarten	Bürgerwerkstatt Mauerpark — Stand der Planung
AA198	10.12.2015	Futurberlin	Ergreift Geisel die Stadtkrone?

URL	Actor Concern	Actor Position
brunnenviertel-ackerstrasse.de/MauerparkBebauung	Housing	PRO
prenzlberger-stimme.de/?paged=3	Participation	CONTRA
prenzlberger-ansichten.de/nachrichten/	Community	Neutral
mauerpark.info/	Housing	Contra
berlin.de/ba-mitte/politik-und.../43_bvv_nachtrag.pdf	History	Pro
groth-gruppe.de/leistungen-referenzen/ingenieurbau.html	Urban Transformation	Neutral
brunnenviertel-ackerstrasse.de/0lofPalmeZentrum	Community	Neutral
prenzlauerberg-nachrichten.de/politik/_/friedhofspark-171940.html	Urban Transformation	Neutral
stadtentwicklung.berlin.de/aktuell/pressebox/archiv_volltext.shtml?arch_1511/nach...	Ecology	Neutral
parlament-berlin.de/ados/17/IIIPlen/vorgang/verordnungen/vo17-214.pdf	Housing	PRO
futurberlin.de/nachbarschaftsgeschichten-zwischen-berlin-und-paris/	Urban Transformation	Neutral
grueneliga-berlin.de/presse/pressemitteilung-28-15/	Ecology	Neutral
prenzlberger-stimme.de/?p=100318	Community	Neutral
parlament-berlin.de/ados/17/IIIPlen/vorgang/d17-2608.pdf	Housing	Pro
prenzlberger-stimme.de/?p=100450	Housing	Contra
stadtentwicklung.berlin.de/planen/staedtebau-projekte/bernauer_str/	History	Pro
mauergarten.net/	Participation	PRO
futurberlin.de/ergreift-geisel-die-stadtkrone/	Housing	Contra

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