ON INSTITUTIONS, PATHS, AND ROUTES SET IN STONE

The Construction of a Bridge as a Case of Path Instantiation

Inauguraldissertation

Zur Erlangung des akademischen Grades eines Doktors der Wirtschaftswissenschaft am Fachbereich Wirtschaftswissenschaft der Freien Universität Berlin

Vorgelegt von

Olivier Berthod

Berlin, 2011

Erstgutachter

Prof. Dr. Jörg Sydow

Freie Universität Berlin

Zweitgutachter

Prof. Dr. Albrecht Söllner

Europa-Universität Viadrina Frankfurt (Oder)

Tag der Disputation

9. Mai 2011

But I had traveled more wisely, and now it was only the monotony of the highway that oppressed me -dust under foot and brown crackling hedges on either side, ever since I could remember.

Edward Morgan Forster
In: *The other Side of the Hedge* (1911)

History is a nightmare from which I am trying to awake.

James Joyce
In: *Ulysses* (1922)

Directory

List of Figures

List of Tables

List of Abbreviations

Actors/Issues

AC	Administrative Court
ADAC	German automobile club (*Allgemeiner Deutscher Automobil-Club*)
BUND	Institutions at the federal level (Ministry, Chancellor, etc.)
CA	City Administration (*Stadtverwaltung*)
CC	City Council (*Stadtsrat*)
CDU	Christian Democratic Union (*Christlisch Demokratische Union*)
DD	Dresden
DL	Left Party (*Die Linke*)
DNN	*Dresdner Neueste Nachrichten* – local newspaper
EO	Engineering Office
FDP	Liberal Party (*Free Democratic Party*)
FSS	Free State of Saxony (*Freistaat Sachsen*)
GL	Green League (*Grüne Liga e.V.*)
HAC	Higher Administrative Court
ICOMOS	International Council on Monuments and Sites
IUDRP	Institute of Urban Design and Regional Planning, RWTH Aachen University
OB	Mayor (*Oberbürgermeister*)
RD	Regional Directorate (*Regierungspräsidium / Landesdirektion*)
SZ	*Sächsische Zeitung* – local newspaper
TUD	Technical University Dresden
UNESCO	United Nations Educational, Scientific and Cultural Organization
V94	Traffic Concept of 1994 (*Verkehrskonzept 1994*)
WH	World Heritage
WHC	World Heritage Center
WSB	Waldschlösschen Bridge
WS	Waldschlösschen

Nature of documents

ES	Expert Study
ID	Informative Document

M	Map
MP	Minutes of Proceedings
OD	Official Document
OR	Official Report
PA	Press Article
PR	Press Release
PS	Public Statement
WC	Web Content

Note on Archives and Documents:

All published sources are listed in the section "References" at the end of this volume.

All unpublished documents and archives used for this research are referenced in the footnotes and follow the schema:

YYYYMMDD - Issuing actor – Nature of document – "Title of the document" (title self-generated where necessary)

These documents, together with many others, have been archived in a case study databank available for consultation from the author.

Due Warning

This study examines a specific infrastructure project, the construction of a new bridge, in the City of Dresden. This infrastructure project culminated in a highly polarizing conflict involving various local political and administrative constituents of the municipality as well as environmentalists, the UNESCO-World Heritage program of preservation, the State Government, the Federal Government, and, caught in the middle, the citizens of Dresden. The core of the conflict was the City's decision in 1996 to proceed with the planning and construction of the Waldschlösschenbrücke, a four-lane bridge in the middle of what eventually became known, in 2004, as the World Heritage Cultural Landscape "Dresden and the Elbe Valley".

The conflict was, and still is at the time of writing, very prominent in Germany and remains a sensitive issue. I would like to assure the reader that I performed this research work with impartiality. Most certainly, the conclusions I propose will not satisfy all the parties of the conflicting project. Therefore, I would like to remind the interested reader that this dissertation is a scientific work rooted in the studies and theories of organization. I therefore focused my analytical effort on organizational issues, such as decisions processes, organizational reaction in situation of conflict and crisis, and so on. I do not aim to judge or take a position on issues that are out of this analytical scope, such as matters of aesthetics, urban development policies, engineering, transportation, or legal affairs, but only at identifying, when applicable, the abstract scope of options for an organization to maintain or alter its course of action.

Doubtless, an infrastructure that was once considered "one more concrete bridge" may become someday an exemplary piece of architecture. The construction of the Eiffel Tower in Paris suffered a similar genesis, and so did numerous works that are now considered seminal. This work is rooted in its time and in its theoretical focus, and presents an analysis of the immediate situation only. In other words, I wish all the best to the soon-to-be-completed Waldschlösschenbrücke.

Introduction

-

Getting to Know the Dresden Case

The research for this volume treats of a conflict that has been puzzling the German national press for years. The story was put to the fore in 2006, as journalists reported that the City of Dresden had just entered the list of UNESCO-World Heritage (henceforth WH) sites in danger. The reason for that decision was the imminent construction of the *Waldschlösschenbrücke* (henceforth WSB), a four-lane bridge above the Elbe River, pretty much in the middle of the, by then, protected zone.

The Case

The municipal project was born in the early 1990s, as the child of a polarizing discussion within the City Administration. The City of Dresden is located on either sides of the Elbe. The WSB is a new traverse over the river in the Waldschlösschen area (henceforth WS), still under construction, and a few kilometers upstream from the city center (see figure 1). The traverse crosses a large meadow, where the valley is at its widest. The bridge profile is rather low. On the right river side, it leans against the slope of a hill (visible on the left of figure 2). As a consequence, the new axe connects to the street network via a set of tunnels crossing below the hill. The complex nature of the project, especially due to its complicated inclusion into the surrounding landscape, has always been the subject of polemics.

This piece of infrastructure was part of a broader traffic plan called 'Verkehrskonzept 1994' (henceforth V94). The V94 projected the construction and renovation of several axes to improve the traffic situation in the city. Back then, Dresden was still marked by the recent reunification of Germany and expected a dramatic increase in traffic from 1990 until 2010, according to the forecasts compiled at this time. Shortly after the ratification of the V94, the City Administration started work

on the implementation of the concept and the planning of new traverses. Back then, the WSB was not ranked as first priority. Debates about options for new traverses had emerged internally. Nonetheless, the expectation of traffic congestion, and its physical manifestations via traffic jams, during rush-hour channeled the decision to centralize traffic flows over one large new axe over the river: the WSB. Political factions in the City Council positioned themselves in favor, or not, of the bridge. A political majority (center-right and liberals) took a turn in favor of the WSB and two years later, on August 15, 1996, the City Council voted the start of the project. However, 15 years later, this decision is being challenged by a set of events and contingencies that were not foreseeable ex-ante. The decision of the World Heritage Center, which we just reported about, is one of them. The traffic issue is another one: contrary to former forecasts, the figures have been remaining stable since 2000, and correspond approximately (in 2010) to the traffic load that was to be attained *with* the bridge once in operation, thus questioning the efficiency of the WSB as solution to traffic problems, as well as the public expenditure of EUR 182 Mio for planning and construction.

Figure 1 - The WSB (simulation)[1]

As for the history of the WSB, an architectural competition eventually took place in 1997 to determine the design of the new bridge. 29 participants were selected out of 183. The guidelines insisted on the realization of a solution that would blend into the sensitive location and would not harm the visual relations. On December 14-16, 1997, the jury debated about the proposals. The concept delivered by the Berlin-based architect team ESKR won the competition (see figure 2).

[1] 20060300 CA ID „Waldschlösschenbrücke bridge and World Heritage status“ (p. 10)

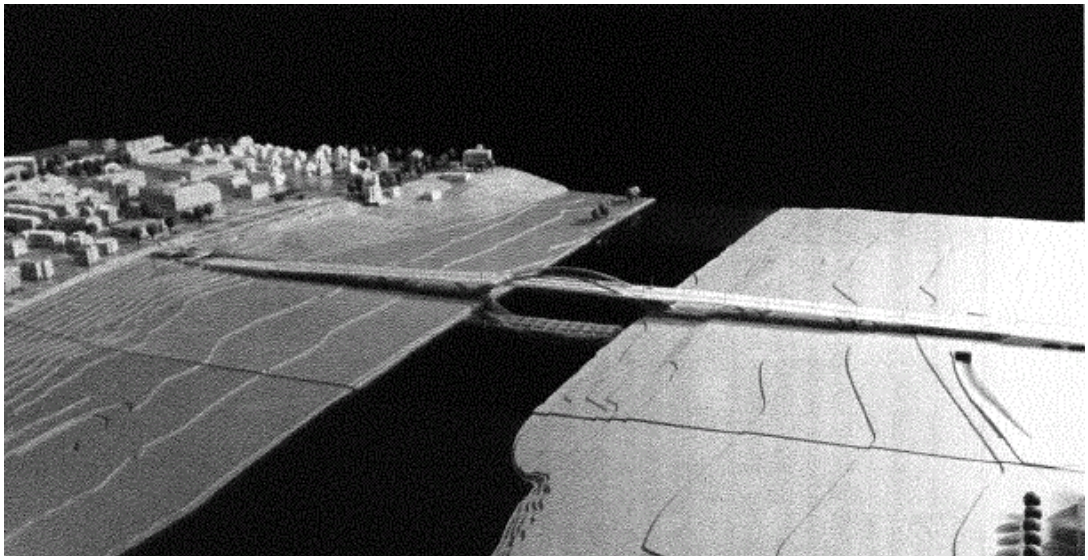


Figure 2 - Model of the WSB as submitted in 1997[2]

On January 14, 2000, after years of planning work, the City submitted its plans for official appraisal to the Regional Directorate. The plans were refused a first time. Then the plans were considerably modified and submitted anew in 2003. Plan appraisal was granted on February 25, 2004. In the same year, however, the composition of the City Council changed upon election. A majority left and center-left coalition tried to stop the project and to invest the money elsewhere. Since 2000, the traffic had been decreasing, slowly undermining the decision to further invest in the project. Budgeting issues had always been critical in the City, and the WSB was about to become a very expensive effort. Motivated by this change in situation, the two main supporting factions and the ADAC (Germany's -and Europe's- largest automobile Club) organized a public referendum on the matter. On February 27, 2005 50, 8% of the electoral register participated in the referendum. 67, 9% of them voted in favor of the construction of a bridge at WS, thus binding the City to the project for three years.

This debate expanded prominently to become, in 2009, an international issue, involving numerous local institutional bodies, the Federal Government of Germany, numerous social movements, and, last but not least, the UNESCO and its 1972 Convention for the Protection of World Heritage Sites. Indeed, a large part of Dresden, together with the surrounding Elbe river banks, had been listed WH since 2004, upon a

[2] 19971211 CA OD "Realisierungswettbewerb Neue Elbebrücke am Standort Waldschösschen in Dresden - Vorprüfbericht" (p. 19)

self-initiated application process supported by the State of Saxony and the Federal Republic of Germany. Dresden, once dubbed the 'Florence on the Elbe', had always been considered a place of critical importance in terms of the arts and culture. In fact the vestiges of its baroque architecture remain as prominent as the memory of its almost total destruction in 1945, under the bombs of the allied forces. In the summer of 2005, informed by the press and by the intervention of Dresden-based environmentalists, the WH Center (acting as the executive body for the 1972 Convention) sent letters via the diplomatic channels to Germany and to the City of Dresden, asking for clarification about the bridge project. The City's management did not react immediately. Eventually, the WH Center had the project evaluated by independent experts from the University of Aachen, Germany. The evaluation turned negative for the bridge. Based on these results, the WH Committee communicated its concerns with the impact of the bridge and put the site on its so-called 'red list' during its yearly session of 2006.

In most cases, such a penalty is sufficient to make change happen. Since the creation of the WH program, the WH Committee never went as far as to delete a site for lack of compliance. Until the Dresden case, such a decision occurred only once; it was in Oman, due to oil exploitation in a protected area. Accordingly, in Dresden, the opponents to the bridge clearly believed in the taken for granted power of the famous institution. Yet in Dresden, things did not move; instead, the conflict caved in. The City, engaged as a whole into the project, defended the historic character of the bridge, which had been in preparation for no less than 100 years, and the wide approbation of the population in the local community. During the debates, options for compromises began to reach the press, suggestions for a full tunnel instead of a bridge were made, and the Federal Minister for Transport mentioned the possibility to co-finance a solution that would satisfy the WHC, without success in the City Council. Protests, for and against the bridge project increased and started mobilizing a diversity of actors, such as famous intellectuals (like Nobel-prize laureates Günter Grass and Günter Blobel), politicians (like the Federal Minister of Transport, Building and Urban Development Wolfgang Tiefensee), and architects (like Volkwin Marg of Gerkan, Marg und Partner). Scrutinized by local jurisdictions and local regulatory bodies, the City claimed its incapacity to step off a project that was all set up, legally binding, and ready to build. In 2007, the construction works started. Concrete was poured in the river banks, in spite of ongoing discussions. The conflict ended on June 25, 2009, with the final deletion of the

site from the WH preservation program, a first in Europe. Nonetheless, the WSB is to reach completion in 2012, after 20 years of debates.

Towards an Organizational Analysis of the Dresden Case

By now, it should have become clear that the "Dresden case" is not easy to grasp if taken in its totality. In fact, it fully deserves an in-depth study of its own. A great variety of disciplines, such as law, international affairs, architecture, environmental and cultural preservation, urban policy, structural engineering, and not least organization research, may find here a prolific ground for reflections.

From an organizational perspective, the Dresden case implies "a rejection of rational-actor models, an interest in institutions as independent variables, [and] a turn toward cognitive and cultural explanations" (DiMaggio and Powell 1991: 8). Those attributes make this case, at first, particularly relevant for the neo-institutional analysis of organizations, inspired by the sociology of organizations. Since the early 80s, institutional theory has been developing an alternative approach to the relations between organizations and their environments. This stream pays attention to the way by which institutions constrain and enable the scope of actions in the field to which organizations belong. Drawing heavily on Berger and Luckmann (1966) and the social-constructionist tradition, institutional analysis of organizations considers institutions (e.g. laws, norms of appropriate behavior, industrial recipes or practices) as ways to hinder uncertainty, ease coordination among actors, and increase the predictability of their actions. In this view, organizations tend to follow the rationale of "institutionalized beliefs, rules, and roles, symbolic elements capable of affecting organizational forms independent of resource flows and technical requirements" (Scott 1991: 165). Organizations do so in order to gain legitimacy in their field and hereby to optimize their access to the resources necessary for their survival (Meyer and Rowan 1977; Scott 1987; Baum and Oliver 1991; DiMaggio and Powell 1991). This process explains why organizations become increasingly similar. In this respect "bureaucratization and other forms of homogenization emerge, we argue, out of the structuration (Giddens, 1979) of organizational fields" (DiMaggio and Powell 1983: 147 – their citation). This process of structuration is to present four elements: "an increase in the extent of interaction among organizations in the field; the emergence of sharply defined inter-organizational

structures of domination and patterns of coalition; an increase in the information load with which organizations n a field (…); and the development of a mutual awareness among participants in a set of organizations that they are involved in a common enterprise" (1983: 148). To the authors, the influence of rationalization and bureaucratization of action has been redirected from market pressure to the State and professions. This process contributes to the definition of collective rationalities in fields (DiMaggio and Powell 1983) and communities (Marquis and Battilana 2009).

The situation in Dresden depicts an extreme case of colliding organizational compliance and resistance to a diversity of sources in institutional pressure. As a matter of fact, the conflict with the WH Convention of the UNESCO was nothing but the most prominent and last institutional level reached in a long process of contestation (Von Schorlemer 2009), opposing supporters and opponents to the bridge as "boundary-object".[3] For 15 years, the bridge as project has been evolving from an intern dispute to an international issue, involving various voices, from municipal employees to local social movements and representatives of the UNESCO-World Heritage Convention of 1972. During these same 15 years, the City, under the command of a critical mass of supporters, has been resisting this disruptive pressure, and managed to secure its effort. The project is now reaching completion, and yet remains loaded with polarized power. It is no exaggeration to say that it has become a symbolic matter in the city. This research thus asks the following questions and tackles them via three dedicated empirical chapters (IV, V, and VI):

How did the idea of a bridge at this location – here considered as a form of collective rationality – emerge?
How was this collective rationality instantiated in practice?
How does this process of instantiation account for the reluctance to think the project anew?

Institutional theory provides analytical models that help to explain organizational persistence in front of conflicting institutional pressure. These models

[3] Please note that I herewith use this word with a different understanding from Star and Griesemer (1989) or Sapsed and Salter (2004); instead I consider the bridge project as the pivotal point for my analysis of the City as organization. In this respect this project, as object, serves as a boundary to the data collection and analyses.

depart in two directions. One stream proposes a structural influence (e.g. the existence of different societal logics or historically defined frames of thinking, latitudes between competing institutional demands) as determinant to explain the strategies picked by the organizations (e.g. Marquis and Lounsbury 2007). The other stream focuses on organizational determinants and look at how organizations experience and respond to conflicting demands (Pache and Santos 2010). Those two streams, however, illustrate a classical short-coming of the institutional analysis of organizations: each "resembles a play that begins with the second act", once "the dust has settled" over the organizations (Powell, Packalen, and Whittington, forthcoming: 1). In other words, it does not tackle the emergence of collective rationalities and the role played by the agents in this process.

In this context, I propose to shift the attention towards arguments of path dependence theory, and to shed light on the micro foundations of the structuring process that took place in the City with respect to the context of the WSB project. Path dependence accounts for the development, endogenous to the organization or other systems, of increasing returns, positive feedback loops, or self-reinforcing mechanisms, that reduce the perceived scope of options and alternative developments over time. Such mechanisms concern themselves with: learning effects, adaptive expectations, or coordination effects (Sydow, Schreyögg and Koch 2009). In this view, the explanation for the case lies in its history and in what the organization did, institutionally, as well as technically. As David (1985) puts it: "the main point of the story will become plain enough: it is sometimes not possible to uncover the logic (or illogic) of the world around us except by understanding how it got that way". In other words, looking at organizational path dependence allows understanding how the play began and thus why it ended as it did.

Constructing a bridge is a long, heavy, and visible organizational effort that somehow resembles a project in slow-motion. The Dresden case thus allows us to unpack the *anatomy* of decision-making in path-dependent contexts, and to observe intern politics of decision- and consensus-findings, relations of domination, and of disruptive efforts. In other words, one same case offers us the emergence of a path, its instantiation in slow-motion, and attempts at breaking or disrupting the path. Therefore, for the sake of this analysis, I took the following stance:

- First of all, with respect to the *level of analysis*, I focused on the City (as focal-

unit) and its decision-structures, with relation to the WSB project.

- For matter of clarity, when I use the word "City", I mean the administrative organization of the City of Dresden as official representation of the citizens' interests (as depicted in figure 3).
- When referring to the municipality, i.e. the geographical territory, its regulations and its stakeholders, I use the word "Community".
- Also, it is important to note at this point that I *did not* explore this case as a story of project management, or of temporary organization (cf. Bakker 2010). Instead, the bridge project serves only as a boundary-object for the analysis.

As for the functioning of the City, the Mayor (elected by the citizens) acts as chairman of the City Council and manages the City Administration. The City Administration is divided into major domains of activities (finances, security, culture, urban development, or economic development). The City Council acts as elected representation of the citizens and votes the administration's objectives. It entails missions to the Mayor via passed motions. The Mayor can, in turn, veto these motions if legally applicable. Figure 3 illustrates these relations. A more complex representation including the many stakeholders to the City, with respect to the bridge project, is provided in the methodology section.

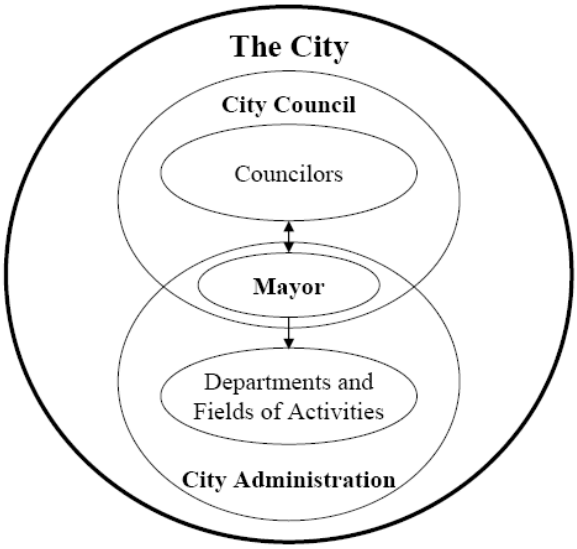


Figure 3 - The City and its Stakeholders

We will see that the City did not just build one more traverse. Instead, it instantiated a century-old bridging conception, that had been present in its archives and

plans for decades. Similar projects of traverse, at this location, were conducted and aborted in the XXth century. Citizens and members of the administration thus grew with the expectation that a bridge would be built someday at WS. Numerous historical events eventually channeled this effort, thus shaping a path of constricted efforts boiling underneath. The results further show how supporters of the bridge in the City structured the project by drawing on rules of bureaucracy and democracy to secure the instantiation of the path. This implied the creation of organizational stability along two self-reinforcing processes: knowledge accumulation via technical problem-solving and collective mobilization to institutionally secure the technical efforts delivered. This process of structuration, however, triggered unintended dynamics that worsen the situation. The fear to see the project abort one more time, the lack of trust in the opposition camp, and the heavy cost-overrun developed a persuasive power, far stronger than the urge to think the project anew.

In the remaining of this volume I discuss more in details the theoretical dimensions underlying this case study. In Chapter II I explain the limitation of a pure institutional approach and argue for the inclusion of path dependence theory. In Chapter III I depict the methodological implications of this theoretical angle and more especially the ideas of process philosophy and of historical analyses. Eventually I give details on the data collection and analytical steps. The following three chapters unfold the empirical analysis. Chapter IV tackles issues of path dependence by showing how past projects influenced the decision-making as the City was facing traffic problems. Chapter V opens the structuring process with more accuracy and illustrates how the supporters of the bridge project organized collective action in the City to make the project a municipal task in spite of the opponents. Chapter VI shows how the conflict escalated and why attempts at disrupting the path thus instantiated made everything even worst. In the last chapter I discuss the findings from the Dresden case and their implications for theory development in path dependence and neo-institutionalism.

Chapter II

—

Theoretical Preliminaries

In this chapter, I review the institutional literature and explain why path dependence studies of organizations could help us understanding the Dresden case. I eventually present the main differences between research on institutional determinants of organizational action and path dependence studies of organizations, and discuss ways to combine arguments of path dependence and of institutional analysis.

Institutional theories on organizations are not homogeneous and differ from one paradigm to the other. Holm (1995) reminds us of two ways of thinking about institutions. A rational perspective sees institutions as efficient constructs, in place to ease action and solve problems of interactions among actors. Prominent proponents of such a perspective are authors like Olson (1965) or Williamson (1975). A second perspective proposes to conceive of institutions as socially constructed frameworks of norms of behavior, values, and other taken for granted orientations about what is considered appropriate conduct, independent from concerns of efficiency. As stated in the introduction to this volume, I follow this latter theoretical lens for this study.

So called "sociological" approaches of institutions further differ from one sub-discipline to the other. The historical institutionalism of authors like Thelen (1999) does not equate the one developed in the organization studies, by DiMaggio and Powell (1983) or Scott (2008) for example. A discussion covering all those approaches is therefore not conceivable. Moreover, some institutional approaches have given more attention to path-dependent arguments than others; for example, historical institutionalism (Thelen 1999) or institutional approaches in political sciences (Mahoney 2000).

This work is rooted in management and organization studies. Hence, and without denigrating any other approaches, we will focus this discussion on the one branch that has received most of the academic attention in organizational theory in

recent decades: the so-called neo-institutional analysis of organizations, born from the seminal works of Meyer and Rowan (1977), Zucker (1977), and DiMaggio and Powell (1983).[4]

Institutional Analysis of Organizations – The Weight of Institutions

Institutional analyses have been present for decades in the academic debate on organizations. As a matter of fact, it has been there long enough to see its own intellectual evolution categorized as "old"-institutionalism, "new", and "neo". DiMaggio and Powell (1991) first discussed systematically the differences between old and new. An author like Philip Selznick is often named as exemplary for the older tradition. In this stream, so DiMaggio and Powell (1991), inertia was seen as the result of vested interests, due to the dichotomous goals and priorities of the members of the organization. The focus was thus set on the informal structures and ideas of co-optation, socialization, or commitment. The new tradition started in 1977, with the simultaneous publication of the work by Meyer and Rowan on myths of rationality and the article by Zucker on cultural persistence in organizations. With their work, the focus shifted towards formal structures and their symbolic role on organizations, embedded in fields of stakeholders and society (DiMaggio and Powell 1991: 13). Later, the "neo"-institutionalism sought to bring both traditions together. What follows builds on this latter tradition.

From New to Neo: The Premises

Back in the late 1970s and early 1980s, largely influenced by the work of Berger and Luckmann (1966), a set of papers renewed the attention paid to institutional influence on organizations. I mentioned the influence of Meyer and Rowan (1977) and of Zucker (1977). I need to add the role played by DiMaggio and Powell and their influential article (1983) on collective rationality in organizational fields.

In the same time period, a small set of analytical streams used to compete in the organization theory. One of them, the population ecologists, used to draw on biological

[4] In the remaining of this volume, I sometimes refer to "institutional theory" for sake of convenience. I mean herewith the neo-institutional analysis of organizations.

imagery. They were interested in answering the question "why are there so many kinds of organizations?" (Hannan and Freeman 1977: 936). Issues of variation, search for efficiency, and survival of the fittest were then crucial in analyses of organizations.

What was about to become the new-institutionalism took the counterpoint. Influenced by Weber's work on bureaucracy, its advocates considered ideas of efficiency and rationality as socially-constructed myths, in direct line with the capitalist tradition, the influence of market pressure, and the reigning bureaucratization of society, reinforced in their existence by the actors themselves. These authors started looking at how persisting beliefs, myths of rationalization and rules constrain choices in formal structures among organizations, with a trend toward globalized bureaucratization (e.g. ISO norms, IT, etc.). Issues of variation were replaced by isomorphism among organization, to answer the question "why there is such startling homogeneity of organizational forms and practices" (DiMaggio and Powell 1983: 148).

The early formulations of the institutional theory have become particularly influential. So Scott: "Institutional theory, at least in its newest guise, burst on the organizations scene" (2008: ix). Today, according to Greenwood and his colleagues, "institutional theory is perhaps the dominant approach to understanding organizations" (2008: 2). This argument is supported by Haveman and David (2008) who assert that submissions on institutional theory have been inundating the Organization and Management Theory Division at the annual meetings of the Academy of Management for years.

Institutions may be many things: an organization (like a university, a firm, or a hospital), public agencies with normative power (like a regulating directorate), or social conventions that structure the social game, like the shared acceptance of a handshake to greet people (for a review see Greenwood et al. 2008). *Institutions* are seen as taken for granted by the actors under scrutiny. In this respect, institutions remain generally unquestioned. This means that those institutions have attained a state of objectivity in the individuals' minds, necessary to make them part of the landscape and seemingly independent from human action (Berger and Luckmann 1966). More precisely, institutions represent formal or informal "patterns of activity through which humans conduct their material life in time and space, and symbolic systems through which they categorize that activity and infuse it with meaning" (Friedland and Alford 1991: 232). This means that while a regulating agency may be seen, in its existence, as an

institutionalized construct, what makes it interesting to this theoretical perspective is how an other organization will comply with the requirements of this entity and thus undergo a specific process of decision that must not be a technically rational one, but that will appear to be necessary to proceed further with its activity. This can be enforced by the means of a law (e.g. you need a construction permit from the local administration to build your house) or by mean of a cognitive, shared script of behavior (e.g. in some social circles it remains correct to ask a father for the hand of his daughter). What made the analysis particularly new and appealing to organization theory was that such "institutionalized beliefs, rules, and roles, symbolic elements [were] capable of affecting organizational forms independent of resource flows and technical requirements" (Scott 1991: 165). The suggestive effect of such institutionalized requirements on organizations is suspected to reduce the potential scope of options at hand. Since Pfeffer and Salancik (1978) at the latest, it had become clear how much organizations need specific resources to survive: businesses need sales; public schools need subsidies from state agencies, and so on. Within the framework of institutional theory, access to these resources is granted by stakeholder according to the degree of *legitimacy* manifested by the organization. Legitimacy is further defined by the institutions within which the organization evolves. In other words, a business will generate more sales if its functioning is considered appropriate by its customers. In theory, this could go as far as supporting the existence of processes and functions that are rationally outdated or irrelevant, but necessary for the organization to maintain its legitimacy and thereby secure funds.

Legitimacy, as a construct, is subject of "a plethora of definitions, measures, and theoretical propositions, not all of which are fully compatible with one another" (Deephouse and Suchman 2008: 50). The construct was put back to the fore by Meyer and Rowan (1977) in their formal model illustrating the relation between resources and legitimacy in organizational design. In their idea, the surviving of organizations was granted by a sane mix between technological efficiency and compliance to institutional myths about what is considered rational. According to Deephouse and Suchman (2008), the construct was often used without theoretical considerations, basically summarized as legitimacy or the absence of it, and observed empirically when an organization remained unquestioned in its existence or ways of functioning. Suchman defined the idea as follows: "legitimacy is a generalized perception or assumption that the actions

of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (1995: 574). Based on this broad statement, numerous studies eventually aimed at deepening the issue. Most notably, Deephouse (1996) tested the relation in the banking sector, showing that conformity to institutional rules increased legitimacy in the media. He concluded with a theory of strategic balance (1999), discussing the tension between competitive differentiation and isomorphic conformity.

While the debate on legitimacy is being pursued at the time of writing (e.g. with the process of theorization of legitimacy [Greenwood, Suddaby and Hinings 2002]; of the collective construction of legitimacy via texts, scripts and discourse [Barley and Tolbert 1997; Philips, Lawrence and Hardy 2004; Munir and Phillips 2005]), I suggest proceeding with the definition of Suchman, above. In his definition he stressed that a conduct, in its manifestation, is considered appropriate "within some socially constructed system of norms, values, beliefs, and definitions" (1995: 574). In institutional theory, this "socially constructed system" is operationalized via the idea of *organizational field*. So DiMaggio and Powell: "by organizational field, we mean those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products" (1983: 148). The analysis thus shifts from competing firms to "the totality of relevant actors" (1983: 148). What binds those actors together is the shared socially-constructed system of institutionalized expectations that structures the field they contribute to constitute. Relying on those institutions is the mean by which organizations reduce uncertainty and increase both the predictability and intelligibility of their actions to the whole field. Hence institutions do not only limit, but also enable choices, as long as actors actively refer to them in their practices (Barley and Tolbert 1997; see also Giddens 1984). To DiMaggio and Powell (1983) organizations enter a field when their interactions increase, for example due to the contribution to a common task, like the production a service by a business and the regulation of this offer by specific agencies. Such interactions, here simplified for the sake of clarity, gave birth to notions of isomorphism and unified answers to uncertain situations. Indeed when considering a whole field, like the U.S. museums (e.g. DiMaggio 1991), or the one of private service firms (e.g. Greenwood et al. 2002), one is struck by the similarity in organizational forms, discourses, or strategies. As Wooten

and Hoffman (2008) point out, early applications in research sought to oppose institutional from rational (understood as driven by market efficiency or technical rationality) determinants in field-wide diffusions of practices.

The idea of *field* became a popular device to make sense of empirical data that goes beyond the organization. At the end of the road, the idea that rationality may not be the sole determinant of organizational action became a runner. Most notably, DiMaggio and Powell's article (1983) emerged as a "ritual citation, affirming that, well, organizations are kind of wacky, and (despite the presence of 'collective rationality' in the paper's subtitle) people are never rational" (DiMaggio 1995: 395). Many empirical applications connected to this line of thinking and further deepened the research program. Fligstein (1985) concerned himself with the spread of the multidivisional form among large firms and looked for the causes of this diffusion process between 1919 and 1979. He found out that an organizational interpretation of what is going on in the environment was necessary to account for change, but that this interpretation must not rely on real problems only, i.e. "it will not necessarily directly reflect market forces or perfect rationality" (1985: 388). As he stated it, "DiMaggio and Powell's argument is more difficult to operationalize. The issue is how to capture a mimetic effect" (1985: 384). Fligstein thus created a variable where he could observe the percentage of firms, according to each industry code, that had adopted the multidivisional form. Diffusion, however, became a key variable to account for isomorphism. In a similar vein, Baron, Dobbin and Devereaux-Jennings (1986) studied the bureaucratization of employment in the U.S. industry. They found that interventions by the governments played a significant role in the process, and that it blurred the distinction between efficient (i.e. a market-based view) and bureaucratic control (i.e. a neo-Marxist view of hierarchy). More directly linked to resource access, Meyer, Scott and Strang (1987) found that the administrative components of American public school districts vary depending on the role played by local, state, and federal funding environments. Also Baum and Oliver (1992) found out that a strong institutional linkage was positively linked with survival advantages among child care service organizations in Toronto. Embracing the qualitative methodological turn, Ritti and Silver (1986) followed the genesis of a bureau of consumer services in Pennsylvania and showed how the organization manipulated symbols and built a myth around its existence to assure its growth and survival and secure a taken-for-granted status.

In the 90's, contesting voices made their way back into the academic journals. Andrew Abbott, in an enthusiast review (1991a) of the new-testament-like volume on new institutionalism by Powell and DiMaggio (1991), wondered whether calling itself the 'new' was "part of overthrowing the older generation" (Abbott 1991a: 755) and pointed out the relevance of the Chicago school as a neglected influence. To him, the Chicago school was taking one shortcoming of the new institutionalism into account: change and processes. In a similar vein, Philip Selznick (1996) took a clear position and expressed concerns about such a sharp differentiation. He put the newness of it into perspective and claimed that it had more something of "a failure to integrate the old and the new by taking full account of theoretical and empirical continuities" (1996: 275). To Selznick, wordings like new and old "encourage an undesirable preoccupation with polarities and polemics" (1996: 276) and prevent from studying actual implementations of social policies and their challenges. Also Arthur Stinchcombe (1997) pointed out that this theoretical program would tend to underestimate the willingness of people to accept institutions for what they are. Reviewing the insights delivered by the old institutionalism, he remarked that good-sense and reason were as solid as the formalism of rules for people to judge situations. So Stinchcombe: "the trouble with the new institutionalism is that it does not have the guts of institutions in it. The guts of institutions is that somebody somewhere really cares to hold an organization to the standards and is often paid to do that. (…) And sometimes that somebody, or his or her commitment, is lacking, in which case the center cannot hold, and mere anarchy is loosed upon the world" (1997: 17-18).

Hirsch and Lounsbury (1997) answered this dichotomy by pleading for reconciliation. They noted a departure from what they call "the contextual richness of action" (1997: 406) in favor of more structuralist perspectives. They recalled the work of the Chicago School on fieldwork and interactions and the work of Giddens (1984) that stressed how individuals and organizations actually enact their institutional environments by connecting their action to specific constituents. To this, they opposed the work by structuralist scholars, like the studies in the tradition of organizational population ecology. Institutional theory, according to Hirsch and Lounsbury, offers a frame where both perspectives may find their marks, dividing, however, by a family quarrel: the old versus the new. Reconciling the two would provide institutional analysis with more accurate understanding of actions and structure. Puzzled by issues

of radical organizational change made necessary by growingly complex environment, Greenwood and Hinings (1996) recognized that the new-institutionalism (by its focus on legitimacy, homogeneity and embeddedness in fields) was "weak in analyzing the *internal dynamics* of organizational change. As a consequence, the theory is silent on why some organizations adopt radical change whereas others do not, despite experiencing the same institutional pressures" (1996: 1023 – their emphasis). Their solution was an understanding of *neo-institutionalism* as the coming together of the *old* and the *new*. The authors answered their initial question by implementing the study of intra-organizational dynamics, key to the old institutionalism, and by opening their analysis to issues of power, commitments and interests within the organization.

Since then, the analytical focus of this stream of research has moved from rather stable macro-structures towards structural change, under the influence of actors' agency. As Barley and Tolbert put it, institutions indeed are constraints "that are open to modifications over time" (1997: 94). This actor turn was born from developments around issues of isomorphism, legitimacy, and change, with an agentic perspective (Greenwood et al. 2008). This consolidation has been stimulated theoretically. DiMaggio (1988) introduced the idea of actors working for radical change: the so-called institutional entrepreneurs. Oliver (1991) linked the institutional perspective to strategic management and more especially to the resource-based view, to account for variations among organizational response to institutional demands, ranging from compliance to riot. Powell (1991) asked for deeper analyses of institutional compliance and of institutional evolution and to account for variations as a driver of change, somehow close to population ecology, and on path-dependent dynamics to explain the rise and magnificence of specific institutional arrangements over other alternatives. More recently, Lawrence and Suddaby (2006) took a decidedly micro-sociological stance to tackle anew the idea of work and practice, and conceived of different strategies to create, maintain and disrupt institutions. Lastly, Powell and Colyvas (2008) summarized the trend by a call for micro-foundations in institutional theory, urging its proponents to look at issues of sense making or ethnomethodology.

Countless empirical studies strengthened this line. Related research looked at dynamics of institutional emergence and change in granting a broader account to the interplay of actions, meanings, and actors, where change is regarded as a process instead of a finished state (Dacin, Goodstein and Scott 2002). Covaleski and Dirsmith

(1988), for example, observed how and why a university adopted specific budgetary practices, judged socially acceptable, and how the actors contributed to modify them in a period of decline. Hoffman (1999) most notably contributed to this trend by showing how the organizational field evolves and forms an arena around central issues. Elsbach and Sutton (1992) introduced impression management theory into the debate and showed how decoupling legitimate structures from illegitimate activities facilitated the work of spokespersons. The two social movement organizations they had observed made use of the attention received due to their illegitimate actions to apply impression management techniques and thus broadened their sources of institutional support as a counter strategy. In a similar fashion, Hargadon and Douglas (2001) made use of organizational history as method and showed how Edison solved institutional rigidity by imitating old understandings of what lightning technology is about. The design of his electric bulb thus resembled the older gas lamps in design as much as in performance. Battilana (2006) tackled the paradox of embedded agency, i.e. how can actors produce change in a context in which they have been socialized, and found support in the role played by individual's social position to explain entrepreneurship in spite of embeddedness. Greenwood and Suddaby (2006) asked the same question and observed the introduction of the multidisciplinary practice as a new organizational form among professional business services firms. They demonstrated how centrality in field, or the lack of it, was linked with exposure to dissonances in institutional voices and opportunities for change.

Persistence of Organizational Conduct in Conflicting Institutional Contexts

Riding this last trend, the idea of institutional pluralism received significant attention in the last years, not least thanks to the work of Thornton and Ocasio on the idea of competing 'logics' (1999, 2009). Friedland and Alford (1991), in what has become a classical piece of institutional analysis, first introduced the concept of multiple societal logics in organizational studies, as a mediating concept to answer multilevel concerns. To them, various logics infuse our society and "each of the most important institutional orders of contemporary Western societies has a central logic (...) available to organizations and individuals to elaborate" (1991: 248). Those central institutions correspond to the capitalist market (logic of accumulation and

commodification), family (logic of community and unconditional loyalty to its members), bureaucratic state (logic of rationalization and regulation), and democracy (logic of participation and popular control). Hence individuals, organizations, and society as a whole, are constrained by institutions embedded within higher-order societal logics. This triggers great potential for conflicts and contradictions.

As we just saw, such conflicts mostly serve research on change. Typical for such research, Reay and Hinings (2005) reported on the role of competing logics to explain radical change in the field of Canadian health care. Similarly, Hensmans (2003) looked at changes in the music distribution industry and drew on the idea of ideology to account for change in this field, conceiving metaphorically of organizations as social movements to detail the variety of strategic answers. However, as Thornton and Ocasio put it: "competing logics are not, by themselves, an explanation of change in institutional logics but an antecedent or a consequence" (1999: 118).

An organization is often penetrated from demands of different sort. Public administrations are typical cases of organizations that are "the embodiment or incarnation of multiple logics" (Kraatz and Block 2008: 244). For example, Townley (2002) documented the introduction of business planning and performance measures and reports in cultural facilities and heritage sites in Alberta, Canada. The responsible division managers experienced collisions with the operative core, i.e. museum professionals and conservators in the province, who compared such attempts to heresy. Similarly, medical practitioners, nurses, and MBAs often stick to different, taken for granted, expectations of how a hospital should be run (see e.g. Reay and Hinings 2005). However, while most institutional scholars recognize or postulate the constraints of institutional pluralism, research on organizational response to conflicting institutional demands as such is scarce (Pache and Santos 2010). Oliver (1991) was one of the first authors to systemize the scope of options for an organization to strategically answer such situations. In her model, conflicts and collisions are not the only result of past institutionalization. Inclusive compromises were already crucial in Selznick's work (1949). Later, ideas of decoupling became part of institutional arguments (Meyer and Rowan 1977). More diversified, Oliver developed five strategies and their related tactics: acquiesce, compromise, avoid, defy, and manipulate (1991: 152). In this respect, strategies of compromise, avoidance and, more especially, of defiance and manipulation, represent active resistance to permit persistence in organizational conduct

in spite of a fragmented and contradictory institutional order. In her model, these strategies are dependent on the fragmentation of the field. This lacks of precision and represents one potential determinant among many other possibilities (see Pache and Santos 2010 for a similar critique). Kraatz and Block (2008) proposed that organizations may answer dichotomous, pluralist demands via four strategies: *engendering conflict and resistance to get rid of the sources of pluralism*; *compartmentalizing organizations and answer independently*; *reigning over the tension and manage the sources in one's interest*; and finally: *institutionalizing the organization in its own right*. As usual, the unknown lays less on what organizations may do, but more on why they do so. Here also, Kraatz and Block (2008) remain discrete.

Two main answers emerged to explain the reactions of those organizations persisting in their conduct (or, in some cases, even engaged in activities of resistance) as an answer to the competing institutional demands it is confronted with. The first one sees the sources of this persisting conduct in the logic or *structural* frame the organization is embedded in. The second sees the sources of this conduct in the *organization* as such.

Structural explanations for organizational conduct persistence in cases of conflicting institutional demands are typical for the institutional tradition and look for antecedents in the frame within which the organization has emerged. Confronted by pluralism, the organizations tend to rely on the known. Purdy and Gray (2009) researched the field of state offices for dispute resolution and reported on the institutionalization of *multiple* practices issued from conflicting logics and their coexistence instead of the emergence of one single dominant organizational form. Their results support the idea that different organizational forms, drawing on conflicting logics, may co-exist in a same field. Earlier, Fiss and Zajac (2004) had illustrated the role of German historical acts, defining how and why a business is to be run, to explain variations in the implementation of shareholder value orientation in large contemporary German companies. Lounsbury (2007) delivered similar insights in his study of contracting to professional money management among mutual funds in Boston and New York, respectively influenced by a trustee-, and a growth- (or performance-based) logic. To the author, the co-existence of a more conservative and a more upstart strategy led to a conflict over the very being of the industry. Marquis and Lounsbury (2007), in line with this geographical touch, showed how competing institutional frames not only

support but also facilitated resistance to institutional change in the field of U.S. community banking. These examples, with their focus on fields and populations of organizations, fail at catching the determinants at the interplay of organizational action and institutional frames and still conceive of actors as cultural "dopes" (as coined by Powell and Colyvas, 2008).

Research on *organizational determinants* of persistence in organizational conducts in spite of conflicting institutional pressure tries to answer this situation and systematizes the conditions under which institutional dichotomy may arise and why organizations answer the way they do. As we already saw, Oliver (1991) depicted potential answers, but was relying on the field's conditions to determine whether an organization would decide to ignore competitive institutional demands, riot against them, or compromise. Most empirical work was performed in a similar fashion: while the repertoire of potential organizational reactions to institutional conflicts increasingly grew, the reasons for choosing one response over the other remained neglected. Fox-Wolfgramm, Boal and Hunt (1998), for instance, argued that resistance was driven by a mismatch of current and envisioned organizational identity upon a change in the structural landscape. In their study, however, they focused on the change/resistance strategies. Similarly, Alexander (1996) researched pictures at art exhibitions, starting with the postulate that managers are actors and not mere reactors. She found out that, while the funding environment played a role on the design of exhibitions, museum managers may well resist change and work to keep their autonomy. In the depiction of her variables, she ascribes this reaction to their educational background and preferences. Confronted with this blur, Pache and Santos (2010) recently addressed the question more directly. They built a more systematic account of organizational responses based on the nature of the conflicting demands (i.e. on goals or on means) and on the intern organizational representation of the conflicting demands. Their work relies thus heavily on asymmetries in power structures. This solution finds empirical echo. Fiss and Zajac (2004) had mentioned already the role played by the power and interests of actors making decisions in the German companies while observing their adoption of shareholder value orientation. They noted that those organizations (as much as fields) are arenas of politics, "in which different actors are engaged in contests over the goals and rules of governance of the corporation" (Fiss and Zajac 2004: 527). Kim, Shin, Oh and Jeong (2007) did similar work in focusing on organizational political dynamics to

explain the decline and emergence of practices in the presidential selection systems in Korean universities. This line of thinking, however, remains silent on why some actors would use their power and not others, and on how these preferences and interests were initially constituted. Indeed "neo-institutional accounts often do an excellent job of situating the organization within its broader cultural context, but they typically extract it from its unique history of actions and transactions in so doing" (Kraatz and Block 2008: 248). In spite of a deep interest in processes (like the one of institutionalization or the one of organizational adoption of institutionalized requirements), temporal perspectives are often neglected (Lawrence, Winn and Jennings 2001).

As a matter of fact, the Dresden case teaches us two things: (1) part of the persistence of the organizational conduct in front of diversified institutional pressures seems to be bound to the history of the project. (2) A second part of this organizational persistence seems to be bound to what the organization did with this shared memory and how the organization wrapped its action in structures. Therefore, for the sake of the Dresden case, I propose to approach phenomenon of persistence in organizational conduct in contexts of conflicting institutional demands as a problem rooted in the organization's *history* of structured and structuring actions. Path dependence theory provides models and analytical tools to document the process of constitution of rigidities and preferences in organizations. Linking path dependence theory to the study of organizational resistance to institutional pressures could provide an answer explaining why actors are unable of leaving one option over another by demonstrating how local interests and priorities are built along a certain process of iterations at the interplay of action and institutional anchoring. The next section will introduce the theory of organizational path dependence.

Path Dependence Studies of Organizations – The Weight of History

The catch-phrase 'history matters' often accompanies path dependence concerns. It provides a quick impression of the essence of the theory. Yet the concept of path dependence, initially formulated as a critique of the neo-classical model in economics, goes well beyond that.

Early Formulations

Early works on path dependence questioned the idea that markets would shift towards any technology or practice that would offer the most efficient solutions. Paul David (1985), in his famous article on the QWERTY keyboard layout, settled the very idea of *path dependence*. The definition he proposed is still used as formulated: a path-dependent sequence is one "of which important influences upon the eventual outcome can be exerted by temporally remote events" (1985: 332), thus including chance, in extreme cases. Such *stochastic developments* (i.e. random and not deterministic) "do not converge automatically to a fixed-point distribution of outcomes" (1985: 332): they are *non-ergodic* (i.e. unpredictable in outcome). David's main argument was to show how history was necessary for economics to understand specific processes in which market forces and mystifications of the invisible hand would prove insufficient to account for the end result. To illustrate his point, he related to a piece of historical narrative on QWERTY. The keyboard layout is inherited from typewriters. Letters used with greater frequencies (e.g. E is more often used than W) were detached from each other to avoid gripping the machine (the typebars would jam while typing too quickly, resulting in a succession of similar characters on the same tipping place). This layout was eventually taken over and implemented on today's keyboards. David thus claimed that society would be, now, better off using other layouts, most notably the Dvorak Simplified Keyboard (DSK). The DSK was to provide more velocity for trained tippers and was adapted to computing machines, freed from the gripping problem of the typewriters. Yet the DSK was never diffused. David wondered why improvements on the QWERTY layouts were never accepted. To account for this, he proposed three mechanisms (he calls them "features"): technical interrelatedness between hard- and software enjoining actors to stick to the dominant and best networked alternative; systemic economies of scale, increasing as the standard diffuse and settle over others; and the quasi-irreversibility of investments, supporting the occurrence of *lock-in* situations.

In his work, David already quotes what was about to become the other attribute of path-dependent sequences: the occurrence of *increasing returns* proposed by Brian Arthur. Similar to David, Arthur (1989) explored what he called "the dynamics of allocation under increasing returns in a context where increasing returns arise naturally:

agents choosing between technologies competing for adoption" (1989: 116). While David worked as an economic historian, thus drawing on a narrative structured along economic mechanisms, Arthur decidedly formalized the approach in mathematical models. The idea of multiple equilibriums under increasing returns was not new. But, so Arthur claims, static approaches cannot do more than stating them. He proposed a dynamic approach instead. He modeled the idea of temporally remote event as "'historical small events' (…) that are outside the ex-ante knowledge of the observer" (1989: 118). Such historical events, linked to the idea of 'chance' (i.e. random) in economic analysis, could become the trigger for a sequence of increasing returns, i.e. "the more they [i.e. complex technologies] are adopted, the more experience is gained with them, and the more they are improved" (1989: 116). In the light of this, Arthur compared the occurrence of three cases: constant returns, diminishing returns, and increasing returns in a simulation of agents choosing between A and B technologies. In the first two cases, history is just a carrier; there is only one outcome possible. Under increasing returns, however, history triggers sequences, the outcomes of which are magnified by the occurrence of increasing returns that make the rising star increasingly attractive. Supported by these dynamics, this sequence must not necessarily be the most efficient one. To Arthur, *laissez-faire* strategies do not guarantee the emergence of the best option.

The two papers have become classical pieces. The idea that specific events and decisions made in the past could reduce dramatically the span of options independently from criteria of efficiency made its way and the idea received severe criticisms from neo-classical economists. Liebowitz and Margolis (1995), in particular, define three types of path dependence. *First degree path dependence* implies the mere idea that what was done earlier is influencing the scope of options today. The physical world is full of such examples: factories, buried lines, etc. *Second degree path dependence* is probably the most frequent manifestation of path dependence. This implies that an option considered efficient at T0 suffers from new information provided at T1, disclosing the superiority of another option. Such a situation is not a market failure, since the information was not available at T0. This is, according to these critics, the case of the QWERTY keyboard. It allows, however, for puzzling phenomena of collective inertia, in the case of what the authors call "(naïve) regrets" (1995: 211). Last but not least, *third degree path dependence* tackles the strongest, and rarest, case of

path dependence and inefficient outcome: when a decision at T0 is taken, with the knowledge that the other option would have provided greater total social benefits.

This discussion (especially the one on third degree path dependence) triggered repetitive debates among economists that are beyond the scope of this volume (for a summary see Margolis 2009). What remains of interest to us is that the argument of path dependence (mostly of the first and second degrees) has diffused across the broader social sciences, settling the idea that, generally speaking, (1) there may indeed be paths out there; (2) paths are initiated by temporally remote events; (3) paths form a trajectory magnified by mechanisms (originally called increasing returns; later also self-reinforcements or positive feedbacks) that are enjoining the actors to replicate past decisions; (4) such sequences may eventually end in a lock-in situation, where the sum of the actors concerned is bound to a path, independently from potentially better alternatives.

Path-dependent developments offer stability to elaborate on particular actions, thus providing agents with increasing returns, self-reinforcement, or positive feedbacks in the short run. These three features are not equal in conceptual content and Page (2006) best discussed the differences in terms of mathematical logic and of implications (more on that later). Important for the moment is that the stability thus produced, may, however, become a great source of rigidity in case of changing environmental circumstances. Such applications of path analysis concerned themselves with the spread of specific technologies, as they are accepted as main standard by users (Arthur 1994), but also with the rise of given locations for particular industry clusters (Barnes, Gartland and Stack 2004; Krugman 1991; Powell, et al. forthcoming), the establishment of societal conventions and norms (David 1994; North 1990), the transformation of economic systems (North 1990; Zukowski 2004), analysis of political systems (Pierson 2000), or business models, patterns of organizational decisions, and strategic systems in the media industries (Koch 2008, 2011).

Organizations and Path Dependence

Research on path dependence in and among organizations (as compared to markets or societies) has concerned itself with a variety of issues, such as organizational and strategic inertia or the imprinting of specific organizational structures or practices

over time. In the strategic management literature, and focusing thus on the organizational level, Leonard-Barton (1992) was one of the first authors to tackle the paradox between core capabilities of the firm (i.e. the [set of] capabilities that provide a competitive advantage to the firm) and the rigidities that such a specialization can develop. To her, such capabilities find their source in a "unique heritage, which is not easily imitated by would-be competitors" (1992: 114). This situation, however, can contribute to rigidities when the firm needs to answer the gap between its core capabilities and sudden shifts in its environment. The arguments by Leonard-Barton (1992) were eventually renewed in the seminal article by Teece, Pisano and Shuen (1997) on dynamic capabilities. Schreyögg and Kliesch-Eberl (2007) connected to this discussion, and, using the notion of path dependence more explicitly, wondered how dynamic can capabilities actually be. Drawing directly from the notion of path dependence, Karim and Mitchell (2000) discussed the idea that retaining, accumulating and deepening an existing resource during firms acquisitions may lead to path dependence. Still on organizational forms, Schreyögg and Sydow (2010a) discussed, critically, the popular idea of fluid organizations and shed light on the contrasting idea that stability is much needed for organizational processes to bloom, drawing on notions of organizational identity, path dependence, and recursive practices.

Looking at a higher level of analysis, Carney and Gedajlovic (2002) documented the existence of family business groups in the ASEAN region and the co-evolution of this form of business and of the surrounding institutional environment. At this level of analysis, the interest is less in the mechanisms internal to the organizations, but more in the observation of a path shared by a field or a community and the role played by organizations in this emergent process. In such cases, as much as in organizational or market-based accounts, "rather than working efficiently and instantaneously to produce optimal alignment, history matters to final outcomes in the sense that future evolution is constrained or enabled by past developments" (Farjoun 2002: 851). Research in this stream is conceiving of paths with a strong emphasis on their on-going structuration (Giddens 1984). For example, Djelic and Quack (2007) took the perspective of evolution and change in societal paths and studied what they call the 'rules of the games' (see also North 1990) in the cases of German product and financial markets as competition regimes were transferred from the US to Germany, and in the establishment of transnational rules and its impact on two agencies, the International Accounting

Standards Board and the International Competition Network. In their view, paths are moving targets with numerous overlapping points, thus open to change and evolutions. Scholars of path dependence theory active in this stream are not afraid to conceive of the process constitutive of path dependence as one particular type of 'institutionalization' (e.g. Beyer 2010). Drawing on neo-institutional elements, Thornton, Jones and Kury, proposed that the "accumulation of events can result in a path-dependent process in which shifts in the symbolic interpretation of events are locked-in in place by simultaneous shifts in resources" (2005, p. 130). To the authors, "[s]uch sequencing produces more events that reinforce or erode the dominance of the incumbent logic" (2005, p. 130). In a similar fashion, Holm enjoins us to "allow for the possibility of positive feedback and path dependence. A (seemingly) insignificant event can set off chain reactions and generate cumulative effects" (1995, p. 401). But if those prominent examples cite path dependence theory, they still come closer to the classical idea of the unanticipated consequences of purposive actions (Merton 1936) and the more recent insight into the importance of sequences of events (Mahoney 2000). Such attempts suggest the potential for more path dependence theory but do not really implement it in a tangible way (Djelic and Quack 2007) into their analyses (see, however, for notable examples: Colyvas and Powell 2006; Scott 2008).

A recurrent criticism among scholars of organization theory claims that path dependence as a theoretical construct is often used somewhat loosely and with little respect for the initial theoretical formulations. As a matter of fact the word *path* carries a strong metaphorical impact. Popular expressions such as "*at the end of the road"* or "*to be on the path to*" are prominent examples of such usage. In other words, we see easily the drawback coming: path dependence tends to become a buzz-word, more often evoked for rhetorical purposes than analytical enrichment. Sydow et al. (2009) were among the first authors of a now growing movement to ask for more conceptual rigor in research on *organizational* paths. In their view, paths are created internally and replicated along the organization's history of decisions and actions. Eventually, the decision pattern roots in the surrounding structures, making any potential process of change even less attractive to trigger. They proposed a model, in which the constitution of organizational path dependence can be paced along three phases with distinct dynamics, regimes, and implications: (1) a pre-formation phase in which a temporally remote event triggers a chain of causality, (2) a formation phase in which at least one

self-reinforcing mechanism profiles the sequence and thus narrows the span of options in a funnel-like way, and (3) a lock-in phase in which the dominant pattern obtains a quasi-deterministic nature. The particular interest of their model is that it can be applied on both the organizational level (how a path emerges in an organization) and the aggregated level (i.e. how a path emerges among numerous organizations).

(1) *Pre-formation phase*: A path-dependent process starts with a phase of relative high margin of action and possibilities, slightly imprinted by past developments and institutional landscapes. This is the occurrence of a set of "small" events in the records that, mostly un-purposefully, becomes the trigger for the course of action under scrutiny.

(2) *Path-formation phase*: the small events tend to trigger a set of preferences and provoke the rise of mechanisms of increasing returns, positive feedbacks, and/or self-reinforcement (Page 2006) that iteratively enjoin the actors to stick to the path of actions thus constituted. Such mechanisms are of self-reinforcing nature. For analytical ends, (2009) and his colleagues identify the following: *learning effects* (increasing returns on learning, e.g. knowledge, improvement of skills, unit-costs decrease), *coordination effects* (the benefits and suggestive power of rule-guided behaviors), *adaptive expectations* (the more actors are expected to favor one solution, the more favorable the solution becomes), and *complementarities effects* (e.g. between units or practices, via economies of scope). In any case, their occurrence and self-reinforcing nature enjoin the actors to repeat their past actions or to pursue past developments, thus maintaining and embedding their path overtime.[5] Those mechanisms go further than asking "why/how one thing leads to the other" (Anderson et al. 2006). Instead this analysis shows how the execution of a specific mechanism further leads to the repetition of this same mechanism via some practices related to it. In so doing they appropriately answer the call for mechanisms-based research related to situations that are puzzling (Weber 2006).

(3) *Lock-in phase*: Over time the organization reaches a seemingly lock-in state that circumvents any deviation from the course of action, be it optimal or not; the

[5] With this framework path dependence should be sharply differentiated from a similar process constitutive of inertia in organizations: escalating commitment (as defined by Staw, 1981; Brockner 1992). In Staw's approach, organizations and decision-makers are confronted with negative results right at the beginning. This is the commitment of the organization-maker to the initial decision that makes it difficult for her/him to reverse the chosen course of action. In path dependence, in return, the course of action is fed with subsequent rounds of positive feedbacks, increasing returns, and self-reinforcement. This is this successful past experience that makes a change so difficult

process has become path-dependent. Actors locked-in are trapped in the mechanisms of increasing returns, positive feedbacks, or self-reinforcement they experienced while walking down the path. The process as a whole, and its memory, becomes the rationale to resist change when adaptation is needed and overrun rational cost/use comparisons, focusing more on the growing perceived switching costs and on preferences. In an organizational lock-in, action is bound to the path thus formed. However, closer to what Liebowitz and Margolis refer to as second degree path dependence, deviant behavior remains possible, not least due to the omnipresent dialectic of control, in which "the less powerful manage resources in such a way as to exert control over the more powerful" (Giddens 1984: 374).

This line of thought is shared by Vergne and Durand (2010). The two authors develop a narrow definition of path dependence and take a Popperian turn, claiming that (first degree) path dependence can only be verified or falsified via simulations, counter-factual modeling, or experimental studies. They build the process of path dependence constitution as the result of (1) contingency (or chance) in the first place, i.e. that the temporally remote events are not determined by a set of initial conditions, and of (2) self-reinforcement in the form of increasing returns (e.g. to learning) or positive network effects. Vergne and Durand go one step further and propose that this analysis must incorporate the idea that a mechanism is also at play in such sequences to diminish the attractiveness of other options (2010: 743).

Taken together, these two pieces constitute what one could refer to as the 'hard version' of organizational path dependence. This position is discussed by adherents of the 'soft version'. In this vein (Garud, Kumaraswamy and Karnoe 2010; Garud and Karnoe 2001), paths are seen as structures in the sense of Giddens (1984), i.e. as embedding contexts. Self-reinforcing mechanisms may thus be manipulated by actors and lock-in situations represent mere stabilizations in the ongoing process of structuration (Garud et al. 2010: 769). In this line of thought, the reconfiguration of paths into newly created ones is made via the use of narratives to connect with identity, prior achievements and problems, and to mobilize the past (in the sense of Weick, 1979) to enact organizational processes. The authors argue that actors combine and recombine events into narratives to make sense of the present situation and mobilize the past to shape the future otherwise (Bartel and Garud 2009).

There are, however, numerous work based on narratives that demonstrate the

contrary. Geiger and Antonacopoulou (2009) reported how narratives contribute to the constitution of blind spots and inertia in organizations. In their analysis, one success story dominated other alternative narratives and remained present in spite of crisis. They document how the narrative supported itself and triggered the emergence of inertia by jamming attempts by the organization to question itself. In a similar vein, Boyce (1995) had already showed how the telling of two specific stories in a non-profit organization allowed members to express the essence of the organization, and to share a common point of focus and unity. Narratives indeed can develop a strong suggestive power for people attending their telling. Bower and Morrow (1990) documented, via a review of controlled experiences, how readers of stories actually develop mental models of characters, sequences, places, and situations, to infer causal explanations between actions taken and resulting goals. To the authors, this skill represents one of the basics in language comprehension: "We build mental models that represent significant aspects of our physical and social world, and we manipulate elements of those models when we think, plan, and try to explain events of that world" (1990: 48). Ewick and Silbey (1995) took a similar path and contoured a sociology of narrative, in which hegemonic tales take the lead over subversive accounts of events that challenge taken-for-granted assumptions (see also Mordhorst, 2008). Brown and Jones (1998) did a similar work studying a failed information system project. They found out that various narratives had emerged, melting into two main lines of thinking: inevitability (i.e. the occurrence of unpredictable events) and conspiracy (i.e. the work by specific groups and actors), leaving the organization with the feeling that its project was doomed to failure. In fact, such stories are more likely to emerge when situations get out of control, thus helping members of the organizations and the organization's audience to stress the organizational capacity to control and overview the situations, even when they are tricky (Brown 2003). Discussions on the gathering or disruptive power of narratives get us back to the discussions on embedded agency. Hence, while I welcome the idea of narratives and rhetorical strategies as ways to reshape trajectories of innovations, logic still wants us to recognize that, considering a majority of actors locked-in by increasing returns and mechanisms that are self-reinforcing, these actors would rather tell a story that reinforce the path they are bound to instead of plotting against it.

Institutional and Path Dependence Analyses: Way(s) of Inclusion

We have now seen the two main theoretical elements that underlie this work. First of all, we saw that *institutional theory lacks of explanatory power to account for the constitution of preferences and priorities as drivers of organizational persistence in front of conflicting institutional demands*. I suggested approaching this issue as *a problem of organizational path dependence* and to look at the organization's history of actions and interactions. We eventually saw the implications, lines of thoughts, and polemics currently active in this second theory. This raises now a set of questions: How can we include both theories in an analytical framework? In this respect, what do both theories share, and what differences do they feature? In other words: How can institutional analysis of organizations and organizational path dependence theory learn from each other and help us to unpack the Dresden case?

Is Path Dependence not Institutionalization?

Institutional analyses of organizations tend to conceive of path dependence as a driver of inertial forces in studies of institutional stability and change. Despite Powell's (1991) early claims to make sound use of the theoretical potential of path dependence, this notion is too often used in a metaphorical way. For example, in a study of Sun Microsystems and Java, Garud, Jain and Kumaraswamy commented issues of compliance to institutions and claimed that "conformity to institutionalized rules may generate path dependence leading to specific ways of thinking and doing" (2002: 196). While these authors quoted the idea of path dependence (and its key authors), a direct empirical link was not provided in the remaining of their case study. Carney and Gedajlovic (2002) took a similar path in their report of the co-evolution of family business groups and their institutional environment in Southeast Asia. The authors conceived of path dependence as a mere effect of past development on the difficulties currently experienced by the firms they observed. The source for this inertia was not determined. Exemplary for such metaphorical use of path-related arguments is the study by Modell, Jacobs and Wiesel (2007) on the development of new public management practices in Swedish public administrations (such as the Tax Agency). They invoked the idea of path dependencies as related to historical and institutional

drivers constraining and mediating diffusion. Such degrees of inertia, resulting from institutionalized constellations of practices and arrangements, can be confused easily with forms of structural inertia inherited from the past (Hannan and Freeman 1984; Hannan, Plos and Carroll 2004) or with imprinting issues, where traces of past institutional configurations persist in the formal functioning of current organizations (Johnson 2007; Stinchcombe 1965).

Other authors, however, have shown more precision in their usage of path dependence with respect to institutional theory. Holm (1995), for example, went one step further in his study of institutionalized organizational form among Norwegian fisheries. He proposed to "allow for the possibility of positive feedback and path dependence" (1995: 401). In his view, a seemingly isolated event, like the new regulation of certain practices, could generate imbalances that trigger exogenous change, eventually stabilized by positive feedback loops in reproduction of power structures and increased interconnectedness and consistency. Also Farjoun (2002) built on path dependence to account for the gain in strength of one institution over the other. To him, this is due to persistent effects of initial conditions, co-development of conflicting forces, and the interaction of mutual adaptation. He observed such patterns in a study of the pricing structures in the on-line database industry, where self-reinforcing mechanisms in network interdependence, fine tuning and elaboration of royalties constrained further innovations and their adoptions.

A potential for inclusion exists between those two theories. More generally, "current research on organizations could benefit greatly if researchers were to pay closer attention to specifying the points of intersection of different theoretical perspectives and to combining these perspectives to provide more complete explanations" (Tolbert 1985: 12). Gartland (2005) and Scott (2008) see a difference in paradigm when comparing path dependence research and institutional analysis of organizations (see also Hirsch and Gillespie 2001). This difference, according to Powell (1991), provides with different tools and analytical frames, to consider outcomes that "must be explained as the product of previous choices that were shaped by institutional conventions and capabilities" (1991: 189). Indeed, for Powell, "path-dependent arguments hold considerable promise for the explanation of institutional persistence" (1991: 194). Social patterns may offer characteristics that are not dissimilar to technological standards: stability, lack of adaptation while facing changes in the

environment, and being "magnified by positive feedback" (Powell 1991: 193).

As a matter of fact, both theories often document cases "in which actors do not see or are prevented from pursuing their interests" (Holm 1995: 398). I discussed elsewhere the ways to differentiate both theories in more details (Berthod and Sydow 2010). In this paper, my co-author and I stated that both theories tend to imply traces of historicity, of potential inefficiency and actual resistance to change, and are fed by repetition and reinforcing effects.[6] Against this background, we attempted to dissolve a potential confusion between the two concepts. To do so, we derived five analytical dimensions, common to institutionalizing and path-dependent processes. According to our review of the literatures, both processes tend to focus on 1) *shared and socially-constructed practices*, 2) an important *influence of history and time*, 3) *social mechanisms* at work, 4) certain *degrees of persistence*, and 5) the *emergence of – at least potentially – sub-optimal outcomes*. We went on and drew on the five analytical dimensions to proceed with an in-depth comparison of empirical studies. We reviewed, using a pattern-matching way of thinking, what the scholars actually documented when they used the analytical devices provided by institutional and path dependence theories. We found out that the foci of both theories, as well as the usage of these theories in empirical research are diverging in important ways. The results of the analysis are summarized in table 1 and the subsequent short sections summarize our findings.

Shared, Socially-Constructed Arrangements under Scrutiny

Institutionalized and path-dependent entities refer to shared, socially constructed arrangements and ways of thinking. After a closer look, we noticed that the focus of institutional theory was different in its application. Institutionalists investigate arrangements that are taken for granted and that guide behavior by carrying a degree of normative authority (defining what conduct is appropriate and tolerable) and cognitive help (what one usually does in specific situations). Hence, following an institutionalization perspective implies considering arrangements that characterize actions and actors (Barley and Tolbert 1997; Berger and Luckmann 1966; Jepperson 1991) and make their action intelligible and meaningful to the collective (DiMaggio and Powell 1983; Meyer and Rowan 1977). By contrast, arrangements that are relevant

[6] Manuscript available upon request.

for path dependence research do not necessarily imply a form of moral and cultural authority capable of characterizing actions and actors. Research considers a practice as path-dependent when it proves to lead to the exclusion of rival options, and when this exclusion is caused by self-reinforcing processes (Arthur 1989; David 1985; Sydow et al. 2009). Using QWERTY as layout is not a problem of judgment of appropriateness, but one of individual learning and of skills.

	Institutionalization	**Path Dependence**
Arrangements under scrutiny	Institutionalized arrangements are carriers of moral or cultural authority: they are loaded with a characterizing force that enables the elaboration of intelligible and legitimate action.	Path-dependent arrangements are not necessarily the carriers of any moral or cultural authority: instead they correspond to arrangements that are loaded with prior positive experiences.
Historicity	Historicity conceived as repeated typifications, sequences of events, and subsequent evolutions along a process of sedimentation: history as a chain, a succession of traces.	Historicity understood as an unpredictable process, born from seemingly irrelevant decisions in the first place, and magnified by self-reinforcement over time: history as a self-reinforcing trajectory.
Mechanism-based process	Process as a succession of events. Mechanisms of enforcement and reinforcement to the fore: agency-based mechanisms toward active diffusion, maintenance, reproduction and, eventually, persistence.	Process as a (continuous) path. Self-reinforcing mechanisms to the fore: focus on self-reinforcement loops to explain the emergence of a path toward stability and, eventually, lock-in.
Relation to inefficiency	Inefficiency is not necessarily the focus; if so, the search for legitimacy drives potential inefficiency.	Path-dependent processes may end in a lock-in, i.e. in an at least strategically inefficient state; dependencies drive potential inefficiency.
Sources of persistence and potential for change	Persistence is due to legitimacy-based inertia; nevertheless, there remains some possibility for variation, conflict, innovation, and change.	Persistence is due to dependencies-based inertia; there are no reliable explanations for path-breaking yet.

Table 1 - Conceptual discrepancies (Adapted from Berthod and Sydow 2010: 35)

Historicity: Differences in Degrees of Irreversibility?

A process, by its very nature, is punctuated by junctures, events, opportunities, or crises. Studying institutionalizing processes often implies resorting to historical material to uncover "a history of negotiations that lead to 'shared typifications' or generalized expectations and interpretations of behavior" (Barley and Tolbert 1997, p. 94). Jepperson (1991), however, clarified this and noted that it is important not to equate the term institution with any other historical patterning or effects. Institutional theory, we found out, looks at history in a different way from path dependence theory (see also Hirsch and Gillespie 2000). Institutional analysis searches more broadly for events that form *a chain* of reaction explaining current arrangements. For example Hoffman (1999) showed that the structuration of environmentalism in the U.S. chemical industry was the result of isolated events and repeated debates over time. In return, path dependence theory develops a more precise conception of the role of history along three phases with distinct regimes (Sydow et al. 2009). A study of path dependence often shows a trajectory that is triggered by remote events, *and* that is fed by dynamics of self-reinforcement to reach a potentially inefficient lock-in state not predictable ex-ante. In this vein, Blinn (2009) documented how a set of events in the 30's favored the use of costly dubbing techniques over the use of simple subtitles in German cinema productions. This triggered a process of habituation among consumers that still characterizes the commercialization of movies in Germany in spite of costs-issues.

Mechanism-Based Thinking: Enforcement or Self-reinforcement?

In path dependence research, self-reinforcing mechanisms are put to the fore as the drivers of path-dependent processes. Self-reinforcement means that two variables are mutually reinforcing each other in a kind of vicious or positive circle (Masuch 1985). In this respect, Arthur and Lane (1994) showed that the diffusion of a product co-evolves with the information spread about it by its users. This unintended contagion in information becomes a self-reinforcing dynamic supporting the lead of one alternative over the others largely, at least to some extent, behind the back of the agent. By contrast, the studies of institutionalization we reviewed report on mechanisms that

are based on agency and that enforce the diffusion and maintenance of products and arrangements. Self-reinforcing patterns are seldom present in this kind of analysis. Obviously, self-reinforcing patterns may be present amidst processes of institutionalization too. In his three-pillars-model (i.e. regulative, normative and cognitive institutions), Scott (2008) allowed for more differentiation and drew on Arthur (1994) and North (1990) to depict the process of institutionalization of regulative institutions as a path-dependent one. In our argument, we claimed that self-reinforcement could most probably be found within all three institutional pillars, yet they are seldom depicted. Hence the question becomes whether these self-reinforcing patterns are the cause of the persistence of an institutional arrangement, or whether they are only side-effects that resulted from its emergence. For paths researchers, this question is critical with respect to "highlight[ing] the role of incentives" (Scott 2008, p. 123) in complying behaviors.

Potential Inefficiency: What Emphasis?

Institutionalists, conceiving of efficiency and rationality as socially-constructed myths, tend to reject economic and/or technical efficiency as explanation for the choice of organizational structures. Hence while inefficiency may interfere in the outcome, it is not a compulsory ingredient (Powell 1991). However, to conceive of institutions as carriers of inefficient arrangements is a common misunderstanding of the theory (Greenwood et al. 2008). Efficiency is not the primary criterion for organizational design, but legitimacy. This, however, does not exclude efficiency. Lounsbury, Ventresca, and Hirsch (2003) documented how social movements actually worked for better practices in waste recycling in the U.S., enabling the emergence of a new industry in which socially efficient practices developed by volunteers became the appropriate way, incorporated into for-profit waste recyclers. By contrast, path dependence research proposes various degrees of inefficiency as one of the ingredients necessary to construct the theoretical puzzles on which it reports (Liebowitz and Margolis 1995). In its application to organizational studies, path research considers inefficiency at least as potentially there, since rigidity is problematic from a strategic point of view (Sydow et al. 2009). Koch (2008, 2011) showed this in the field of German high quality journalism, where a switch toward online news has proven

difficult due to self-reinforcing loops in the strategic system of the established print news.

Persistence: Any Room for Change?

Finally, we saw that both concepts observe a reduction, over time, of the options available, as perceived by the agents. The fruit of an institutionalizing process is seldom questioned and constrains the span of action by this objectified nature. A typical question, thus, is how to cope with it and develop legitimacy in the field in which one operates. Breaking from the status quo is considered an illegitimate conduct, and deviant organizations receive sanctions from their environment (e.g. Hargadon and Douglas 2001; Townley 2002). However, if persistence of institutional arrangements is to be observed, research does not see it as a dead-end stage. The recent developments in institutional studies have given more weight to change and innovations, even in highly institutionalized fields (DiMaggio 1988; Garud et al. 2002). Research related to this turn looks at the interplay of actions, meanings, institutions and actors (Lounsbury et al. 2003), as did Munir and Phillips (2005) when they reported on the discursive work performed by Kodak to change the image of photography from a profession into a hobby accessible to everyone. With path research, on the contrary, strong degrees of inertia surround the depicted actors. Indeed, one would not be considered 'illegitimate' by using a keyboard other than the QWERTY one. The challenge for path-breaches lies in the difficulty of noticing that one is trapped, and in the cost of developing new arrangements.

Ways of Theoretical Inclusion?

After this discussion, we found it reasonable to clarify the implications of path-dependent and institutionalized arrangements, for empirical research, and for the sake of construct clarity. A path-dependent process, according to the analytical focus of the theory, does not necessarily develop the features for a social arrangement that could be considered an institution. In the same vein, not every institutionalizing process, according to the analytical focus of the scholarly community we identified (the neo-institutionalism in organization studies), features the properties that turn an

arrangement into a path-dependent outcome.

Nevertheless, this clarification did not exclude the possibility for institutionalized arrangements to develop path-dependent properties in the process of their institutionalization (see e.g. Powell 1991). One first attempt to productively combine institutional and path dependence theories and their respective constructs and analytical tools, was therefore to conclude that the notion of *institutional path* should be reserved for processes of institutionalization that reflect strict features of path dependence. According to this analysis, we proposed that *institutional paths* were to consider arrangements which are loaded with a taken-for-granted, moral, and cultural authority, *and* which result from a process triggered by small events and magnified by self-reinforcing mechanisms that make potential change towards any alternative unlikely.

We defended this line of thought and further discussed the implications for institutional theory and the analysis of institutionalization (Berthod and Sydow 2010). We did not, however, consider the potential of institutional theory for developing the theory of path dependence. In the next section, I propose to discuss this inclusion more specifically and to see how it can help us unpack the dynamics underlying the Dresden case.

When Path Dependence Learns from Institutional Theory

In this discussion on the potential inclusions of path dependence theory and institutional analysis, so far, one contribution has been to consider the existence of *institutional paths* (Berthod and Sydow 2010). We defined them as arrangements loaded with a taken-for-granted, moral, and cultural authority, which result from a process triggered by small events and magnified by self-reinforcing mechanisms. This path-dependent nature would make potential change towards any alternative unlikely.

In doing so, one imports the analytical tools from path dependence research into the neo-institutional discourse. A second alternative, in return, is to import the tools from neo-institutional analysis into research on path dependence, and to see how this theoretical inclusion can help us improve our understanding of paths, at the interplay of institutions, organizations, actors, and persistence in organizations and other social systems. This approach thus draws on “traditional” path-analysis, i.e. the identification

of a path as such (e.g. Koch 2008; Schreyögg, Sydow and Holtmann 2011), and is nurtured by two additional analytical components that are typical to neo-institutional theory: (1) the consideration of institutional forces to account for persistence in organizational conduct, and (2) the consideration of agentic strategies in this respect.

Where Does This Lead Us To?

As we saw it earlier in this chapter, its focus on the dialectic between institutions and agency has made neo-institutional theory one of the widest diffused theoretical bodies in organizational analysis. And yet institutional and path dependence analyses of organizations tend to follow a similar conceptual evolution. Institutional analysis of organizations moved from a macro and structural influence on actors towards organizational (DiMaggio and Powell 1983) and individual (Battilana 2006) perspectives. Similarly, path dependence theory moved from a structural influence on actors towards an organizational perspective (Sydow et al. 2009; Vergne and Durand 2010), and, more recently even towards individual concerns (Koch, Eisend and Petermann 2009; Langer 2011). In this respect, the role of agency has long been taking in volume among institutionalists, detecting a potential for change and evolution in endogenous factors (Dacin, Goodstein and Scott 2002; Djelic and Quack 2007; Streeck and Thelen 2005) instead of exogenous only. This debate, however, is still in its infancy in path dependence research (see, however, notable works by Garud and Karnoe, 2001, and Sydow, Lerch and Staber, 2010).

The Dresden case –initial motivation for this discussion– shows us how members of an organization, i.e. the City, have been putting a collective rationality into action (i.e. the need for a bridge at Waldschlösschen) and how this process triggered waves of conflicts among a majority of supporters and a minority of opponents in the organization and across its institutional environment. Puzzling was the fact that the organization observed, i.e. the City of Dresden, would refuse any sort of institutional pressure against its project, in spite of factual critics about the efficiency of the solution, of potential for technical and financial compromise, and of significant cost overrun (more on that later). This made us shift from mere institutional explanations towards path dependence studies. Indeed if we want to understand the Dresden case, we need to look at both the historical path underlying the idea of a bridge construction, i.e.

the emergence of a collective rationality, as well as the work performed by the supporters, and, ultimately, by the City as organization, to put this path in practice and to defend it in front of disruptive attacks.

The analytical position taken in neo-institutional theory could now help path dependence research in the observation of specific phenomena that are outside its scope, namely: how do actors draw on their institutional context to instantiate paths in action, how does the institutional context thus enacted impact the organizational path, how do other actors try and constrain them, and how do actors locked-in defend instantiations of paths. Such questions echo the work by Kuipers and Boin (2010). In their view, institutions nurture path-dependent processes at the organizational level (they looked at public administrations in the U.S.) by providing them with legitimacy, and hereby contribute to erode the capacity for considering alternative courses of action. Also Sydow et al. (2010) recently wondered how actors work to create, maintain, and disrupt organizational paths. This analytical inclusion could further contributes to shed light on the role of the yet unelaborated notion of "enhancing context" surrounding path-dependent trajectories (Pierson 2000; Sydow et al. 2009).

Those are questions typical for embedded agency, a long debated issue in institutional analysis. Institutionalists bypassed them by postulating the embeddedness of actors in multiple contexts as a source for actors' creativity and critical reflection. To inject agency into the 'hard' version of path dependence studies, I suggest considering the meta-theoretical assumptions shared by both theories: an ontology in which structures and actions receive equal attention.

Injecting Agency: Common Conceptual Foundations

Since there has been a dominant design in computer keyboard layouts (David 1985), there have been agents who tried and developed alternative solutions (e.g. the DSK layout). Hence while a path may indeed lock a critical mass of agents, and thus continually confirm its stability, empirical honesty wants us to consider the existence of agents who dare to wreak havoc on paths, and who are, to some degrees, seemingly less concerned by the lock-in effect and its self-reinforcing drivers. In a similar fashion, the existence of such agents and their work towards disruption must probably animate the other agents who are engaged into conservation of the path as it is. This phenomenon

has been observed already in the German water distribution, where social movements actively resisted transfers of management practices derived from private French companies (Coeurdray and Blanchet 2010). Similar resistance is observable in the music industry, where record companies locked in their relation to physical distribution of musical content (Dolata 2009; Kunow 2011) actively defended their old resourcing-routines by demonizing the pirate offer and by developing collective strategies to defend their preferences (Hensmans 2003).

This empirical situation is very similar to the critique once made by supporters of the 'old' institutionalism to the tenants of the 'new'. Stinchcombe reminded that "somebody somewhere really cares to hold an organization to the standards and is often paid to do that" (1997: 17). In this respect, institutional analysis was marked by one recent research program that tends to summarize most of the individual attempts at injecting agency of the last 20 years: the notion of institutional *work* (Lawrence and Suddaby 2006). With the introduction of this rubric, institutionalists were eager to connect "a set of previously disparate ideas" (Lawrence, Suddaby and Leca 2009: 1), in order to observe how "actors affect the institutional arrangements within which they operate" (2009: 3). In their introductory article, Lawrence and Suddaby (2006) delineated the notion along three main occupational rubrics: the *creation*, the *maintenance*, and the *disruption* of institutions, and viewed it as an "intelligent, situated institutional action" (2006: 219).

This theoretical balancing act between institution and action was heavily informed by the running debate on agency versus structure. To inform their approach, Lawrence and Suddaby (2006) rooted their work in the sociology of practice, (quoting Giddens 1984, and Bourdieu 1972; see also Bourdieu 1979), and in process thinking (Rescher 2000; more on that later). Indeed Giddens' theory of structuration (for a discussion see Barley and Tolbert 1997) and Bourdieu's notions of field and habitus (see e.g. Hirsch and Lounsbury 1997) have been influential imageries in the institutional debate during the recent years.[7] They had been, however, already very influential since the early formulations of the neo-institutionalism.

Bourdieu's work has always been dedicated to asymmetries in power and

[7] Please note nevertheless that such proximity between Bourdieu and Giddens implies a rather superficial understanding of their respective conceptions of practice and structure (see Schatzki 2007, for a short discussion on that matter). Indeed their coming-together would most certainly exasperate current advocates of their thoughts.

domination as bound to structures. He summarized it as understanding the paradox of the *doxa*, i.e. "the fact that the order of the world, with its one-way streets and no-entry signs, its obligations and its sanctions, literally as well as figuratively, is more or less respected as it is" (Bourdieu 2002: 11 – own translation). His interest however was not deterministic, but rooted in understanding structures as a result of action and *vice versa*. To Hirsch and Lounsbury (1997) Bourdieu was largely embraced by the proponents of the neo–institutionalism. As a matter of fact, DiMaggio, as early as in 1979, wrote in a review article how "Bourdieu takes as his subject precisely those attitudes, dispositions, and ways of perceiving reality that *are taken for granted* by members of a class or a society" (1979: 1461 – my emphasis). Particularly influential in this respect was Bourdieu's notion of field, summarized by DiMaggio as "both the totality of actors and organizations involved in an arena of social or cultural production and the dynamic relationships among them" (1979: 1463). This understanding of Bourdieu's imagery offers striking similarities to the definition that DiMaggio and Powell would propose four years later, in their formulation of the organizational field: "those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products" (1983: 148). To the French sociologist, fields are subject of asymmetries in which dominated and dominating agents reproduce continually, and mostly unconsciously, a symbolic violence that separates them from each other. In a mediating range, the groups of interests one belongs to condition oneself via one's *habitus*. This corresponds to a unified interiorization of the conditions that are typical of the groups, or classes, one belongs to. This allows us to generate practices and to interpret and differentiate each other and thus to (re)produce an agency that is considered typical and distinctive (Bourdieu 1979). This idea of a habitus allows for variation in agency, since it is based on a great repertoire of dispositions. The typical example here is the use of language as structure that allows for the formation of an infinite amount of sentences. The formation of sentences, as practice, varies greatly in accordance with the social group one belongs to. This variation is result of an interiorized habitus and is used as a resource in the field.

In a similar fashion, Giddens formulated (1984) his theory of structuration as an attempt to end the quarrel between interpretive and structuralist perspectives. To him, the problem as to whether agency defines structures or whether structures shape agency

is a matter of definition. In his view, they are the two sides of a same coin. Power and domination, in this respect, are a feature of the duality of structure, i.e. the fact that structure is the medium *and* the outcome of the conduct it contributed to organizes. In this respect, power emerges out of relational contexts. Giddens may appear more "optimistic" since he proposes that dominated can still influence the resources on which dominating are drawing in their relationship, and thus balance what he calls the dialectic of control. Actors are indeed knowledgeable and thus know about what they do as well as about their relational context, even though they may not easily formulate it. In other words, we all are intuitive sociologists (Giddens 1984). When agents enact the institutional realm in practice, they recursively reinforce the structures and hereby enable further action. The institutional realm, in this case, is made of structures. Structures are defined as sets of rules and resources that exist "only as memory traces (…) instantiated in action" (1984: 377): rules of *signification* (i.e. institutionalized schemes of interpretation) and of *legitimation* (i.e. the normative and legal regulation of action), and resources of *domination* (i.e. the allocation of resources exerted by political and/or economic institutions). These three elements of structures come close to Scott's carriers of institutions (2008), made of *normative* (i.e. prescriptive and obligatory dimensions of social life), *cognitive* (i.e. shared conceptions of the nature of reality) and *regulative* (i.e. rules, surveillance mechanisms) components. This conception indeed served as basis for the development of the neo-institutionalism. For example, it was influential in the understanding of institutions as a *process* of steady structuring in organizations that aims at embodying and answering the 'provinces of meaning' in which organizations are embedded (Ranson, Hinings and Greenwood 1980). A few years later, DiMaggio and Powell, in their influential essay on socially-constructed collective rationality, wrote that "Bureaucratization and other forms of homogenization emerge (…) out of the structuration (Giddens 1979) of organizational fields" (1983: 147 – their citation). A few sentences further, they pursued the reasoning with: "the process of institutional definition, or 'structuration', consists of (…) the development of a mutual awareness [among other elements]" (1983: 148). With a lesser interest in domination and power relations, this idea of duality of structure made its way and has been influential in the formulation of agency in neo-institutional accounts of innovation, change, and persistence, for example in the work of Lawrence (1999) on 'institutional strategies' and the drawing on membership as a resource, the work by

Barley and Tolbert (1997) on institutionalization as a structuration process driven by the enactment of scripts in action, or Whittington (1992) who sees in structuration theory a perspective that would help institutionalists to analyses disparate and fragmented institutional influences on actors.

Contrary to Bourdieu (even though ways of inclusion are at hand in path dependence studies) Giddens' work has been influential to both institutional *and* path dependence studies of organizations. As a matter of fact, a path represents also a mere memory trace about past successes and present constraints. As such, paths are social arrangements to solve collective problems. Hence the idea of being embarked on a path can act, at first, as a structural assistance, supported by increasing returns or coordination among a set of actors, to solve issues. It can also become a lock-in that further constrains the scope of options available to these same actors. In other words, "the flow of action continually produces consequences which are unintended by actors, and these unintended consequences also may form unacknowledged conditions of action in a feedback fashion" (Giddens 1984: 27). However, while the structural influence finds immediate similarities, some like to claim that 'hard' proponents of path dependence theory exclude the idea of agency (e.g. Garud et al. 2010). This is doubtless a misunderstanding. It is true, however, that agentic dimensions have, so far, been contributing to explain the emerging process of path dependence and did not questioned what actors actually do with these paths, reflexively, for example once they are locked-in. Institutional theory bypassed this focus on structural prospects by recalling its foundations, as we saw, rooted in theories that conceive of both action and structures as intertwined (Bourdieu and Giddens). Concerns about agentic processes in path-dependent contexts have been raised all the same, using the same grand-theoretical foundations. In their article settling issues of path dependence in and among organizations, Sydow and his colleagues noted that the "dominant solution emerges in terms of recursive action patterns (Giddens 1984)" (2009: 694 – their citation). They further conceive of lock-ins in terms of *cognition, norms,* and *resources*, quoting, again, Giddens. But most importantly, they depict the actors as knowledgeable. Actors locked in still "have scope in interpreting the organizational patterns" (2009: 695). The authors further conceive of variations between the core-path and its actual instantiations.

Similar empirical work already came out, bridging agentic perspectives and 'hard' path analysis. Dobusch (2008) hit a similar road and showed how city

administrations in Germany and Austria made their way with and out of the Windows-path, with respect to their computer equipment. Schuessler (2008) proposed a similar theoretical articulation in her study of the German clothing industry. Finally, echoing Lawrence and Suddaby's taxonomy of institutional work, Sydow et al. (2010) wondered what could be "the processes and mechanisms by which trajectories develop and about the factors that are involved in creating, maintaining, and breaking path dependence". In their study of the optics cluster in the German region of Berlin-Brandenburg, they go as far as proposing that actors may even create paths, and plan for a path to emerge at a later point in time. In their view, actors build on rules and resources that were shaped during the structuration of the cluster they belong to, thus allowing the emergence of self-reinforcing coordination effects.

Agency and Path Dependence: Path Instantiation as Reflexive Structuration

Injecting agency into path dependence to explain persistence in pluralistic institutional contexts brings one problem along. The very idea of incentive, as implied in path dependence (Scott 2008) sheds light on one very social mechanism: *power*. Power is a long-forgotten friend among institutionalists (Clegg 2010 – with the notable exception of Lawrence et al. 2001) and this is one more reason for building on a structurationist perspective. Giddens (1984) indeed has conceived of a frame that bridges agentic and institutional realms by taking power and relations of domination into account. Drawing on Giddens' work, we can observe agency-based processes in path dependent contexts as parts of a broader process of *Path Instantiation* nested within institutional realms. This idea has already been addressed, even though only superficially, in path dependence literature, with Pierson (2000) and Sydow et al. (2009) and their designation of an "enhancing context" to path dependence.

Mega-projects, like the construction of the WSB, present in their governance two particularities that make their analysis particularly sensitive to such developments. First, mega-projects represent technical processes that are largely unpredictable and time dependent (Flyvbjerg, Bruzelius and Rothengatter 2003). Initial decisions trigger large amounts of technical development and of optimization efforts. The great paradox in the governance of such projects lies in the necessary abandonment of flexibility over time, while such projects span over long time periods, thus suffering high degrees of

uncertainty (Miller and Hobbs 2005). Implementing and optimizing one solution indeed implies abandoning other options, thus bouncing the classical exploration/exploitation balance towards exploitation exclusively (March 1991). Second, mega-projects are as much a matter of analytical work as of communication and institutional anchoring towards the alignment of the numerous actors and activities involved (Suchman 2000). Planning for large scale construction and architectural efforts is therefore also a matter of persuasive storytelling about the future (Throgmorton 1992), where dragooning the public scrutiny and other institutional constituents into common frames of understanding further implies the rise of collective expectations and localized rationalities that are difficult to abandon completely. Because of their heavy and slow nature, large-scale projects offer a sort of "path in slow-motion" where every steps and former trials can be observed and counted and analyzed (different from a routine, for instance)

Path Instantiation: The "Bright Side"

I suggest that actors in the City of Dresden worked to *instantiate* an old, yet present, local solution to a local collective problem: the need for a bridge at Waldschlösschen to solve traffic issues. This idea had been the subject of numerous instantiations before. All former plans were constricted, either by way of internal decision, or by exogenous historical chocks. The classical saying "*Organizations remember* by *doing*" (Nelson and Winter 1982: 99 – emphasis in original) applies here as usual. Paths and their repeated instantiations are shared "memory traces" (Giddens 1984: 25), as much as the structures that contributed to give them not only meaning, but also physical existence. The path-dependent nature of the bridge in Dresden has developed a flavor of collective rationality within the community for which the City is supposed to stand. Building on this historical influence, I suggest observing how the members of the City, as organization, worked to instantiate this rationality into a project and to defend it until completion. The suggestive power of this long-lasting process, typical to path dependence, as well as the repeated attempts to disrupt the project, downplayed the City's concerns for inefficient development, like cost overrun and misallocation of public money, or the traffic evolution and the actual needs for such a policy.

To study this *Process of Path Instantiations*, I propose to see how path dependence was at the core of this puzzling organizational resistance to institutional pressures. Giddens conceive of the action realm (i.e. the actors' strategic conducts) as linked to an institutional realm within which the actors of a system are operating. As we saw, this institutional realm is made of three structural components that act like *virtual* schemas (Sewell 1992) for the actors to draw on. They comprise structures of legitimation, of signification, and of domination. These three institutional constituents are made available to actors via *actual* modalities that they may use to enable action and thus enact the virtual structures in practice (see figure 4).[8] By enacting structures actors reinforce their virtual existence. As such this higher realm both enables and constrains actions.

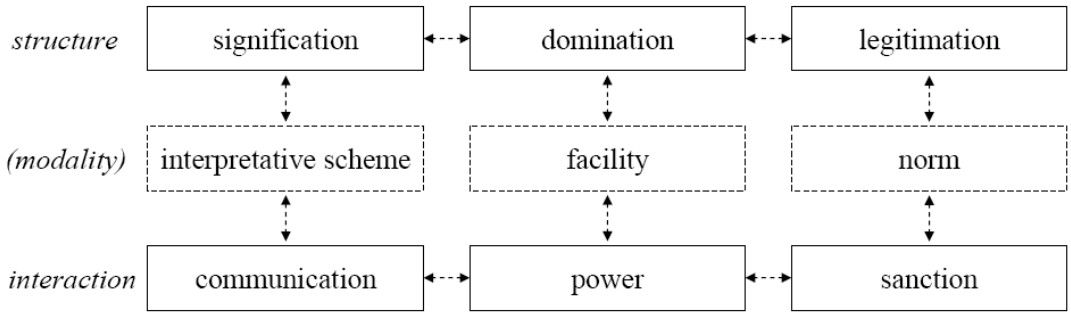


Figure 4 - The structuration process (Giddens 1984: 29)

For example, if we consider the structuration of a university as a social system, this is the daily using of specific knowledge that allows me giving meaning to what I say while I interact in communication with other fellow doctoral candidates. For example, I can do that by drawing on specific symbols or signs, or by relating to our identity and role in the profession. Similarly, our position in the profession makes us more vulnerable to authority and to the allocation of resources than a tenured professor, since our access to specific facilities, like the budgeting of a chair or the decision of a line of research, is not immediately credited. This is further legitimized by way of contracts and, more generally, norms of appropriate behavior, like, basically, the fact that, well, graduate students are not supposed to manage an academic department.

[8] *Actual* does not imperatively mean *Material*. Immaterial resources are *Actual* in the sense that they may be observable characteristics of what actors can do or draw on, like knowledge, or the reverence of subjects to their King (Sewell 1992). For example, my knowledge of grammar has no immediate material manifestation, but I make use of it as a resource to interact with others via speech acts and writing.

However, this situation can be counterbalanced by the doctoral candidates' using more informal spheres of power and resistance, or by complaining and asking for sanctions against any exaggerating professor, thus enacting other specific rules of signification and legitimation. One needs to keep in mind that every single action should find its source in all three structures of signification, of legitimation and of domination at the same time. These are separated only for analytical convenience,

In their example of the German optics cluster, Sydow and his colleagues (2010) show that the structuration of road-maps in the network presented spurs of coordination effects via behavior-guiding convention, a mechanism subject to self-reinforcement when it is mobilized. One more time, self-reinforcement means that the output of one specific action or decision exerts a strong and positive suggestive power on the actors in future decisions, thus enjoining actors to reiterate past agency when required to act. There is an incentive in repeating action. As developed by Sydow and his colleagues (2009), self-reinforcing mechanisms concern *learning effects* and the suggestive power of *knowledge*; *coordination effects* and the suggestive power of *behavior-guiding conventions* (like driving on the right or on the left side of the road); *complementary effects* and the suggestive power of *economies of scope*; and *adaptive expectations* and the suggestive power of *other's expectations* (like public opinion or fashion). To Sydow and his co-authors (2010) the structuration process of the functioning of an organization, of a network, or, in our case, of a City, contributes to the narrowing of the scope of options and leads to a potential lock-in by thickening the interpretative schemes and norms of appropriateness and by an accumulation and centralization of power, thus disabling an effective dialectic of control.

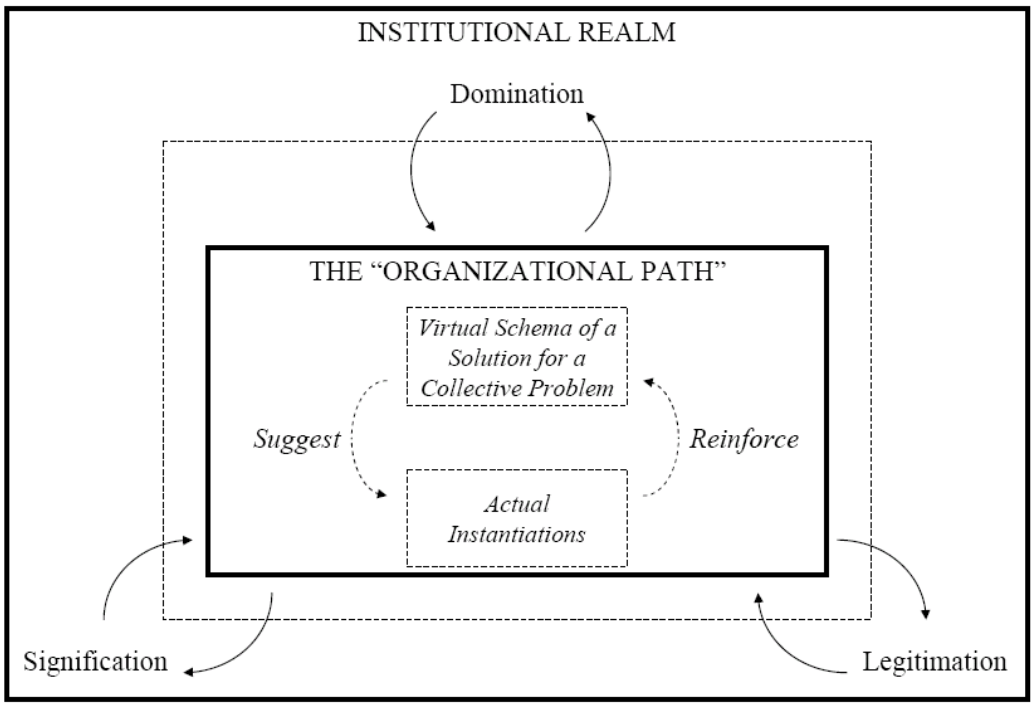


Figure 5 - The structuring process of path instantiation

Figure 5 (the design is inspired from a similar layout by Sydow and Windeler 1998: 276) illustrates the main idea behind the process of path instantiation as nested in an institutional context that exerts both an enabling and a constraining force over the organization. In this perspective, a path represents the virtual schema of a solution (in our case: a bridge at a specific location) for a collective problem (in our case a traffic problem). The more one instantiates this virtual schema in action, the more one reinforces its seemingly rational nature. This does not necessitate a completed instantiation. As a matter of fact, every attempt at instantiating such a solution implicitly stresses the rationality of the solution. A path, however, is no island and necessitates being nested into its context. Here, the institutional constraints are pointing out the way while at the same time enabling the instantiation of the path. Indeed supporters of the virtual schema will most certainly use resources, interpretive schemes, and norms and values to push the solution forward and implement it and make the instantiation progress. In return, the occurrence of positive feedbacks, increasing returns, or self-reinforcement will act favorably on the instantiation and on the structuring effort, thus shaping a trajectory of collective action in the organization concerned. For example, in the Dresden case, resources of domination were used to channel the instantiation of the organizational path. Eventually, the occurrence of self-

reinforcement supported a centralization of power over the path instantiation within the organization. Also, rules of significations were used to provide meaning to the path instantiation. In return, over numerous rounds, the narrative mode used became thicker and even more stable, rendering the symbols and webs of meaning used even more obvious. Finally, rules of legitimation were used in forms of values and norms to infuse the path instantiation with legitimacy. Overtime, the self-reinforcement experienced while instantiating the path acted further justified the trajectory taken.

Path Instantiation: The "Dark Side"

However, as in any dialectical relationship, one part of the system may most likely enjoy the situation, while the other part will feel that one has reached a virtual boundary that one can not tolerate anymore (Camus 1951), thus unleashing, in practice, dynamics of internal resistance and disruption.[9] In the Dresden case, we saw that resistance and disruptive work *against* path instantiation was performed in the community. It started within the City itself, and evolved eventually across institutional levels. A structurationist idea of instantiation implies a particular concept of agency, in which different orientations may arise: a massive will to instantiate old patterns, influenced by the self-reinforcing forces at play, but also the possibility for actors to critically reflect on this hegemony. Drawing on Giddens' idea of dialectic of control, this situation occurs mostly when asymmetries in power and domination have grown too large. This is the idea that Emirbayer and Mische's (1998) explored implicitly. Their work is particularly interesting for our discussion since they root their conception of agency in the notion of time and history. The authors propose to build on the pragmatist tradition, drawing on Mead (1932), and suggest that, "as actors respond to changing environments, they must continually reconstruct their view of the past in an attempt to understand the causal conditioning of the emergent present, while using this understanding to control and shape their responses in the arising future" (1998: 968-969). Hence they define agency as "*the temporally constructed engagement by actors of different structural environments* (…) *which, through the interplay of habit,*

[9] Note, however, that in spite of a current popular consensus in favour of Camus' work, his thoughts on riot were harshly criticized by authors like Aron, Sartre, or Bourdieu, and may not be all too easily articulated into a social theory. My formulation of riot here remains however sympathetic to his.

imagination, and judgment, both reproduces and transforms those structures in interactive response to the problems posed by changing historical situations" (1998: 970 – emphasis in original). To put it simply, actors develop agency based on three rationales: *what has proven good or bad so far*; *where could we be*; and *what can we do*. Agents may do so because they evolve in different, fragmented and overlapping structural systems. Emirbayer and Mische formalize it with Mead's notion of *sociality*: the fact that actors are situated in *multiple* temporally-evolving relational contexts. This is similar to the institutional approach that conceives of agency as elaborated on different societal logics. Hence criteria to define priorities and preferences are continuously questioned and redefined as situations and times unfold fragmented in multiple contexts.

With this conception of agency, Emirbayer and Mische (1998) suggest that the multitude of institutional configurations *support* the constitution of *multiple* agentic orientations, according to temporal, local and relational contexts. In other words: actors present a multitude of personalities and are embedded in multiple contexts and are thus not equal in their reaction to paths and their instantiations. For example, the authors propose that actors operating regularly in complex settings learn to take a wider variety of factors into account and are used to consider and "reflect upon alternative paths of action" while developing agency (Emirbayer and Mische 1998: 1007). This allows taking into account the existence of actors reluctant to let go with the past, and of other actors who, relying on a different agentic orientation, are eager to question existing patterns of thoughts and specific structural elements. This collision of potential agentic orientation can lead to actions that are shocking for one web of relation in which one operates, while absolutely "normal" for another. To Emirbayer and Mische, actors positioned at the intersection of numerous temporal-relational contexts are more likely to develop greater agentic orientations towards creativity and critical interventions. In a similar vein, and particularly interesting for path dependence studies, agents acting iterationally "unhesitatingly reproduce larger schemas, helping to lock in place social, political, and economic contexts, which, however "unjust" they may appear in an expanded perspective, after all serves the actors well within their own personal and professional lives" (1998: 1009).

Pulling this discussion down to organization and path dependence studies, this argument implies that actors bound to a path tend to reproduce it by instantiating

related virtual schemas.[10] While we know that a critical mass does so in path-dependent contexts, we can now account for the possibility for some actors to develop agentic orientation that is critical to the mainstream instantiation. Considering the QWERTY keyboard, certain actors, for example those with an engineering-background, would be more likely to find themselves evaluating the sub-optimality of the situation as one opportunity for innovation and progress. For such people, this agentic orientation is based on an iterational way of thinking about technological progress and optimization, and is particularly typical of the way engineers or entrepreneurs would think of their work in general. However, in the eyes of people who can not hold a hammer in the upright position, this way of thinking about our keyboard sounds more like a surprising creative prospection. This is probably what happened in Edison's mind (Hargadon and Douglas 2001), as he decided to displace the gas-lighting technological path to settle his light-bulb. The collision of different schemas has the potential to make us realize the problematic solution in which we are locked-in, and to allow us to draw on different resources and recombine them in new ways to propose alternative options. In other words: a path takes manifestation in practice via repeated instantiations of it. A great majority of actors may want to iterate the path and keep it "alive" by instantiating it over and over again, influenced by past successes at it. But not all actors are dopes; they are able to reflect upon situations. If actors are able to instantiate a path, others are also able to question its instantiation, especially when it is bound to relations of power and domination. The instantiation of a path may thus present great arenas of conflicts, resistance, and efforts to constrict the instantiation.

Summary and Outlook

I looked at the Dresden case under the prism of the neo-institutional analysis of organizations. The repetitive resistance of one organization to diverse sources of institutional pressures over the period of 15 years made this case particularly relevant for this stream, usually postulating the constraining power of institutions on organizational and individual action. For diverse empirical and theoretical reasons, I suggested approaching this phenomenon as the result of path-dependent forces at play

[10] See Seo and Creed (2002: 231) for a similar discussion in relation with institutional theory.

in Dresden. To account for active instantiation, defense and disruption of paths, I eventually discussed how path dependence studies could learn from the agency-turn taken by the new-institutionalists two decades ago, under the influence of Giddens' theory. Following this structurationist view of institutions, I introduced the ideas of *Path Instantiation*. This process conceives of paths as virtual schemas of solutions for collective problems that are instantiated in action and nested into the reigning institutional realm. This allows for conceiving of a more diverse scope of agency among actors bound to a path. This way of thinking will allow us to unpack the Dresden case by paying attention to the path-dependent forces at play and the agency that aims at instantiating, maintaining, and constraining the path thus formed.

Chapter III

—

Methodological Approach

Typical to institutional (e.g. DiMaggio 1991) and path dependence studies of organizations (e.g. Booth, 2003; Schreyögg et al. 2011) this volume reports on a case study informed by organizational history and socio-economic analyses. The study of a path means –in spite of 'path' being a noun– studying the influence of a *process*. Therefore, in a first section, this chapter details the foundation of historical and process research. It will then detail what historical research methods actually are, and how they can influence organizational studies and process research more generally. In a second part, this chapter details the design of this study, the data collection and the analytical steps taken.

Historical Analyses and Process Studies of Organizations

Max Weber has always been an influential figure to organization theory (see most notably the special issue in *Organization Studies*, 2005). In this respect, Kieser reminded us that Weber "was as much a historian as a sociologist. He was convinced that in order to understand contemporary institutions one has to know how they had developed in history" (1994: 609). While process and longitudinal studies have made their way (see e.g. the special issue in the *Scandinavian Journal of Management*, 1997), historical analyses are indeed scarce in organization studies. As a matter of fact, organization and management research tends to favour presentism and often tries to claim for the universalism of its insights, thus undermining the role of the past, and more generally, the role of the process that shaped things the way they are in the organization (Booth and Rowlinson, 2006). I will now review the grounds on which process research evolves and how historical analyses can enrich this approach.

Basics on Processes

Studying processes in the social sciences goes, intuitively, against cross-sectional and universalistic accounts of social life and follows specific ontological discussions. Thinking of reality as a process is often linked to Heraclitus' remark on bathing in the ever-changing waters of a river (Whitehead, 1929). During the 19th century, the humanities have been the home of thinkers (e.g. Bergson, Mead, and Whitehead) who were critical to the static conception of reality (Carrier and Wimmer 2004). Thinking of processes was a way to overcome the divide between body and mind, classical since Descartes' division of thinking and physical substances (1641 – ed. 1990). Considering substances as processes meant recognizing their alterable and revocable nature; a feature indeed shared by both 'body' and 'mind'. If this is accepted, the world of substances is from then on made of *events*. Humans or stones, for example, should be considered as enduring events that kept on happening (Abbott 2001). Processes are the basis, and humans derive 'things' out of them, trying to infuse processes with stable properties. 'Things' are not the results of processes, but their mere manifestations (Rescher 2000). More precisely, "a process is an actual or possible occurrence that consists of an integrated series of connected developments unfolding in programmatic coordination: an orchestrated series of occurrences that are systematically linked to one another either causally or functionally" (Rescher 2000: 22).

For example, with respect to the organization, Schatzki asks "what is it, then, for an organization to happen" (2006: 1864), i.e. as an event would do? To him, an organization happens when the practices constituting the organization are carried out. Such processes are agent-managed, i.e. initiated by an agent and object of specific modalities in manner and means (Rescher 2000). With respect to social analyses in general, process philosophy has had a strong impact on the notion of historical relativism. Indeed "the historical process envelops all our activities and dealings (...) we are trapped within history" (Rescher 2000: 107-8). Notions of conceptuality within a never-ending flow in 'becoming' have moved things "to a fundamentally relational account of social objects and their meaning, and through recognition that the actual arrangements of social life encode histories and sociologies in an empirical relation (…) that is ours to analyze" (Abbott 2001: 237).

Historical Analyses of Organizations

Historical analyses, and not least path dependence, may easily be reduced to studies in which "one damn thing follows another" (David 1985: 332). Jacques makes it clear: "every story in the past tense is not history" (Jacques 2006: 39). Historical analysis, when it is done properly, cites numerous sources and examines them critically. Knowledge should be chronological and not topical, and linked to a discussion of historical analysis methods. Booth (2003) links organizational history to the difference between explaining and understanding, and to the production of thick descriptions with a concern for details similar to Geertz's work (1983) in anthropology. Thinking of history is, basically, taking the crucial role of the past into account to explain the present.

A trend towards convergence between historical analyses and social research has long been observed (e.g. Abbott 1991b). This convergence, however, remains often "a marriage of convenience" (Abrahms 1980: 3). Social analysis remains a club for fuzzy theoreticians, and history a gang of pettifogging detail-seekers. On that matter, and directly related to organizational research, Kieser (1994) depicted historians as scholars who enjoy thick depictions and distrust theories, while organization scholars often neglect important details of the story when they misfit their theories (see also Abbott, 1991b). To Jacques, "amateurism" is, however, not a problem; "historical scholarship is a public party, open to anyone of any background who wishes to attend" (2006: 40). The question thus becomes how amateur historians should use historical analysis.

According to Jacques (2006), archival sources are crucial, as compared to retrospective accounts and interviews. The latter should be critically examined, as well as the archival material one is being provided with. Respect should be paid to time and chronology. Hence, stories of development are not history, for they tell a Darwinian story of evolution. Such history is about legitimating and sense-making. On the contrary, Jacques reminds us that history is about how people change as everything around them changes, without knowing where they are heading at. Such empirical work often ends with the summarizing of results in a narrative that paces the chronological process while examining it critically. This corresponds to a way of thinking that is rooted in the way humans render existence and the experience of time as it unfolds (Czarniawska 1998). A search for even more details and facts may appear as endless

without some guidance towards testable assumptions (Gotham and Stapples 1996). This is often addressed by using computer-assisted techniques like Event Structure Analysis (Griffin 1993) or counter-narratives (Mordhorst 2008). Taking the popular example of Pettigrew and his study of the Imperial Chemicals Industries and their corporate strategy (1985), Booth and Rowlingson (2006) stress the difference between proper historical analysis, i.e. the chronological rending of facts as they occurred, in comparison to historical analysis used as a tool in studies of real-time considerations, in which the analysis travels across time periods. Thus the product of organizational history tends towards an analytically structured narrative of an organization's (more or less) recent history. From a methodological point of view, this implies bringing together the historical way of assembling narratives (relatively free from methodological and conceptual work, but with thick depiction of the data sources) with organization studies (with greater conceptual work, and yet less details on empirical details).

Kieser (1994) further identified four main reasons to overcome this divide towards producing organizational histories that are thick enough and relevant to theories: (1) understanding the emergence of trans-cultural differences among organizations, (2) learning from history to identify the fads of the present, (3) understanding existing structures as the outcome of past decisions and developments instead of seeing them as the results of natural laws of optimality, (4) the confrontation of cross-sectional organization theories with longitudinal analyses. With respect to the latter, a way to theorize with historical analyses is to show how one organizational history would depart from ideal types as defined by a theory. To do that, several theories may be used, in an attempt to propose a better understanding of the organization studied and thus to produce a finer formulation of the theory. The famous work of Allison (1969) on the Cuban missile crises is exemplary in his way of working with historical narratives. Historical inquiry is thus a tool to apprehend human action and understand "how and under what conditions something was created, the choices considered and not taken, as well as the paths chosen" (Barrett and Srivasta 1991: 236). With this, historical analyses are directly linked to studies of social construction. History is at the heart of generational transmission and contributes to the objectification of knowledge. The job is to make sense of retrospective material and interviews and to interpret both the information and the distortions between what is being told and what was reported at the time of the events under study, e.g. via archival records. Büthe (2002) goes further and

propose modelling history as dynamic sequences of change and stability. In breaking time into sequences, researchers can take time as an actual variable influencing the overall trajectory one is observing. This implies taking changes in regimes dynamics as time unfolds and is thus particularly suitable for path dependence studies (in the sense of Sydow et al. 2009). To Büthe, composing narratives is ideal to inform process-tracing studies and test a theory or model, if the latter is to structure the narrative writing. Does the model allow framing the story as it happened or do important elements fall out? Data is treated in the form of a narrative, instead of tables of citations for example, and is disciplined by a conceptual model. For example, the object one seeks to explain helps to close the narrative and to bracket the analysis in time. Hence writing historical narratives is more than telling a story, it further helps to identify underlying social mechanisms (Quadagno and Knapp 1992).

A Few Tools for the Job

Process research in organization studies tends to go one step further in the systematic analysis of historical material and longitudinal data. Closer to Büthe's perspective (2002), process researchers (i.e. researchers more interested in longitudinal data than in historical analyses *per se*) provide direct links to theories and are most likely to infer the hidden dynamics and social mechanisms that are responsible for the sequences observed. I detail now the three main conceptual tools I used to make sense of the Dresden case: multi-level analysis; Event Sequence Analysis (ESA); and mechanisms identification.

Pacing Path Instantiation: Some Remarks on Process and Multilevel Research

The approach we detailed in the theoretical discussion draws on holistic views of organizational analysis that give similar importance to structural *and* agentic processes. Thinking of only one level of analysis, e.g. the organizational actions or the institutional determinants, is therefore not suitable. For its 50th birthday, the *Academy of Management Journal* (2007) issued a forum on multilevel analyses, stressing their value for organizational and management research. More precisely, Hitt and his coauthors wrote that "management scholarship has become bifurcated into camps of micro and

macro experts who rarely engage each other in debates or collaboration" (2007: 1385). To overcome this situation, more accounts of multilevel analyses are needed, not least between individuals, organizations and institutional environments (Chreim, Williams and Hinings, 2007). Hitt et al. (2007) gives a few guiding rules for multilevel analyses (and, in their case, theorizing). Their suggestions are influenced by quantitative methods, with issues of measurement and inferences for example. Particularly important, nevertheless, is their identifying of a *focal unit* (e.g. the organization, the individual, the nesting system) in the analytical work one is performing. Discussions, predictions, and analyses must circulate around this focal unit, somehow like a movie around its main character, to make a clear contribution and lead the analysis along a red line. According to Morgeson and Hofmann's plea for multilevel research, "to understand how collective structure emerges, one must first understand the components of collective action (…) [and] focus on the systems of interaction among organizational members and collectives" (1999: 251). Hence, while the identification of a focal-unit is necessary, we need to identify the relevant sub-units and interactions among its members and observe how collective action emerged in the object under study.

Finally, using an approach inspired by structuration theory further implies that the two realms (i.e. the institutional realm and the realm of action) evolve jointly and synchronically. This makes the analysis practically impossible (Jarzabkowski 2008). To resolve this, in her study of strategy-making processes, Jarzabkowski suggests sequential analyses in a diachronic manner, observing changes in actions and structures over different time periods (similar to Barley and Tolbert 1997). Therefore, to account for this in my analyses, I stick to a bottom-up perspective. Inspired by Morgeson and Hofmann's guidelines (1999), I considered every important event and decision in the organizational history with respect to the bridge project and started with the internal debates within the organization and looked at the structural components that were mobilized for it. I then moved to the reaction of the fragmented institutional environment, and the structural components that were mobilized. Finally I looked at the feedback on the organization, with the influence of this process for the next main sequence of decision.

Unpacking the Weight of the Path: Event Structure Analysis

ESA appeared in the early 1990's, most notably via the work by Heise (1989), Abell (1993), Griffin (1993) and Abbott (1995; Abbott and Tsay 2000) on event structure.[11] ESA represents an interpretive heuristic that helps the researcher interested in historical analyses to transform a narrative (either formulated by the analyst or withdrawn from an informant in the field) into a chronology of events with clear links of causality, thus shaping a chain in its core development and isolating parallel events (Gotham and Staples 1996). This chain can be the interpretation of the researcher, and in this case it follows a rather chronological development. It can also be used to figure out the mental models of actors about specific developments. In this case, the chains illustrate the importance of specific events for the overall development, as understood by informants from the field. This interpretive analysis is computer-assisted and drives the researcher through a matrix of causality. Heise (1988) first introduced the method and its software, ETHNO, by analyzing the Little Red Riding Hood folktale to demonstrate how computer-assisted analysis of qualitative data can help researchers verify priorities and key events in a sequence.

Similar applications in organization and management studies have already been made, even though they remain scarce (see e.g. Stevenson, Zinzow and Sridharan 2003; Stevenson and Greenberg 1998). Drawing on Heise's work, Griffin (1993) made one of the most notable applications of ESA with the reinterpretation of a lynching that had taken place in the 1930's. He made use of a narrative about the lynching produced by an author, three years after the killing and of his own historical and theoretical knowledge to reinterpret the case and thus obtain new insights on what (could have) happened that day. His work is particularly suitable for our discussion. Indeed "while ESA does not directly model social structure, its analytic utility lies in the ability to order temporally historical events and to decipher how individual action reproduces and is constrained by social structure" (Gotham and Staples 1996: 484). Griffin further argues that, in ESA, arguments of path dependence "can be used to examine the determinants of key actions and choices not taken, and help explain why sequential paths are sustained through time" (1993: 1099). While this resonates with Mahoney's (2000) work on paths as mere sequences, i.e. without consideration for self-reinforcing events, Griffin cites the work

[11] See also the special issue on event structures in the Journal of Mathematical Sociology (1993).

of Aminzade (1992), who draws on David's conception of path dependence (1985) and divides the analysis of paths into three steps: (1) analyzing initial choices suspect of chance or transience; (2) the study of counterfactuals along the sequence of repeated choices, i.e. the identification of alternatives turned off and their consequences (via historical analogies); (3) identify the (self-reinforcing) mechanisms that sustained the movement. Inspired by this, Griffin proceeded with a mix of historical interrogation (i.e. the unpacking of the case's story) and of causal interpretation using factual and counterfactual questions about what happened or could have happened. This is achieved "through knowledge of the event's actors, its immediate context, and how both unforeseen contingencies and path dependencies facilitate and hinder the possibilities for future action" (1993: 1102).

The researcher writes down the chronology of actions/events and enters it as an input into the software. The software responds with questions on the events, challenging the researcher's knowledge of the case. Once all inconsistencies are answered, the software runs the data collected and illustrates it in a diagram of action. While one can stick to the narrative from the field, the analyst can then abstract the actions into more generalized categories and reinterpret what has been told with the help of theory or empirical counter-evidences. Griffin (1993) warns rightly the interested analysts: ESA *does not define causality* for the researcher. Instead it is one's duty to gain a strong understanding of the case to make clear decisions about the narrative, and to secure these decisions with evidence.

ESA is (as much as any qualitative method and software) just an aid for the analyst to sort data and make sense out of it with systemized accuracy. With it, one can display causal *interpretations* (and not causality) in order to compare the trajectory related by informants from the field under the influence of the local rationality to what material from the field actually tells about the case. In an application to the Dresden case, I suggest making use of ESA methods to compare the assertions that the supporters told about the project, i.e. the local myth of rationality, to the information found in the data and archive material. Working this way on narratives from the field will help us to determine whether constructing the WSB was the rational choice to make straight from the past or not.

Unpacking the Dynamics of Path Instantiation: The Search for Mechanisms

We saw that self-reinforcing mechanisms, increasing returns, and positive feedbacks are the heart of path dependence theory (Sydow et al. 2009). Even though these three concepts do not equate each other (Page 2006), let us start by stating that such dynamics imply a multi-stage analysis that one can summarizes as input → mechanism → output, with the idea that the output is itself the motivation and input of the next round, hence running a closed loop. More formally this means: X → Y → repetition of X → more Y → repetition of X even more Y, etc. Such mechanisms may concern micro-macro processes on the verge of network effects, by which "collective outcomes (…) result from individual actors observing what others have done which shapes their own propensity to take that action, which in turn makes them evidence for the next actor" (Davis and Marquis 2006: 336). They may also consider more micro-micro processes, for example individual learning effects, by which relying on certain practices feeds learning, while this knowledge accumulation enjoins the actor to exploit those practices and thus reinforce the knowledge basis.

In their article on path dependence in organizations, Sydow and his co-authors make strong assertions with respect to self-reinforcing mechanisms, somehow like deterministic predictions about the system they are to explain. This Luhmannian understanding is, however, not quite in line with the scholarly source on social mechanisms the authors are using, namely Pajunen and his linking (2008) between mechanisms in organization theory and the tradition of methodological individualism (e.g. Elster 1989; Stinchcombe 1991). In this tradition, social mechanisms "explain how and/or why one thing leads to another" (Anderson et al. 2006). The explanatory power of social mechanisms lies in their ability to elevate the discussion about the dataset at a more general and abstract level. To put it differently, mechanisms act like "smaller" processes that explain why the overall process evolved the way it did.

To Hedström and Swedberg (1996), mechanisms are seldom used in history, but frequently in economics, psychology, and, to a later extent though, in sociology, all three referential disciplines for research in organizations and management. The unpacking of mechanisms corresponds to Merton's call for middle-range explanations, somewhere between empirical descriptions and grand-theoretical, sensitizing devices. Mechanisms, however, are not mere causal links. Respecting the importance given to

actors in the methodological individualism, Hedström and Swedberg further cites Jon Elster's (1989) work on the matter and reminds their readers that mechanisms must be distinguished from predictions, assertions, statements on causes and effects, storytelling, correlations and necessitations. Mechanisms *explain* effects that bind variables but do not predict their correlation or their conduct, as statistical analyses would do for example. Gross (2009) stresses a minimum level of generality implied with mechanisms (please note however that minimum does not mean a quasi-absence of generality). In organization and management theory, with respect to this view on mechanisms and actors, Davis and Marquis claim that in a capitalist economy we can be "confident that actors will respond to particular pressures, but uncertain in what direction" (2006: 336). This perspective is therefore perfectly in line with our theoretical discussion, in which we saw how the sociality of actors in multiple contexts can be the source for variation in actors' reactions to existing paths.

Mechanism-based thinking is made of conjectures about "recurrent processes generating a specific kind of outcome" (Mayntz 2004: 237). As a result, they are not easily perceptible. As a matter of fact it is even more difficult to make them perceptible to the reader. In their empirical work, researchers have to guess and induce them (see Bunge 2004, for a discussion) out of the narrative they reconstructed. To Mayntz "a mechanism is only *identified* when the process linking an outcome and specific initial conditions is spelled out" (2004: 241 – emphasis in original). To Bunge (1997), identifying a mechanism means interpreting a social fact to show the meaning it carries for the agent under scrutiny. To unpack mechanisms in this work, I relied on several approaches. Hedström and Swedberg propose a taxonomy (1996; 1998) with three types of mechanisms: situational mechanisms (i.e. processes at macro-levels that contextualize and determine action at the micro-level); action-formation mechanisms (i.e. micro-level processes that form action); and transformational mechanisms (i.e. processes exerted at the micro-level that further impact the macro-level). Anderson and his co-authors translated (2006: 12) this taxonomy into a structurationist perspective (inspired by Barley and Tolbert 1997), and stressed especially the study of situational and transformational mechanisms as iterations between structural and action realm.

A journey across levels is necessary to induce mechanisms (Gross 2009). Indeed it may be particularly difficult to observe mechanisms at the micro-level especially, without interpreting situations and statements from the field; human brains remain black

boxes. In most cases, an empirical approach that produces substantial results is the observing of some patterns (e.g. Koch 2008) or of some escalations (e.g. Schneiberg and Clemens 2006). For example Knapp (2007) suggests the identification of accumulation of privileges, in case of dysfunctional paths, and the emergence of shared norms of conduct in case of more functional paths. Masuch (1985) goes in a similar direction and, under the heading 'vicious circles', depicts the study of feedback loops and of escalating processes using the payoff matrix of the prisoners' dilemma. While the overall evolution can be pictured that way, some work, based on more qualitative material like interviews or textual analyses, should help illustrate and reasoning on the mechanisms that support the phenomenon observed. For example Gilbert (2005), in his work on threat perception and its effect on rigidity in resource repartitions, makes extensive use of interviews to illustrate the pattern of action he identified and to understand the depth of the mechanisms and their impact.

Research Design and Analysis

This research project started in March 2009. A couple of months before, in October 2008, I met with a UNESCO-WH program specialist in his office in Paris. My initial idea behind this interview was my looking for a research project about how organizations make use of institutional requirements to redefine their own strategies and lock themselves to related sources of funding. During this discussion, I became aware of the Dresden case, described as a puzzling phenomenon of persisting conduct. Eventually I flew back to Berlin and left my notes aside during the winter to attend the remaining elements of my doctoral coursework (April 2008 to March 2009) and to perform some teaching-service (October to December 2008). During the Christmas break of 2009, I had some initial thoughts on the Dresden case and researched basic information on the story, mostly using newspaper articles and documents I could find online, and gave phone calls to people involved in the conflict. Based on this initial data, I started framing the case. I wrote a ten-page research proposal that I delivered on January 30, 2009 to the university. I presented the research proposal on February 06, 2009, to the committee of the doctoral program "Research on organizational paths". The case received official approval. Research work started in the end of February 2009, as the project was assigned a supervisorial team. The iterative data collection, the

formulation and presentations of results at conferences,[12] and the writing of the inaugural doctoral dissertation took place from March 2009 to March 2011, as defined by the funding policy and didactic framework of the doctoral program.

In this section I detail the various stages of this study. Three steps with different focus and goals drove the research process, inspired by Langley's (1999) recommendations:

1) The constitution of a case data-bank
2) The writing of a thick description of the case
3) The tracing of process and building of analytical categories

The research started with intense efforts of data collection and interpretation to reconstruct the case in a historical manner. During those first rounds of collection and analyses, the design of the study was formulated.

On Design

Exemplary for the kind of research criticized by historians and process researchers, Siggelkow (2007) provocatively argued that cases should only be studied if they report on extreme and unknown conditions, such as the story of a victim of a dramatic work accident who would survive with a large hole across his head, or the hypothetical case of a talking pig. This positivistic interpretation of case research is not new. Eisenhardt, a couple of years earlier, had made the argument that some four to nine cases were required to make valid theorizing with cases (1989). In fact, in spite of Eisenhardt's patience and Siggelkow's dubious taste for metaphors, the interest for single-case designs had long been made clear. Dyer and Wilkins (1991) reminded their readers that most great works in organization theory were derived from one to two cases (e.g. Crozier 1964; Selznick 1949), up to four (Dalton 1959). In these studies, the organizations studied were exemplary organizations. What made the research interesting were the *depth* of the study and the richness of their details. To Dyer and Wilkins,

[12] Related works and parts of this research were/will be presented at the 27th EGOS Colloquium (July 2011, Gothenburg), the 2nd International Conference on Path Dependence (March 2011, Berlin), the 70th Meetings of the Academy of Management, OMT Division (August 2010, Montreal), the 26th EGOS Colloquium (July 2010, Universidade Nova, Lisbon), the Constructing Green Conference (May 2010, University of Michigan, Ann Arbor); the International Summer School on the Logic of Self-Reinforcing Processes (July 2009, Berlin), and the 2nd International Conference on Institutions (June 2009, University of Alberta).

research is better off with a thick and well-researched case study that tells a good story than with the definition and measurement of sharper constructs across multiple settings.

An Embedded Single Case Study

This piece of research draws on one case, since this case is a rather unique one: for the very first time in its history, the World Heritage Program was faced with radical incompliance and had to delete a site from its list. The goal of the study was to observe the dynamics that underlie sustained conflicts in order to understand where such conflicts come from, and why organizational decisions become, over time, so difficult to disrupt. In this respect, the Dresden case is exemplary and unique at the same time. To formulate the research design, I relied on a set of framing dimensions (Miles and Huberman 1994; Yin 2009), as depicted in table 2. Because the City as such is indeed the organization responsible for the project (in the sense of King et al. 2010), the case study I conducted focused on the conduct of the *City of Dresden* as *focal unit*, with respect to the construction project WSB as *boundary object* to the analysis.[13] With "the City of Dresden" I mean the formal organization and its *sub-units*, as defined administratively: the City Council (CC), the City Administration (CA), the Mayor (who chairs both the council and the administration) and the political faction represented in the council.

Looking at internal dynamics in collective structures is the way to understand how decisions emerge at different periods and how structures are used by the members of the organization in this process. After the first pilot research on the case, I identified the *embedding context* (i.e. the institutional forces exerted on the City with respect to the bridge project) as well as the mediating actors that constitute the City's environment. The actors listed below were all involved, at different point in time, and with different degrees, in the project led by the City. They all had, at some points, some influence on the conflicting project. Similarly, the temporal boundaries were set as a result of the pilot research on the case. The first temporal boundaries (1862-1994) provide details on the historical context and depict the repeated instantiations and their

[13] Again, with boundary object I mean the rationale to which I bounded the data collection and case analysis (different from Star and Griesmeier 1989). This was necessary to determine what data was relevant and what actor was worth looking at in the process. This is similar to what Miles and Huberman call "phenomenon" (1994:26).

constrictions. This time period gives us a starting point to further observe the current instantiation and explain its dynamics during the time period 1994 to June 25, 2009, date of the official deletion of the site from the UNESCO-WH list.

Design Dimensions	**The Dresden Case**
Embedded focal unit	City of Dresden (organization, as defined administratively)
Boundary object	Waldschlösschen bridge project
Sub-units (within focal unit)	• City-council • City Administration • Mayor • Political factions
Environment and institutional determinants	• Municipal, regional and national jurisdictions • Political landscape • Public opinion • Local history • Traffic situation • UNESCO-World Heritage convention and management guidelines
Mediating actors in the focal unit's environment	• Regional Directorate • Local State government (Free State of Saxony) • UNESCO-WH Center • UNESCO-WH Committee • Administrative courts • ICOMOS (NGO in charge of evaluations for WH) • Architects and constructors • Social movements • Individual leaders and experts involved occasionally
Temporal bracketing	• 1862-1994 → path emergence • 1994- June 25, 2009 → path instantiation

Table 2 - Case design

The Focal-Unit and its Stakeholders

Dresden is the capital city of the Free State of Saxony, located at the eastern borders to Poland and the Czech Republic. Historically, Dresden has always benefited from a specific fame. Once dubbed the Florence of the Elbe, the city was known for its baroque architecture and used to be one of the centers for the arts until World War II.

Numerous artists and writers reported on their stays in the city and various art movements took place within its walls. In the 1930's and 1940's, Dresden was largely involved in the German war effort and became a target of choice for the Allied Forces. During the nights of February 13 and 15, 1945, five air-raids delivered tons of bombs and incendiary material over the city, killing between 18.000 and 25.000 people. While the reasons for it are being challenged by historians, it is safe to claim that the city's destruction was also motivated by the symbolic weight it carried, Dresden being popular enough at that time to represent more than one large city. Most of the city center was devastated, as well as major parts of its suburbs. Eventually, the city engaged itself into efforts of reconstruction and most major monuments were rebuilt; today (2011) numerous projects are still in progress.

After the war, in 1948, the Free Sate of Saxony was integrated into the communist German Democratic Republic (GDR). In 1989, the Dresden's movements of resistance were particularly active in the protests that were spreading throughout the GDR. On October 3, 1990, one year after the fell of the wall in Berlin, Saxony joined the Federal Republic. Today's Germany functions as a federal parliamentary republic of sixteen sovereign states. The states are self-governed, with the legislative power divided between federation and states. In the City of Dresden, the Mayor (elected by the citizens) is head of the municipality. She/he rules as chairman of the City Council and manages the City Administration. The City Administration is divided into major domains of activities, like finances, security, culture, urban development, or economic development. The City Council is the elected representation of the citizens and decides upon the Administration's objectives. It entails missions to the Mayor via the motions it passes. Finally, between the state of Saxony and the City, a third level is decisive: the Regional Directorates. In Saxony three Regional Directorates are responsible for three major areas: Dresden, Leipzig, and Chemnitz. The Regional Directorates serve as monitoring bodies and survey the coordination of the local administrative actions as well as their legal legitimacy. Figure 6 illustrates the many relations and stakeholders to the City, with respect to the bridge project. Please note that relations among stakeholders are not taken into account in this depiction.

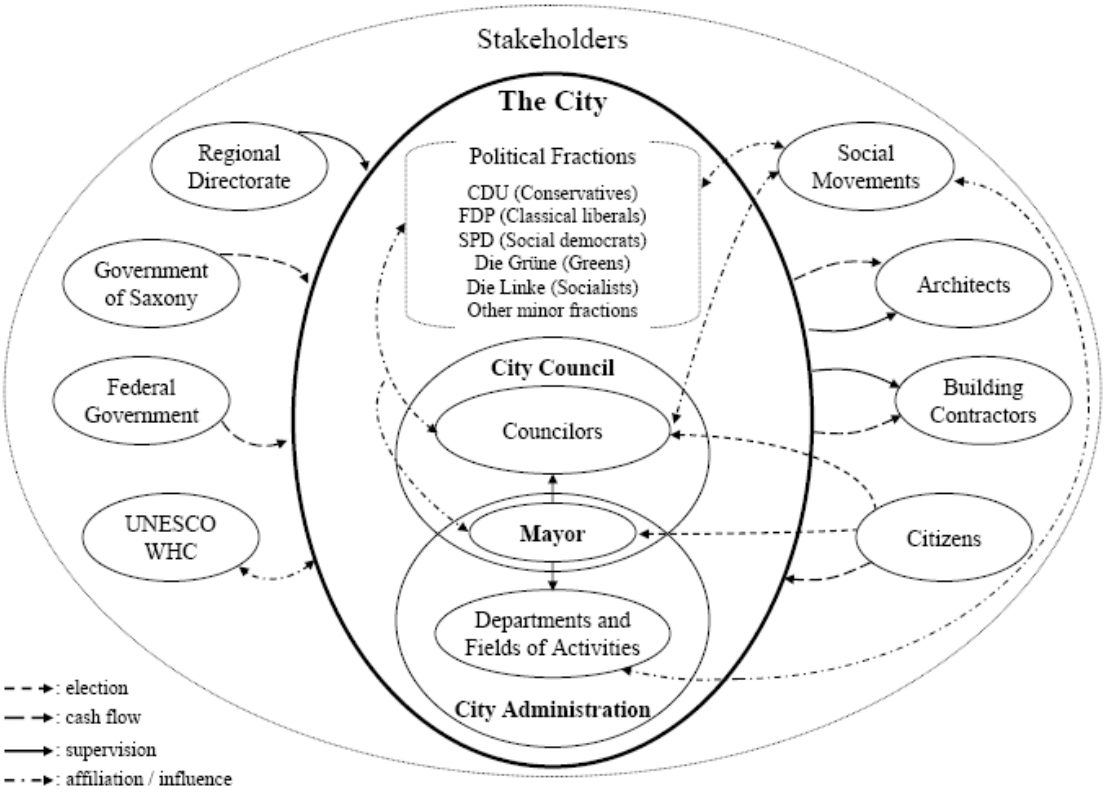


Figure 6 - The city as focal-unit

Validity Issues

Most case studies lack attention to criteria of validity. To improve the internal, construct, and external validity and the perceived reliability of their case studies, researchers should follow specific guidelines and try at least to satisfy most of them (Gibbert et al. 2008; Denzin and Lincoln 2000). Concerning the *internal validity* of the Dresden case, I formulated an analytical model derived from the neo-institutional theory of organizations and made use of pattern matching to grasp the case's relevance (see figure 7).

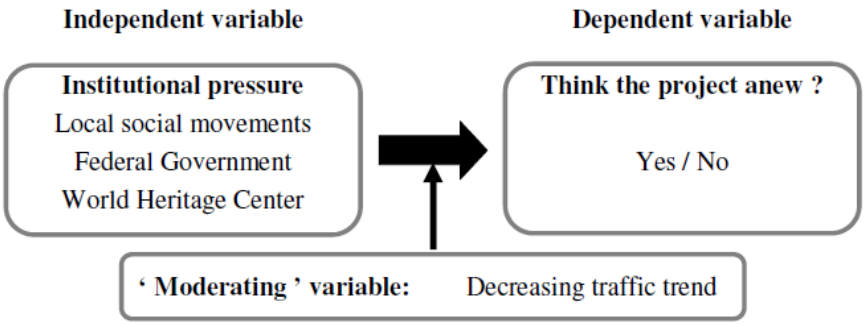


Figure 7 - The basic analytical model

Institutional theory, as we saw in the preceding chapter, would predict a rather clear influence of the institutional pressure on the organization's conduct. We saw, however, that in the Dresden case, things did not evolve that way. Instead the pressure escalated from intern to local and from local to international levels of institutional pressure. The conflict caved in and ended with a failure to compromise, officialised by the final deletion from the UNESCO-WH program. To explain this situation, we use the theory of path dependence and wish to show how a historical path emerged and influenced the choices among options in its most recent instantiation and how this triggered intern dynamics that evolved across levels to explain a phenomenon of organization resistance in a case of institutional pluralism. To improve *construct validity*, I triangulated information among several data sources, making use of interviews as much as of documents, maps, and press coverage. I repeatedly checked my conclusions with actors in the field. The *external validity* of the Dresden case is, by its very nature, low. Indeed such a case of persisting conduct, in incompliance with the UNESCO-WH program, had never occurred before. The possibility remains, however, for similar cases, within different institutional realms, to occur. In any case, the knowledge gathered with the Dresden story enriches the debate on organizational compliance, on the lack of it, and on persistence in organizational conduct in contexts of contradictory institutional pluralism by showing how a path-dependent perspective may provides different insights, and how institutional pluralism and pressures may be the direct result of the organization's conduct and of its members. In this respect the external validity is provided via the discussion that this case causes in terms of theory. Finally, with respect to *reliability*, I built a case study database, served by a systematic overview compiled in Excel, indexing all the material gathered and allowing any interested researchers to excavate source-material very easily, via the document's year,

source, sort, length, or issues treated. This methodological section further applies as case study protocol, summarizing all steps from case selection to data analysis and enables interested researchers to follow the analytical work and to appreciate its overall validity.

Data Sources and Collection: The Constitution of a Case Databank

The research for this study relies on multiple data sources. The collection initially started with informative material to gain an understanding of the overall story, broad enough to include as many positions as possible. I started with collecting press articles and interviews to shape an overview of the story. Numerous articles and chronicles could be found online via press archives databanks. I further collected all official documents and other relevant textual material (like press releases, content from websites of administrations involved and of social movements, feasibility studies, evaluative reports on various aspects of the issue, legal documents and reports of courts decisions, minutes of proceedings, intern notes, architectural working drafts, plans submissions) that I could track down, either via archival requests or with the help from contacts I had made in the field (see table 3). The collection of this documentary data was driven by questions I kept on asking to the field. This investigative logic helped me to look for new documents and to talk to actors I would not have thought of otherwise. Hence the data collected was issued by the City of Dresden or by the mediating actors listed in above. A databank of 542 documents was thus built for a total of 6508 pages. All documents have been exploited, although to different degrees, to write an extensive case report.

Variety of Documents	**Σ Documents**
Expert studies (mandated external expertise)	32
Informative documents (e.g. lobbying, campaigning)	22
Minutes of proceedings	20
Official documents (e.g. letters, motions, decisions)	110
Official reports (evaluative character)	31
Press releases	244
Public statements (individual nature, e.g. press, blogs)	25
Maps	22
Pictures	13
Web content	23
Total	**542** (= 6508 pages)

Table 3 - Case study database I – Documents

This phase further included the collection of informative material on local political issues and the traffic situation in Dresden, as well as on WH policies and other legal and environmental aspects. This exhaustive data base was enriched with numerous press articles (n=304) from the local newspaper with the widest distribution "*Sächsische Zeitung*", and 261 pages of comments written by readers in the internet forum of the second newspaper of the city "*DNN*", that I used to gain a finer understanding of the community's expectations and attitudes over time. I collected press articles for triangulation matters and to look for short interviews given in real time that could be used for the analyses. This was especially important for the time period 1994 to approximately 1998, as the internet was not commonly used yet by public administrations, to obtain more information on running issues. From 1998 on, public declarations and other information could be retrieved from websites and pages referenced in web-archives. I further collected visual data such as maps, 3D visualizations, as well as documentary videos and numerous pictures I made during repeated visits on the construction site. Finally, I collected a few scientific publications about the Dresden case when applicable, mostly in the field of international law and environment.

I also conducted interviews with 17 individuals involved in the project or the conflict, either personally or as spokespersons for specific organizations or sub-units,

like program specialists of the UNESCO, local politicians and environmentalists, professionals from diverse fields, current and former members of the City Administration, one former Mayor of the City (see table 4 for an overview). The conversation length varied from 0h25m to 3h42m. All interviews but one were taped and transcribed eventually. I could have organized more interviews as the snowball effect was working out very well. However, I considered the amount of documents and transcripts and limited myself to 17 interview-partners due to the time restriction of two year for completing this dissertation.

Background	**Interview Partners**
City Administration (current / former)	2/3
City Council	4
Regional Directorate	2
Social Movement (against WSB)	3
WH-Experts (WH-Center / German Commission)	2/1
Architects	1
Total Interview-Partners (Taped/Untaped)	17/1
Total Transcript Length	197 pages
Total Length	15h27m15s
Other Interviews *	23
Total Interviews	40

* Contemporary interviews given to the press by actors involved, 1994-2008

Table 4 - Case study database II – Interviews

Using retrospective interviews may suffer from bias in temporal stability (Golden 1992), even though this bias is often overestimated (Huber 1985). Ex-post rationalization of decisions and events one has attended remains a sense-making device that all individuals share and apply when asked to remember or to narrate (Weick 1995). This was the reason for my preferring the use of documents and contemporary interviews given to the press for the analysis. Relying heavily on documents, however, implies missing specific aspects that can or should not be reported. Hence I used the interviews for two reasons. First, my idea was to triangulate assertions and information from documents with explanations given by interviewees. In this respect I applied the idea of cross-checking (Bongrand and Laborier 2005), i.e. I considered information as

'existent' when I could find confirmation from two different sources, ideally from both supporters' and opponents' sides of the project. I kept this in mind and, during the interviews, took a silent and somewhat naïve posture enjoining the interview partners to talk freely about the core issue: the bridge project. This was inspired by narrative interviews techniques (Küsters 2006). In case it would not work out, I would manage the conversation with a standardized list of themes adapted to each interview partner, as a help for me to check whether all issues of interest had been tackled during the discussion. To start the conversation, I would present the project briefly. I would keep the research very broad in its presentation, describing it as a work on decision-making in large-scale projects, such as the construction of a bridge, by large administrations. I would then tackle the WSB project and end with the question:

"Could you please tell me how it all went?

– From the very beginning?

– Ideally: yes."

Despite the fact that the issue had remained a sensitive conflict in the city, the interview partners spoke freely and, often, with passion. During the conversation, I tried to disappear and let them talk, guiding smoothly the conversation when needed, while I took notes on irregularities. Once the interviewees had talked extensively, or at least said what they wanted to say on the matter, I came back to conflicting information, asked for precisions, and confronted what they said with more precise accounts I had gathered in the research process. This occasioned some anger sometimes. Nevertheless, this was the possibility for me to lead the interviewees out of mere ex-post sense-making by observing their reaction when faced with an informed critic. In most cases, conversations and contents changed and became more interesting with respect to insider knowledge. My second motivation was precisely to observe how individuals would reconstruct the process I was studying. While documents and triangulation would get me closer to factual accuracy, the use of narrative interviews was a great help to observe how a shared and constructed collective rationality had emerged along the process and how people would make sense of former decisions and choices. An overview of the interview-guidelines can be consulted in the appendix 1.

Data Reduction: Producing a Thick Description

Similar to Miles (1979), in his study of public schools, or Jarzabkowski (2008), in her study of strategizing in universities, I started the analysis by writing a thick description of the case, drawing on the information gathered to reduce the raw data. This step allows suggesting new data collection phases, new questions, new ways of thinking about links and causality, and new points of focus in the databank. This is also an analytical device that allows first systemic thinking to look for patterns in events or reactions, as well as a contextualist tool to observe sequences and their repercussions across levels (Langley 1999). These initial framing rounds helped me to take decisions and to draw first working hypotheses. In this writing I described extensively what I could learn from the data I had collected with as little inference from analytical work in the writing as possible. I regularly updated this document with new information. This process was driven by the search for anomalies and counter-factual evidence. My first attempts ended in a narrative, journalism-like story. I reported on the key events that were identified, mentioned, and sometimes implicitly stressed in the data. At this stage, I especially went after triangulation. While I wrote this account, I kept on going back to the data to break the information in a more structured manner and asked the questions: What happened? When? Why? Who was involved? Where? How (i.e. what means, or strategy, or method, were used)? How long did it last? During this first step I felt it was necessary to keep asking questions to the field, and to oneself, so as to trigger discussions between the material gathered and the understanding of the case as it was in its infancy. Hence if the collection and the analysis followed a rather strict protocol (such as observing specific actors and constructs that theoretically frame the study) the process itself has been an evolutionary one since the very beginning, with questions on new issues and potential rival explanations appearing after each step taken. I updated and printed regularly the filed thus compiled and carried it daily with me while proceeding in this research. I kept on writing down some memos and notes and new information, directly with a pen on the paper, and updated the file continually. It became a very difficult decision to let go of this file and to proceed with finer analysis. At some point in time, however, I started developing more abstract considerations during the process, and started writing down some encompassing models and figures, summarizing some gut feelings, all mixed up with theories and empirical data. It is always difficult to

say how and why some ideas came along in the analytical process (Smith 2002). Nevertheless, at this point I knew I was ready to dig further.

Process-Tracing and Category-Building

A clear cut between the different phases that compose this research is easily described. The practice of data analysis, however, happens to be more complex, with analytical phases melting in, and nurturing each other. Nevertheless, at some point in time, I started coding mentally, using the data collected and the file on events that I had compiled. I started drawing models of analysis; down on loose sheets of papers, as well as more formal models on a white board, back home. I collected these raw models in a file and made their pictures to keep a track in digital archives. I cannot really tell where these badly-drawn models came from. Again, for similar reasons, quantitative researchers will not be able to tell you where the initial idea for new theoretical hypotheses actually came from. This is when creativity pops in. To dig deeper into the material, I started bracketing the thick description of events I had compiled along two temporal dimensions: the historical emergence of a path, as defined by the theory of path dependence (Koch 2008; Sydow et al. 2009), and its current instantiation in the form of the WSB.

Pacing Path Emergence with ESA

To research on path instantiation means the identification of a path, and of the resources and incentives on which it draws. With respect to path emergence, the analysis of path dependence is process-based and draws its explanatory power on two main analytical steps:

> (1) The deductive identification of (a) temporally remote events that triggered the current course of action; (b) the spurs of rigidities and, ultimately, of a lock-in.
>
> (2) The inductive identification of the mechanisms that reinforced the course of action over time.

To answer the points (a) and (b), I immersed myself into my detailed account of

the case, focusing on facts. Doing this, I identified the main events and important decisions in the historical background of the current project. Using these first results, I sorted out the data-material and the case using the ESA technique. I entered all events I had identified in the software ETHNO. To define causality, the software asks the analyst whether an event was cause of a next event. To accompany my analysis of causality, I made use of a heuristic developed by Runde and de Rond (2010) to assist my analysis. They give three criteria to define causality:

(1) "Were the factors cited as causes actually present in the situation in which the event to be explained arose?"

(2) "Given that the factors cited as causes were indeed present in the situation in which the event to be explained arose, were they also causally effective?"

And (3): "Given that the causes cited in an explanation are accepted as causes of the event to be explained, are they 'sufficient' to provide satisfactory explanation of that event?"

(In Runde and de Rond, 2010: 438, 440, 442, respectively).

As output, the software delivers a chain of causality. To diagnose path dependence I built one chain informed by what the individuals I had interviewed told me and by the communication of the City on the bridge. Causal mapping occurs in people's minds and may only be revealed in public discussions and exposure to situations of decision-making (Nelson et al. 2000). In doing so, I tried to draw a chain of causality that would represent the local mental model used to define the necessity of the bridge.

I looked for links of causality in the material I had selected and summarized the causal assertions about the causes for the bridge as defined by the supporters of the project. Eventually I computed the chain of causality. Then I went back to my material and examined whether the causalities used by the supporters of the bridge were correct or not, and whether I could find an alternative explanation in the material. Drawing this comparison allowed me to observe how a collective rationality had emerged and to proof the claimed determinism of the project.

In this critical examination, I used causal statements identified from the documents and interviews given to the press. In this respect, I identified the incentives on which the proponents of the bridge had built to determine their favorite choice at each causal momentum. When the assertions of the informants would not match the

material I had gathered, I discussed the dynamics that would explain why a bridge at Waldschlösschen became the first choice before any decisions had been taken. Retrospective sense-making about the past is a classical problem in longitudinal studies. In this case it is herewith considered as analytical opportunity and helps us to unpack mental mappings about causality shared in the community.

Unpacking the Dynamics of Path Instantiation

The path being thus identified, I unpacked the dynamics of the actual path instantiation in its current form. To accompany this process, I worked again on the thick description I had compiled and looked for regularities and patterns.

(1) I looked in the chronology for slices or main episodes. Studying a public administration makes this very handy, since every new step in the project was punctuated with an official motion voted by the City Council. I thus decomposed the timeframe into numerous official motions and for each of them, I tried to write bottom up what had happened within the City to reach this decision, the subsequent impact of this decision on the institutional environment, and the influence of this for the next decision.

(2) I started coding the activities performed by the City with respect to the bridge project.[14] I ended with descriptive codes, like planning, budgeting, communication, voting, etc. Eventually I went back to the document-source to look in more details at the exact sentences or quotes to verify whether the document would really support this interpretation or not. I included a lot of these quotes in the analysis that follows.

Eventually I started reflecting about the codes on activities by putting them in relation into a sort of mental matrix of theoretical sensitizing devices. Such devices "sensitize the observed to notice and question things that had previously been taken for granted" (Weick 1976: 2). To do so, I started grouping together the codes on activities under specific clusters of activities. In a first phase, I started putting them in relation with the theory of structuration. I observed how the City structured its work of instantiation and maintained its project on track while others worked for disrupting it.

[14] I proceeded with assistance of the software Altlas.ti.

To do so, I considered the sequences of decisions I had identified. In each sequence I filtered my data through the concepts from structuration theory (i.e. rules of signification and of legitimation and resources of domination) and identified three strategies: *power-retention; myth-development;* and *project-binding*. In a second phase, drawing on this first data sense-making, I looked for potential self-reinforcing dynamics as results from this structuring process (i.e. learning effects, coordination effects, complementarities and the benefits from scale-effects, and adaptive expectations). I used these concepts to apprehend my data and my initial rounds of coding and to look at the impact of the structuring work in the City. I had identified *adaptive expectations* as one main mechanism in the historical analysis of the path. I relied on the four anyway because I did not want to exclude the potential for actors to mobilize new resources subject to self-reinforcement. This reflection on the material evolved at the interplay of the raw-data and of this matrix of theoretical sensitizing devices. I kept on going back and forth between theories and data, identifying spurs of self-reinforcing mechanisms, getting back to data to find more evidence, abandoning the initial idea, starting all over again, etc. This analytical process allowed for the development of two mechanisms that are translated into the case's reality, while, at the same time, robust and abstract enough to be discussed and implemented into the theoretical discussion. The two are linked to two self-reinforcing mechanisms, respectively: learning effects and adaptive expectations. Finally, in a third phase, I accounted for the repeated attempts of disruption in the project's history by using the idea of dialectic of control (Giddens 1984). I observed the reactions of the supporters to the disruption, their strategies to maintain the project, and the implication of these on the strategies of the opponents. In this context I tried to capture the role played by the self-reinforcing dynamics and the consequences of the conflict for both parties. The following three chapters document the results of these analyses with more details, while staying true to the narrative nature of historical analyses of organizations in their presentation.

Chapter IV

—

Period 1: Isn't a Bridge, a Path? A Community Locked in

A path-dependent organization is dependent on the path, or the way, it has walked down. Being dependent on subsidies is not being path-dependent. This is being subsidies-dependent. Being locked in the suggestive power of the past, this is actual path dependence. In the Dresden case, I argue that the City of Dresden is dependent on the way it has walked down, with respect to its effort for constructing a bridge at Waldschlösschen as solution to the problems experienced by its citizens. The questions driving this chapter are therefore directly related with research on path dependence and represents what one could commonly call a "path diagnosis". Sydow and his co-authors (2009) have already addressed and summarized the ingredients for an organization to be recognized path-dependent: some timely remote events with great influence, a chain of iterations, observable patterns that one can relate to self-reinforcing mechanisms, and a resistance to change that grows as the scope of action diminishes. Koch (2008) also reminds us that path dependence goes further than "history matters" and tries to explain how and why it does matter. He proposes the identification of:

(1) A specific pattern developed over time
(2) The self-reinforcing loop enabling its maintenance overtime
(3) Events and junctures that contributed to the pattern's trajectory
(4) A related lack of strategic choice

Obviously, with respect to the WSB, I cannot unpack *all* instantiations of the project from its first debate in the early 20th century until today. I can, however, account for these actions and decisions and look at their impact on the current instantiation. Indeed in path dependence "the logic of the argument suggests (…) that contemporary outcomes may be highly sensitive to initial conditions. It also suggests the need for an

event-centred study of history in order to understand the present" (Aminzade 1992: 463). To do so, I proposed using historical analysis, with the assistance of the ESA technique, a set of heuristics particularly suitable "to study cultural routines and the subjective representation of reality" (Griffin 1993: 1105).

Historical Analysis: The Suggestive Effect of the Past

We saw that the project as such was officially started in 1994, as part of a broader public policy on traffic. However, projects to cross the Elbe at Waldschlösschen had been in discussion for decades already. Following former expert studies (Institute of Urban Design and Regional Planning [henceforth IUDRP] 2006) and informative material from the CA,[15] I start this description with the 'general construction plan' of 1862, since it was made mention of a traverse at this location for the first time at this occasion. The interested reader may want to refer to the appendix 2, at the end of this volume, for an overview of all major events of this case (covering the period 1862-2009), that will be treated in this analysis.

A Historic Pattern of Instantiations

The plan of 1862 (see figure 8) projected the urban evolution of the municipality, focusing less on traffic issues than on surfaces and construction matters. It foresaw a first ring around the city center, and, in a near future, a second one, crossing the Elbe at Waldschlösschen (henceforth WS). Those rings were there to border the construction efforts and delineate the limits between open surfaces and protected surfaces for landscape-uses. According to the CA, a first bridge project can be found in the plans of the City as early as in 1876.[16] In most cases, the subsequent projects were put on pause for financial reasons. Eventually, funding played a crucial role in the decision to build at Waldschlösschen in the early 1990's.

[15] 20060300 CA ID „Waldschlösschenbrücke und Welterbe"
[16] 19970625 CA OD „Realisierungswettbewerb Neue Elbebrücke am Standort Waldschlösschen in Dresden – Auslobung"

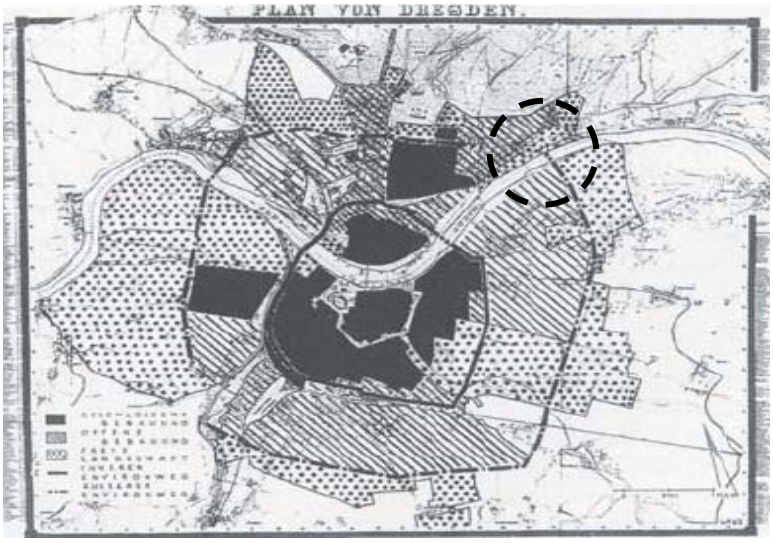


Figure 8 - General construction plan of 1862 (with own addition)[17]

The Elbe cuts the city in the middle of its urban concentration and was gradually enlarged during the 19th century. The meadows, however, remained large and unexploited due to frequent risks of flooding. Within the last years of the 19th century and the first of the 20th, the Carola and the Albert bridges were built in the city center, thus forming a first ring around the, today old (left river side) and new (right river side), city centers (IUDRP 2006). In 1900 and 1911, citizens of the districts south-east of the city center first plead for a traverse at WS to reach the forest more conveniently. The City refused this on economic grounds. In the 30's, the preliminary work on a larger bridge started: between 1926 and 1935 a new traverse in this area received the attention of the department for city development in forms of plans and pilot surveys.[18] As a result, analyses of building-soils and related pilot studies on structural engineering were performed during the 1930's. This bridge was to be built at WS to connect the main roads to the new motorway passing by, north-west from the city center. However, World War II and related military efforts stopped the project. Eventually, the city was left in ruins after the military raids of February 1945. Between 1960 and 1970, various studies were conducted in this area. At that time, a traverse at WS was to complement the planned construction of residential districts in the North and the East of the city. As part of this effort, a six-lane bridge at WS got listed into the general traffic plan of Dresden in 1967, and again in the one of 1976. They both remained mere potential projects

[17] 20060300 CA ID „Waldschlösschenbrücke und Welterbe" (p. 4)
[18] 20090803 CA OD Chronologie 1926-2009

lacking finances.[19] Between 1976 and 1979, the City thought the project anew and planed an eight-lane bridge at WS with very large intersections in the meadows. Hereby it could keep the project in the plans until funding would be made possible. Analytical work for a bridge at WS was then resumed in 1984. It continued until 1986, and ended with solutions for four- and six-lane bridges. This time however, the project was decided officially in a motion by the ministry for traffic issues of the German Democratic Republic. Construction was about to start in 1990. An architectural competition took place in 1988, and, in 1989, a four-lane cable-stayed bridge was praised as the winning draft.

Meanwhile, on October 3d, 1990, Germany reunified. In Dresden, as in any other municipality of the former GDR, car traffic had remained limited due to a centralized system of distribution with years of waiting-list for consumers willing to buy a vehicle. A boom in traffic was thus expected and roads and traffic infrastructures received focused attention. The plans of 1989 for a bridge at WS were then considered outdated. But the idea of a bridge at WS remained in everybody's minds. Between 1990 and 1994, various studies were performed on tunnels and bridges at WS among other locations. The WSB became part of the broader policy for mobility and traffic documented in the traffic concept of 1994. This plan was voted on January 28, 1994, by the CC. The WSB, however, was then ranked as a second priority in terms of bridge construction, behind the construction of a bridge on the west side of the city (known as 3rd Marien Bridge; more on that later).[20]

One Problem: The Traffic Situation

The construction of a new traverse was part of the traffic plan called 'Verkehrskonzept 1994' (henceforth V94). Between 1990 and 1993, the CA evaluated many alternatives for traffic improvement and projected various solutions. For example the V94 projected the renovation of several older bridges, the deviation of some of the main axes to improve the traffic situation in the city center, and the construction of new traverses in the western and eastern parts of the city, to deviate the traffic away from the

[19] 19970625 CA OD „Realisierungswettbewerb Neue Elbebrücke am Standort Waldschlösschen in Dresden - Auslobung“

[20] 19940501 CA ID “Verkehrskonzept der Landeshauptstadt”

south and south-east towards the northern area. The V94 received quick approval from the community (Bartsch, 2008) and was voted by the CC in January, with 81 votes for the plan, 4 against, and 6 blanks.

The official text summarizing the V94 introduced the traffic structures in Dresden as well-networked within both river banks, but with the city center serving as nodal transfer-point (see red circle in figure 9 – City center marked with an "A").[21] The introduction to the material further emphasized the expected boom in political, economic, and cultural importance awaiting Dresden.

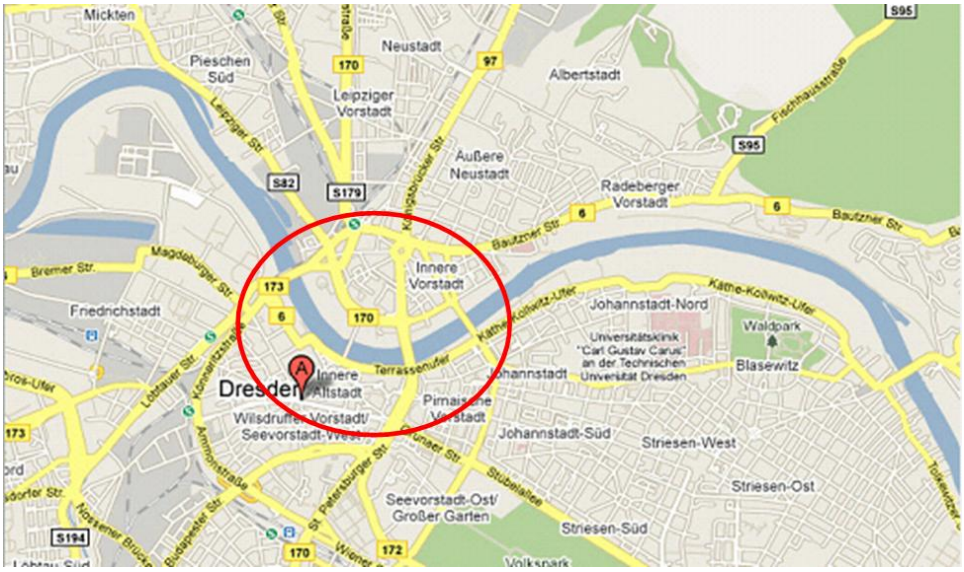


Figure 9 - Map of Dresden (Source: Google Maps + own addition)

An expected rise in traffic volumes was the core-rationale underlying this policy. Since 1989, motorized traffic had been increasing as a side-effect of the German reunification. During the GDR regime, and as in most other Eastern Economies, the automobile distribution had been suffering of shortage (see table 5, adapted from Zatlin 1997: 364). In 1988, the population in Eastern Europe counted 398.310.000 inhabitants for a total of 41.397.000 vehicles and a yearly production of 2.144.759 private vehicles. 218.045 of these vehicles were produced in the GDR for a population of approximately 16 millions inhabitants (Nestorovic 1991). The cheapest Trabant cost 12.000 marks and the cheapest Wartburg 30.200 marks, for an average monthly income of 800 marks (Zatlin 1997). The relation of the East-Germans to the shortage in cars had been reckoned as problematic by the authorities for years, warned that "the political stability

[21] 19940501 CA ID «Verkehrskonzept der Landeshauptstadt"

of the GDR risked becoming dependent upon the availability of one consumer good, the automobile" (Zatlin 1997: 358).

Year	Σ cars produced	Σ cars exported	Σ cars imported	Σ cars available to population
1986	217.931	73.338	24.238	147.900
1987	217.936	72.913	23.803	146.700
1888	218.045	69.689	18.163	147.910
1989	216.969	56.080	21.700	150.100

Table 5 - Automobile production in East Germany

According to Zatlin (1997), in the late 1980's, 50% of the households in East Germany owned a car. To him, however, a more realistic estimation would lie under 40%. In comparison, in West-Germany, the distribution reached an average of one car for two citizens and was present in 70% of the households. The situation shifted quickly after the fall of the Berlin Wall in the winter of 1989. Zatlin writes about "a wave of automobile purchases soon after German monetary union in July of 1990" (1997: 363). Needless to say, in Dresden, one of the leading economies in the former GDR, traffic-related expectations were high and particularly visible for the citizens in the following years, as indicated in the summarizing table 6.

Issue	**The Expectation of Traffic Congestion**
Source	Exemplary Quotes
Declarations in/to the Press	"The current dispute on bridges draws especially on the postulate that the car-traffic will increase steadily, and the actors in this dispute endorse this trend" (Head of Environment, PA SZ 1996).[22] "In 1992/93, as traffic problems were rising above our heads, as citizens, with their reluctance for the bad situation, were unhesitating – which takes time, with the prevalent dolefulness – in that time, the City Administration had quickly the 'still missing Traffic Concept' down pat. 'Once we'll have it, we'll reach the shore', so they said. (…) The residents in the Luther Street, the Biesnitzer Street, the Rauschwalder, and other highly frequented streets are still helplessly observing how the state of their houses and apartments, their nerves and their health, get poisoned by traffic noise, agitation, and emissions" (Journalist, PA SZ 1994).[23] "The traffic drags itself sluggishly over the Blue Wonder [bridge]. By now the average speed in the daytime falls at 2 kmh" (Journalist, PA SZ 1994).[24]

[22] 19960607 PA SZ „Vorschläge zu Brücken bevorzugen das Auto"
[23] 19940216 PA SZ „Eher schlechte als rechte Konzeptebehindern Lösung der Verkehrsprobleme" (p. 1)
[24] 19941026 PA SZ „Brücken Mangel"

Interviews	"It was the identification of the project with economic progress. Where traffic rolls, where cars can be driven, there is prosperity, right? The car was also… it stood for the western wealth. Here [i.e. East-Germany] we drove around wit small Trabants, and in the west they drove VW Golf and upscale, right? Well people apprehended it that way. That's how they identified car and traffic with wealth. And they all strove for wealth; one can easily understand it" (City Councillor, member f the local SPD-faction, interview 2010). „After the traffic augmented explosively, there you had the, I'd say the usual suspects, I mean the west, west-German, or normal west-European traffic conditions, they adjusted themselves quickly in Dresden, and thereby the traffic explosion, everyone wanted a car, and obtained one overnight, the Trabant was lost out, and you can hardly figure it out today, what was going on, on the streets back then" (City Councillor, member of the local CDU-faction, interview 2010).
Documents	"It is to be assumed that the accretion in personal motorization will continue to develop progressively" (CA ID 1994).[25] "This unwanted evolution process will continue if we are not successful in designing strategies for traffic reduction" (CA ID 1994).[26] "It would be easier to cope with a future dismantling [i.e. of the bridge] than to wait for a [decreasing] trend during an undefined period of time" (Participant, CA MP 1996).[27] "Fact is that the citizens of our city expect a change and an action" (Consultant, CA MP 1996).[28]

Table 6 - The expectation of traffic congestion

Assumptions of traffic increase were based on forecasts compiled by the CA in 1989. However, the figure expected for the year 2000 had already been reached in 1991. Similar analysis showed also the important increase in individual motorized traffic (cars, motorbikes, car-sharing) as compared to the usage of public transportations in Dresden. The trend was more important than in other comparable municipalities (see table 7). For example, Stockholm and Amsterdam had managed to reduce the usage of individual motorized traffic with, respectively, the introduction of road-pricing and of support for bicycle traffic. In comparison the individual motorized traffic in Dresden rose by within two years.

[25] 19940501 CA ID «Verkehrskonzept der Landeshauptstadt" (p. 9)
[26] Ibid, p. 10.
[27] 19960528 CA MP "Niederschrift zum Workshop Dresdner Elbbrücken am 28./ 29.05.1996" (p. 19)
[28] Ibid, p. 21.

		Means of Transportation*			
	Year	**IMT**	**PT**	**Bicycle**	**By Foot**
Dresden	1987	30	46	8	16
	1991	51	30	6	13
Hannover	1989	48	24	11	16
Zürich	1989	34	47	19	---
Stockholm	1989	34	54	4	8
Amsterdam	1989	40	25	24	11

* In % of all means of transport
IMT: Individual Motorized Transportation
PT: Public Transportation

Table 7 - Means of transportation in comparison[29]

The CA identified a series of related problems, among others: traffic jams, reduction in average journey time, and obstacles for public transportations. Further statements and studies concerned themselves with emissions and environmental impacts, noise, and evaluations of the public transportation system and of the usage of bicycles. Globally, the evaluations of the network uncovered great challenges: 44% of the road network suffered serious damages and 42% suffered small damages. 27% of the bridges in the area were suitable, 51% showed small damages, 15% showed limited load capacity and safety, and 7% of them were still partly destroyed (figures for 1992).[30] The City thus defined three main strategic visions in its traffic concept:

(1) To develop an urban traffic that is socially acceptable and inclusive.
(2) To develop an urban traffic that is environmentally acceptable.
(3) To develop an urban traffic that is locally acceptable and implies the development of streets and parking lots that is appropriate to the absorbing capacity.

The policy also targeted traffic-related issues like regulation of traffic via emission and speed limits, freight haulage, tourism (coaches and parking lots especially), public transportation (with a focus on buses, ferries and city railway), and the network of main roads (p.33).[31] In this respect, bridges were considered, starting with the renovation of the existing ones. The construction of new bridges was depending on the functionality of the older bridges. As the CC voted the V94, it

[29] 19940501 CA ID „Verkehrskonzept der Landeshauptstadt" (p. 10)
[30] Ibid.
[31] Ibid.

mentioned in its motion that changes were to be made in the official text.[32] Among many details, priorities in bridge construction were to concern themselves with the WSB as third priority, after the solving of traffic issues on the Marien-bridge (west from the city center) and the "Blue Wonder" bridge (east from the city center). The motion explicitly asked to keep the WSB as last priority, and to include the following piece of information:

> "The realization of this measure can only be carried out within the financial possibilities available" (CC OD 1994)[33]

The first wave of realizations saw the construction of a traverse at WS as last priority, after numerous other works. It foresaw the construction of a so-called "third" Marien-bridge (two bridges exist already at this location: the Marien-bridge for motorized traffic and the second Marien-bridge for trains). A third one was to be built parallel to this, to lighten the load on the first bridge, offer a fork-like connection, and shift the traffic driving to the north. Around 2000, renovation works were planed for the Blue Wonder (east side of the city). Finally, the construction of a traverse at WS was projected, also after the year 2000, if applicable. The main argument for this traverse was to link the eastern to the northern part of the city, where the highway from Berlin is passing by. With this piece of infrastructure, the City was expecting to calm down the traffic in the new city center.

However, the impact of this increase in traffic on the community was so strong that it was often taken as an element to channel decisions without precise scientific measures of the problem. A member of the board for city development deplored:

> "After all this time spent for implementation, the concept does not yet fulfill all expectations (…). It misses measures of traffic for the main axes. I have been asking for these scientific statements since 1992" (in PA SZ, 1994).[34]

Similarly, as the green party asked for an inspection of environmental feasibility, the same member of the board again stated:

[32] 19940128 CC OD Beschluss 2126-80-94
[33] Ibid, p. 43.
[34] 19940126 PA SZ „Mit fünf Mark fürs Parkenden Verkehr einschränken„

> "Without such studies, a traverse is not possible. But before the environmental feasibility, traffic studies are necessary" (in PA SZ 1994).[35]

Nonetheless, the candidates running for the Mayor-election took the project into their campaign. The candidate and incumbent from the center-right CDU, had also made the project his own and decidedly campaigned with the bridge. Typically, the green party described the further development of main axes as a way to increase the negative effects of traffic even more and took position against the WSB. In June 1994, the incumbent Mayor was newly elected and stated on infrastructure building in the press:

> "My goal is to start with the building of the WSB" (in PA SZ 1994).[36]

One Ready-Made Solution: The Suggestive Effect of Former Instantiations

As we just saw, the idea of a bridge at, or close to, WS has been instantiated on numerous occasions and with varying depths since 1862. In the 1990's, interestingly, the idea of a bridge at WS quickly became the primer solution to the rising volumes of traffic. A dominant and shared rationality concerning the reasons and the need for a bridge is still palpable when interacting with the supporters and interested citizens.

As I already mentioned in the methodological chapter, it has been suggested that collective rationalities are best observable in contexts of public discussions and in public accounts of past events and decisions. Indeed causal mapping occurs in people's minds and are generally revealed in public discussions and exposure to situations of decision-making (see Nelson et al., 2000). I propose now to report on the City's official account of the bridge and the choice of its location, and to determine how the organization, once engaged officially into the project, defined the rationality underlying its decision when presenting it to the community.

To figure out this shared causal map, I retrieved the documents about the story of the bridge that had been issued by the City and fragmented these stories into events that were common to all accounts. The following is thus based on official and public sources. I consider this as the collective version, as narrated to the public and to the

[35] 19941105 PA SZ „Öko-Untersuchungen am WS notwendig"
[36] 19940809 PA SZ „Neuer Streit um Tunnelbau vor dem Hauptbahnhof" (p.1)

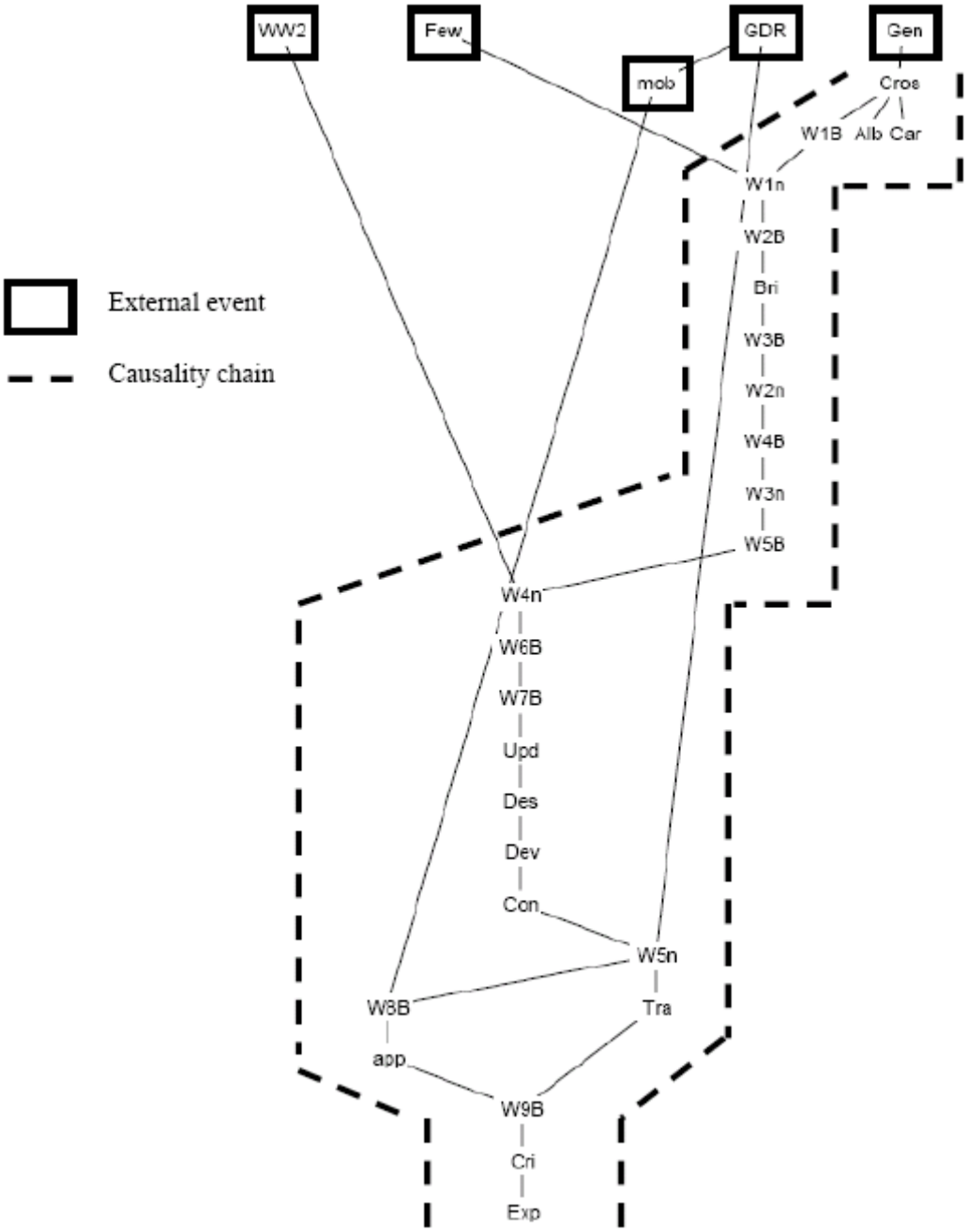
authorities, and therefore representative of what the stakeholders expected to read and/or hear about the project. In this sense, this very account is not exhaustive and absolutely partial. To make sure that I had gathered the arguments with the widest potential for dispersion, I made use of a leaflet issued and distributed to the citizens by the CA, in March 2006, after the first critics by the UNESCO-WH Center were made public. I also made use of the explanations about the necessity for a bridge at WS provided in the documents submitted for plan appraisal to the Regional Directorate in 2000 and in 2003, and of the leaflet provided to the citizens in 2005, during the referendum that ended in favor of the WSB. I closed the analysis in 1996, with the workshop that determined officially WS as the top-priority location. The remaining of the case will be treated in subsequent chapters of this volume.

I computed the events I had identified into the software Ethno2, a Java-run application available online, developed specifically for ESA-like analyses. Ethno2 draws a matrix of events computed and ask the researcher whether event X was a prerequisite for event Y, or not. Different forms of questions are proposed to best fit the story one computes: 'does --- *requires*, or *prerequisites*, or *historically causes* ---'. A contra-factual version is also available: 'suppose --- does not occur. Can ---- occur anyway?' It is recommended to play around with the questions and to try and find the formulation that best challenges one's knowledge of the data.

In this first round (which actually took countless rounds of optimization until the analysis would work out fine) I took the texts I had compiled and interpreted them as causality was written down, i.e. as any uninformed reader would have apprehended it. This was the occasion to excavate deeper implications and suggestive elements embedded in the argumentative structure. Again, ESA does not make any decision for the interpreter. It was my task to deconstruct the text and to interpret its implicit meanings and causal links.

Figure 10 illustrates the chart computed by Ethno after having run the analysis. Please note that this *does not represent a chronological alignment*. A chronology is provided in the appendix 2, at the end of this volume. Instead, this chart represents the *argumentative structure* underlying the narrative that supported the need for the bridge, and this argumentative structure uses history extensively. The formulation of the events was simplified and a three digits code was given to all of the events and arguments to keep the chart clear (see the legend under the chart for full-formulations of the events).

Some of the events are localized up in the figure, like *WW2* (i.e. the occurrence of World War Two) or *Few* (i.e. the fact that few people lived at the WS area around 1860). Being located up in the figure has *no temporal quality*. Instead it means that the occurrence of the event does not depend on the sequence depicted. Indeed WW2 was only an external event that impacted the bridge as any other aspects of social life at the time. Also the general construction plan was the trigger of the sequence and therefore cannot depend from the sequence. In return, the actual sequence of causality is marked by the dashed lines.



Legend (in order of appearance in the chart)	
Short form	**Full appellation**
WW2	Outbreak of World War 2
Few	Few inhabitants lived at the outer ring around 1900
GDR	GDR falls down in 1989
Gen	The General Development Plan of 1862 centred around two concentrically-running ring road
mob	City develops new concept for mobility in 1990
Cros	River crossings were planned where the ring roads met the Elbe
W1B	City thinks of a WSB
Alb	City builds Albert bridge
Car	City builds Carola bridge
W1n	City won't build a WSB
W2B	City thinks of a WSB for the general plan of 1891
Bri	Semi-circulars are allowed for on the sites of the future bridgeheads
W3B	Citizens think of a WSB in 1900
W2n	City won't build a WSB for economic reasons
W4B	Citizens think of a WSB in 1911
W3n	City won't build a WSB for economic reasons
W5B	City thinks of a WSB in the 30s
W4n	City won't build a WSB
W6B	City thinks of a WSB in the 60s
W7B	City thinks of a WSB in the 70s
Upd	City updates WSB in 1988
Des	City confirms design of the WSB in 1989
Dev	City must develop WSB further
Con	Project confirmed by competent authorities
W5n	City won't build a WSB
W8B	City thinks of a WSB as essential element of the concept
Tra	Traffic increases dramatically
app	City approves the concept in 1990
W9B	City thinks of a WSB for the traffic concept of 1994
Cri	Some critisize the bridge
Exp	Experts decides the WSB in 1996

Figure 10 - The municipal narrative

How to interpret these results? I used the texts provided by the City to answer the questions asked by the software, trying, at this point in time, not to recall what I had learnt during my own investigations. This chart thus corresponds to the *mental structure of causality* that a reader would have shaped for her/himself with respect to the idea of a bridge at WS. The chain of causality underlying the communication suggests that all events were necessary occurrences for the current project to exist. It gives herewith the feeling that building today was matter of destiny.

If believed as formulated, this version of the story seems logical, with all events commuting toward one common end: the validated necessity of a traverse at WS. The project, if it is interpreted that way, was all too regularly doomed by historical occurrences (i.e. economic situation, war effort, or radical political changes) that had

nothing to do with the actual need for a bridge.

The structure of this narrative, however, has two effects. First, it produces the idea that a bridge is now unavoidable and of deterministic nature. A sequence of pure causality is thus "staged", if you will. This is illustrated in the chart by the long chain from the General Plan of 1862 until the Experts deciding finally in 1996 (isolated within the dashed lines). Second, it enacts the very core of our argument: namely that a collective rationality emerged out of repeated instantiations. Indeed if we analyse this chart more closely, we can notice a pattern of action, implied within the structure of the narrative:

Idea of a WSB (e.g. W3B)
Instantiation (via plan, project)
External Situation
Constriction (e.g. W2n)

The story is punctuated with instantiations of the bridge. With instantiations I do not mean an actual project only, but also mere allusions to the fact that the City had thought of a bridge as a potentially smart thing to do at this location. From this perspective, every new instantiation becomes the occasion for the reader to reinforce the idea, in her/his mind, that a bridge is matter of destiny and absolutely necessary.

This understanding of the project is also the one I encountered in interviews and in numerous declarations to the press, as reported in table 8. In this table, we can see how much suggestive power this reasoning was carrying in the discussions. Years later, as the conflict reached its peak; a 2008 study by the sociological department of the Technological University of Dresden found out that 44% of the 25-44 years old respondents were in favor of the bridge, whereas almost 70% of the 65 years-old respondents agreed.[37] And yet the latter respondents were precisely part of the age category that was least concerned with rush-hours traffic jams and daily commuting. This was the age category, however, that had been most confronted with past instantiations of the bridge and a category of respondents that were best able to accept the reasoning depicted in figure 10.

[37] 20080821 TUD ES „Neue Telefonumfrage zur Elbquerung"

Issue	**The Suggestive Effect of Former Instantiations**
Source	Exemplary Quotes
Declarations in the Press	"In studies in the 20s, the 30s, 60s and 80s, a traverse at WS was always considered as the best option" (City Councilor, PA SZ 1996).[38] "The solution with the two bridges pleases me very much. But I know also that the planers have always been favoring the WSB since the 30s" (Resident, PA SZ 1996).[39] „This discussion is not understandable for us, Taxi drivers. Already in the 30s, the WSB was projected and considered necessary. When will they build at last?" (Spokesman, Unions of Taxi Drivers, PA SZ 1996).[40]
Interviews	"This is, somewhere in the mind of the population in Dresden, somewhere this issue is anchored. This is not just, as an external spectator maybe would think, a sparking idea, from 1994, traffic policy; instead this is really an issue that has been hardening for a very, very long time within the population of the city (…) the WSB as issue became an emotional matter (…) because obviously, logically, the older citizens of Dresden, the generation 40+, as I would call it, they were raised with the idea that 'anytime a bridge would come there', and especially those who said 'we don't need that bridge', were rather the younger ones, who were not influenced by the previous thoughts, or the new inhabitants. Well, those who came in 1990, and who were not concerned by the emotions around this question. The City Administration as such, which pushed it, obviously, is especially marked by 'older citizens' if you will, and contributed to this inertia, to its development, because, naturally, this was a running issue" (Former Mayor, interview, 2010). "The City Administration retained a lot of staff from the GDR-times [*i.e. involved in the bridge design of 1989*]. Their pet-passion had always been a bridge at WS" (Former Head for Urban Development, interview, 2010). "One has been discussing for a very long time about this bridge in Dresden. The origins go as far as in the 30's, in the last, 1800 or something, the first plans. In practice, one has conceived this city so that these two streets would meet each other, if we had a bridge" (Member of the Saxon State Parliament, local liberal-faction, interview, 2010).
Documents	"It is absolutely legitimate to challenge decades-old conceptions on new bridges also. It is dangerous to stick to decades-old conceptions without criticizing them" (CA MP 1996).[41] "The population, the residents have been informed for years about specific planning works. To my opinion, the WSB is thus a bridging with a decisive level of awareness within the residents of Dresden and the region" (A member of the RD, CA MP 1996).[42]

[38] 19960525 PA SZ „Pro und Kontra - Schon lange geplant"
[39] 19960531 PA SZ „Workshop getürkt? - geteilte meinungen bei Dresdnern"
[40] 19960809 PA SZ „Umfrage - Brückenwahl mit der Pistole auf der Brust"
[41] 19960528 CA MP „Niederschrift zum Workshop Dresdner Elbbrücken am 28./ 29.05.1996" (p. 12)
[42] 19960528 CA MP „Niederschrift zum Workshop Dresdner Elbbrücken am 28./ 29.05.1996" (p. 38)

"Plans from 1978/79 (…) and 1989 (…) are extensively based on the 1967 designs" (Visual Impact Study of the RWTH Aachen University, IUDRP 2006: 65).

Table 8 - The suggestive effect of former instantiations

The suggestive effect of the former instantiations, and especially of the most recent one, during the late 1980's, as shared mental model about the necessity of the bridge, is visible in the decision to instantiate the idea of a bridge in the 1990's. The depiction that follows illustrates the idea of *adaptive expectations*, i.e. "Individuals may feel a need to 'pick the right horse.' (…) It derives from the self-fulfilling character of expectations. Projections about future aggregate use patterns lead individuals to adapt their actions in ways that help make those expectations come true" (Pierson 2000: 254).

At this point in time, numerous alternatives were debated. Shortly after the ratification of the V94, in 1994, the then Mayor appointed an architect as Head of Department for Construction, in order to adjust and further develop the V94, including the WSB. The new head of department mobilized a team within his department, under the heading "strategic development". This team researched new ways to conceive of traffic flows in the city, with a focus on public transportation, somehow inspired by Scandinavian cities, where cars tend to be banned from the city centers via taxes and large pedestrian areas. In their opinion, this was for Dresden the occasion to exploit the geographic situation of the community and to avoid repeating the mistakes that had been done in other German cities during the past decades.

Debates about new traverses rose internally and their attempt clearly appeared as disruptive. Within the CA, three camps emerged. A pro-WSB side showed itself, dominant in number and not least supported by the Mayor and his political faction, dominant in the CC. A second side was represented by the new Head and his team for strategic planning. They were basically refusing the WSB and supported instead a multi-bridge conception, similar to the one of Paris, with a scale-like succession of smaller bridges and main roads along the river, in line with the stripes-like evolution of the city. They suggested building two other bridges, closer to the city center (Erfurter street and Thomas Münzer Platz) and one further upstream, at Laubegast far behind the city center (the figure 11 illustrates the options in the Dresden map. Note at this point that only bridges were considered at that time). According to their proposition, this was to

decrease the need for a traverse at WS. Finally, a third camp proposed to start with building a 3rd Marien-bridge, and then to see its impact on traffic flows to evaluate the need for a bridge at WS later on (as suggested in the traffic policy of 1994). In their opinion, the west side needed more assistance in traffic resolution, and the area for a third Marien-bridge was considered less critical with respect to environmental and residential criteria than any others.

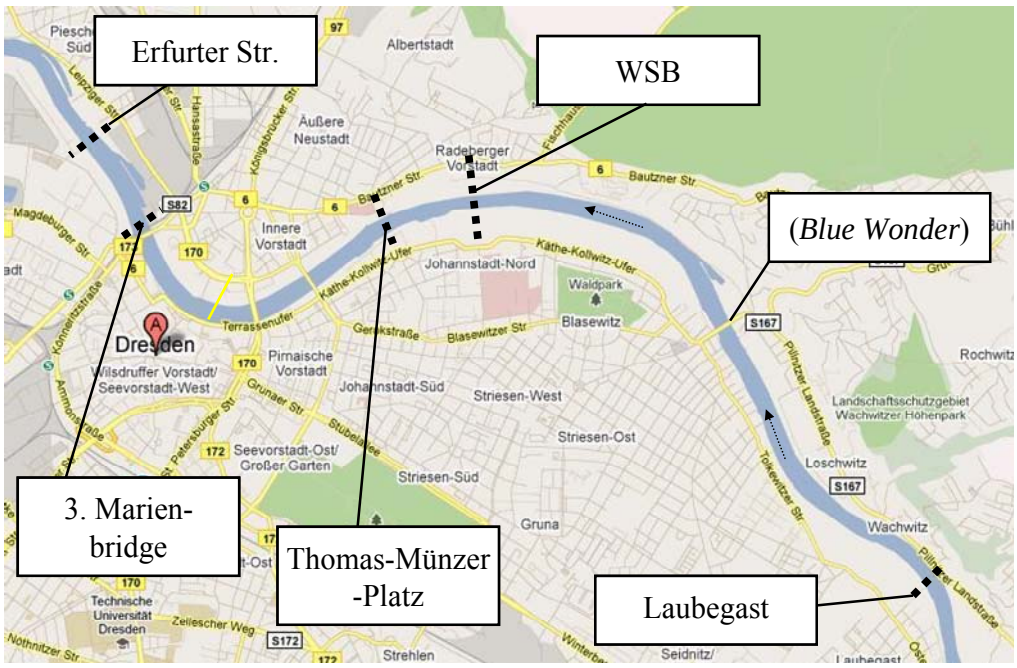


Figure 11 - Options evaluated around 1995 (Source: Google Maps + own additions)

In October of 1995, with the aim at ending quarrels, a study was delivered by a consultancy.[43] They evaluated the issue and came to the result that two bridges were needed: a bridge west, ideally at the Erfurter street, and one in the eastern part of the city. However, since the City could only build one bridge at a time, a bridge east was suggested in the first place.[44] From then on, the location of WS took the lead over Thomas-Münzer-Platz because of several advantages: (1) an easier connection to the main roads; (2) a connection that is less disrupting to the residential district in the north; (3) less detours for those who want to drive up north; (4) easier connection for a potential line of tramway.

The WSB thus became priority over the other locations and outranked the 3rd

[43] 19951000 EO ES "Schlegel – Spiekermann: Variantenuntersuchung Brücken Standort"

[44] I was told that the consultants changed their results in the last moment. Their initial findings recommended a bridge west. However, I could not have this information verified.

Marien-bridge, in spite of the official motion voted in 1994. The debate, however, did not stop. From 1995 on, the new traverse became a public issue, frequently debated in the local press.[45] Meetings (so called Dresden Conferences) were set up and discuss it on a regular basis. On November 8, 1995, during one of those sessions, the then State Minister for Economics, intervened into the debate and channeled the discussion by declaring that financial helps from the Free State of Saxony would be made available only for the construction of a bridge at WS. The Minister had made a similar statement earlier on in the press, stating that Dresden needed two bridges, one in the west, at Erfurter Street, and one in the east: the WSB.[46]

The occurrence and influence of this key event was confirmed to me by numerous interview partners, both pro and against the WSB. Indeed questions of finances were by then already critical in the City.[47] As a matter of fact, the Free State of Saxony could not finance the City's traffic policy "anonymously"; instead it needed a determined project to unlock the funds. This project, so the representatives of the State, back then, was to be the one achieving the highest impact in traffic reduction.

Nonetheless, while the WSB profiled itself as the priority in the formal and informal discussions, the Department for Urban Development and its stab for strategic development kept on developing their solution, i.e. smaller, numerous bridges for a scale-like structure along the river. Critics to the WSB concerned themselves with the connection to the left river side and its high slope, and the fact that traffic as a trend was difficult to predict effectively.[48] For example, a study ordered by this team in December of 1995 criticized the method used to calculate traffic forecasts (i.e. to assume a traffic increase right from the start) and defended the cost-effectiveness of the multi-bridge project.[49] Eventually, the press reported that the Mayor had given orders to plan what was decided and to stop deviating with other ideas (this was confirmed eventually to me in the interviews).[50]

The discussion became a political issue, and was slowly reduced to traffic jam or

[45] 19950624 PA SZ „Dresden 2050: Eine Vision wächst heran„
[46] 19950929 PA SZ „IGA-Bekenntnis bis zum 12. Dezember nötig »
[47] 19951019 PA SZ „59 Prozent weniger für Bauvorhaben?"
[48] 19951019 PA SZ „Planerziel: Brückenverkehr gleichmässiger verteilen"
[49] 19951201 CA ES "Fachliche Grundlagen der Fortschreibung des Verkehrskonzeptes der Landeshauptstadt Dresden"
[50] 19951117 PA SZ „Oberbürgermeister Wagner verurteilt Gehälteraffäre bei Wohnbau"

WSB[51] [52]. On December 14, 1995, the CC asked the mayor to evaluate again the numerous options and to present them to the CC for decision, including elements like: costs, visual impact in the city, environmental impact of the construction and of the traffic, impact on traffic reduction, impact of bridge on residential districts, main roads and inclusiveness.[53] Discussions for a bridge on the west side of the city were taking in volume, instead of the bridge at WS. Meanwhile, a public survey ordered by the CA reported that 94% of the citizens were demanding more services in public transportation.[54] But 75% of the citizens would rather ride their bike or walk instead of driving their cars to travel through the city. Meanwhile, for most residents, a bridge, any bridge, became slowly the idea; and the more the better.[55][56]

Critical Juncture: The Workshop of 1996

The discussion thus went back and forth and started polarizing the members of the City, both in its CA and in the CC, as well as the members of the broader community. The idea came to organize a workshop to determine, via numerous expert voices, the solution to prioritize. In this workshop, we can see how different "socialities" (Emirbayer and Mische 1998) or institutional "logics" (Firedland and Alford 1991) interfere in the discussions and allow for members of a same organization to draw on different elements to project themselves in radically different trajectories for the future.

The Workshop

On May 18, 1996, a document was handed out summarizing the studies and forecasts concerning the numerous options at hand.[57] Here again, simulations were conducted to evaluate increases in traffic and find out potential solution to address the trend adequately. In this document, it was proposed to use a standardized catalogue of

[51] 19951201 PA SZ „Streit um Waldschlösschenbrücke"
[52] 19951214 PA SZ „Populismus-Vorwurf an Oberbürgermeister"
[53] 19951214 CC OD Beschluss A163-30-95
[54] 19960406 PA SZ „Bürger fordern mehr Einsatz für Nahverkehr"
[55] 19960430 PA SZ „Auf ein Wort - Entkrampfen!"
[56] 19960522 PA SZ „Vision von der Stadt im Tal"
[57] 19960518 EO ES „Neue Elbebrücken -Workshop"

criteria to evaluate the options: traffic, urbanism, environment, and costs. The weighting among the criteria and the resulting selection was to be done by a panel of experts and of political decision-makers. The official decision, however, was to be voted by the CC afterwards. Five bridges were considered, looking at their combined effect: (1) WSB; (2) 3rd Marien-bridge; (3) Erfurter Street; (4) Bridge combination at Thomas-Müntzer-Platz and Laubegast.

On May 28, 1996, the discussion started and focused on a set of elements: avoidance of transit traffic through residential districts and city center; public transportation; bike- and walking paths; and the relieving of the Blue Wonder bridge; located east from the city center. The positions we already identified reinforced each other during the workshop. The Head for Urban Development and his team defended the multi-bridge concept. The team for strategic development provided a perspective on traffic where the new infrastructures would contribute to redefine the relation between citizens and their means of transportation; for example by promoting modal split between individual and public transportations of 20 to 80 (minutes of proceedings, p. 3).[58]

> "There is no ideal traffic infrastructure. Important is much more: what main functions do we want to define for a bridge?" (CA MP 1996).[59]

To the newly appointed Head, things were clear: with a combination of two bridges, one at Thomas-Münzer-Platz and one other at Laubegast, the results on traffic resolution (especially on the traffic burden crossing the Blue Wonder) would be at least as good as with a bridge at WS only, if not better. Not least: the costs were, to their calculations, lower for the two bridges together than for the WSB alone. Their adversaries objected the radicalism of the solution and defended the potential of the WSB instead.

The different options were eventually compared. Concerning the environmental friendliness, the responsible person ended up with the following list: (1) the new Marien-bridge; (2) Erfurter street; (3) WSB; (4) Multi-bridge concept (due to the double impact on nature of two construction projects). The person responsible for the costs

[58] 19960528 CA MP „Niederschrift zum Workshop Dresdner Elbbrücken am 28./ 29.05.1996"
[59] Ibid, p. 6.

discussion insisted on the fact that precise cost data were not yet calculable for any option (sic!). Working groups were then settled to discuss the issues. The influence of the CA and its previous knowledge of the options were pointed out for the sake of partiality. The Mayor, however, disagreed. Work started; results were to be presented the next day.

On May 29, 1996, the workshop resumed. Options for inclusion of public transportation took a decisive role. In that respect, the WSB would deliver the best results. And yet a member of the working group on traffic claimed that the results presented were not the results the group had produced. Critics further doubted the scientific nature of the results presented. The presenter was also Chief of the project team working on the WSB in the CA. The presenter reckoned that the results showed were personal estimations shared with the Mayor. It was stressed however that the traffic figures were results of scientific studies. Discussions went on. Any bridge, anywhere, would have impacted on the traffic figures. Again, representatives of the local State reminded that the Government would finance the most promising option in terms of traffic distribution. In this respect, the experts from the local university supported the WSB. In opposition, the bridge at Thomas-Münzer-Platz was harder to connect with the main network. It became clear to the participants that bridges were less in discussion, but two different traffic policies: *Bundling* or *Decentralizing* traffic.

The opponents argued that the WSB would harm greatly the Elbe river banks, especially due to the long distance crossing from the hill, north-west, down to the next side. According to them, while the WSB could provide *strong* results, the multi-bridge concept would provide with the *strongest* ones. The multi-bridge concept was to enlighten traffic loads in the city center and especially in the area of the Blue Wonder, one of the city's emblems. In opposition to this, a WSB would reassemble and concentrate traffic on one big flow. A WSB being very expensive, no further bridge constructions could take place eventually.

The local state's agent cut off the discussions and asked the City to implement all bridge locations into the general construction plan. For the local State, acting as funding organization, the implementation of a tramway on the future bridge(s) was to be the crucial criterion for decision and saw the WSB as first priority in this respect. Concerning the multi-bridge concept, the state declared fearing the start of an endless financing-chain, and doubted the feasibility for financing two bridges instead of one.

The State further asked for a traverse that would carry nation-wide traffic and that would take supra-regional responsibility, in other words:

> "A boulevard-bridge is not eligible" (CA MP 1996).[60]

Again, the profiling of two opposite camps became clear to the participants. The State emphasized the role of infrastructures to support traffic, while other participants claimed that infrastructures were to *regulate* traffic. Discussions went on, debating the pro and contras of both perspectives and opposed a policy of traffic limitation and control, to a policy of traffic support. Finally, one participant proposed stopping the workshop, claiming that a discussion was useless if the State had decided anyways. The Head of Urban Development wondered:

> "How could the legislator be so stupid not to finance a solution that would be cheaper and more effective in its realization" (CA MP 1996).[61]

Experts claimed that both traffic philosophies represented great potentials for conflicts. At this point, some stressed the current trend of traffic reduction in Europe. This was, however, not the case in Dresden yet.

The Results

Retrospectively, it was admitted by my interview partners who were most involved in the project (both for and against the bridge project) that this workshop had been organized as a venue to legitimize the WSB as premium choice. At this point we see the suggestive effect of the former instantiations and its influence on the choice yet to be made. This judgment over the workshop was confirmed to me by individuals from both sides. After the plenary sessions, all experts came up front and presented their conclusions. A great majority voted for the WSB as first option. Also the bridges at Erfurter Street and Laubegast received positive evaluations. The bridge at Thomas-Münzer Platz received only half the positive votes. Numerous arguments have been

[60] 19960528 CA MP „Niederschrift zum Workshop Dresdner Elbbrücken am 28./ 29.05.1996" (p. 14)
[61] Ibid, p. 15

made during this session. Four main points gave the preference for the WSB:

(1) Money played a significant role. The ratio: "subvention" (around 75%, possibly more) over "own-contribution" (25%) was largely favorable to the City. This ratio was a consequence of the reunification efforts in Germany and the willingness to develop eastern infrastructures. It was feared that things may change quickly, with higher own-contributions rates. The local ministry for economics had expressed his willingness to finance a bridge at WS only. Also the financing of two projects at a time seemed technically difficult to organize.

(2) The decision was also a matter of transportation policy on a long term basis. Two scenarios stood in opposition: a steady increase of traffic and its support via large, bundling infrastructures, or a controlled increase and its repartition over more, smaller bridges.[62] Considering the speculative nature of such a decision, a larger bridge for the worst case scenario seemed a safer solution.

(3) From a traffic point of view, it was argued that the WSB was delivering the better performances, with an easier linkage to the existing network. The WSB was also the best option to implement a tramway solution, as well as a linkage to the highways passing by for a supra-municipal role in traffic policy.

(4) In terms of acceptance among citizens, and in spite of a majority in favor of the multi-bridge idea, the chance for the WSB to be received positively were expectedly higher, since the project had been debated for decades and over many generations.

52 participants were invited. 28 of them were allowed to vote in a constellation of polarized opinions. This contributed to contestations in the community, alleging that the end-result was a scam. Nonetheless, the Mayor submitted the WSB-project as top priority to the CC. Closing the workshop, it was told to the press that, in spite of drawbacks, the WSB would have the best impact on traffic and therefore had been favored in the votes.[63] It was reminded that the bridge would be financed at 75% by the State. With respect to this, the moderator to the workshop declared:

> "The State-subventions are always effective for the technical project, for the concrete bridge, not for the best solution to a problem" (in PA SZ, 1996).[64]

[62] 19960816 EO OD „Winning - Fortschreibung Verkehrskonzept Dresden"
[63] 19960530 PA SZ „Experten für Waldschlösschenbrücke"
[64] Ibid.

From then on, the range of variety and options for the new traverse shifted from a debate on location to a debate on design. A tapering process, typical to path-dependent development (Sydow et al. 2009), started, and unleashed a sort of "pull effect", or acceleration of the whole process, into motion. However, before concluding that we face here with a path, we need to proceed with a set of critical tests.

Destiny, Contingency and Rationality Shift

If we consider again figure 10 and ESA analysis that we made, as informed by the City and the supporters of the WSB, then obviously, the current bridge project needed all the former projects to fail in order to exist today. Causality, in this sense, is given. But did the past projects *really* made the subsequent ones necessary, i.e. did the former projects act *as effective causes* (Runde and de Rond 2010) to the following projects? The ESA technique allowed us seeing how people in the community would depict the causal structure underlying the existence of the project. Historical analysis and archival material, however, showed us that things were not so clear back in the 1990s. Sydow et al. (2009) note it rightly: "history in this broad sense is not destiny" (2009: 692).

A Few (Corrective) Words on the Bridge as "Destiny"

Continuity is indeed observable among the former instantiations. In 2005, to make a decision concerning the bridge and its impact on the site, the WH Center sent a team of experts from the Institute of Urban Design and Regional Planning, RWTH Aachen University, Germany, to evaluate the site and the project. The same team had evaluated a building project in a similar conflict in Cologne, Germany,[65] and more recently, the planned construction of a bridge in the WH site of the Rhine Valley.[66]

According to their analysis (IUDRP 2006), the 1862 plan was less a traffic plan than a construction plan to prevent the municipality from expanding chaotically. The road crossing close to what became WS was more a kind of limitation:

[65] This case saw the planned construction of a high-rise building close to the Cathedral, listed since 1996.

[66] The project received a positive evaluation. Construction was granted in 2010.

> "The general building plans for 1862 did not contain specific plans for Elbe bridges outside the inner ring road, nor were such plans required as these areas were still sparsely populated on the Altstadt side of town" (IUDRP 2006: 57).

The first plans at WS and the area came at the end of the 19th century, when roads at both sides were aligned to each other. Squares and places were designed in front of WS and at Thomas-Müntzer-Platz, as precautionary measures. As the citizens, in the early 1900's, started pleading for a traverse, their prerogative was then a faster access to the forest (*Heide*) behind WS. The City passed a motion on September 17, 1908 to avoid construction work in this area, based on aesthetic worries and recognizing the importance of the area for recreation, and bought the surfaces to avoid future endeavors.[67] At this point in time, discussions varied, with references to both WS and Thomas-Müntzer-Platz. Plans took more depth during the 1930s, motivated by the highways passing by and the idea to link the city to it more efficiently. The motivation changed in 1967, as the idea to build a bridge at WS came back to the discussion table. The rationale behind this latter instantiation was the plan to form a large outer ring "that would function as a highly efficient thoroughfare" (IUDRP 2006: 63). However, large-scale demolitions were needed for the project. Nonetheless, from then on, the planning benefited from an influence that became stronger than the mere suggestive effect of memory. The study, as already quoted, notes that the plans subsequently developed, i.e. in 1979 and 1989, drew heavily on the 1967 ones. After the fall of the GDR, one got rid of the 1989 design, considered outdated. The plan however stayed in the subsequent traffic concepts of the municipality, in 1990, 1992, and 1994, as we saw more in details above.

Based on these elements, the study notes that all projects at WS were "children of their time" that drew on different strategies to address different problems. As for "today", the Aachen expertise suggests that Dresden has been organizing itself like a ribbon along the river and hereby limited naturally its concentric evolution. Hence, even if they do not go as far as contradicting the necessity for a bridge from a traffic perspective, they note that a circular design is not considered necessary with respect to the existing network and structural specificities of the city. Instead, and in spite of the

[67] 19080917 CA MP „Amtlicher Sitzungsbericht"

technical difficulties at Thomas-Müntzer-Platz, they suggest that the pace among bridges and their dimensions would make this latter location a more "natural" one for Dresden than WS. To conclude:

> "It cannot be argued that WSB is hard-wired, like a genetic code, into Dresden's city structure" (IUDRP 2006: 61).

Critical Perspectives on Traffic Evolution

"In reality, the world of megaprojects planning and implementation is a highly stochastic one where things happen only with a certain probability and rarely turn out as originally intended" (Flyvbjerg et al. 2003: 73). The traffic situation, as I already illustrated, was a crucial element during the early decision process and drove the constitution of collective expectations, along which the decision-makers in the City channelled their decisions. However, while we saw that public transportations were planned on the WSB to bridge the south-east and the north of the city, the DVB (i.e. the public transport provider in Dresden) refused financing for a tramway line on the new bridge, pointing out a scarce demand for this trajectory. We also saw, during the workshop of 1996, that some voices had started wondering whether Dresden could not be reached by the Europe-wide trend of traffic decrease. Back then, such a situation was difficult to imagine in Dresden. And yet it happened. Table 9 lists the traffic forecasts (for each bridge) based on which the City worked to submit plans for official appraisal in 2000. The "model 2010" is the case without WSB and was to benefit from the assistance of the new bridge to see its burden diminished.

Bridge	1983*	1990*	1994-5**	2010 model**	2010 WSB**
Flügelweg	17.000	23.200	25.500	50.000	50.000
Marien	20.600	21.900	36.700	40.000	40.000
Augustus	6.900	7.500	14.900	14.000	14.000
Carola	29.900	42.500	52.300	54.000	48.000
Albert	21.200	27.000	45.500	45.000	30.000
WSB	---	---	---	---	35.000
B.Wonder	16.700	22.000	27.200	30.000	27.000

In vehicles per day
* Data from Schnabel and Scholz, 2004: 2
** Data from the City's submission for plan appraisal, 2000 "Unterlage 1 – Erläuterungsbericht" (p. 28)
2010: Simulations with (WSB) and without WSB (model)

Table 9 - Traffic forecasts 2010

The Regional Directorate refused the plans in 2000 and sent them back to the City for further planning, asking, among other things, the calculation of new figures for 2015 instead of 2010 only. The City documented the figures as requested (see table 10) and later corrected these figures with higher ones (see table 11).

Bridge	1994-5	2010 model	2015 model	2015 WSB
Flügelweg	25.500	50.000	43.500	42.500
Marien	36.700	40.000	34.000	33.000
Augustus	14.900	14.000	9.000	8.000
Carola	52.300	54.000	58.500	51.000
Albert	45.500	45.000	49.000	37.000
WSB	---	---	---	45.500
Blue Wonder	27.200	30.000	37.000	33.000

In vehicles per day
Data from the City's submission for plan appraisal, 2003 "Unterlage 1.1 – Erläuterungsbericht" (p. 28)
2010 and 2015: Simulations with (WSB) and without WSB (model)

Table 10 - Traffic forecasts 2015

Obviously, I cannot give precise information about exactly when the trend on traffic started its inversion. According to the data provided by Schnabel and Scholz (2004: 2) the inversion started around 1999 and the early 2000s. Since then, the traffic over the bridges has been decreasing steadily. To put these figures in comparison with the one that one sought to achieve with the construction of the WSB, I accessed online, on November 17, 2010, the figures on traffic over bridges for 2009 and put them in

comparison with the figures forecasted in 2000 and 2003, as the plans were submitted for appraisal.[68] Between the forecasts for 2010 with WSB and the real figures for 2009 without WSB, we notice a difference of only + 12,000 cars on the two bridges closest to the WSB. Now if we were optimistic, we could probably bet on further decrease, representative of the average trend that has been observed since 2000. I decide however to remain semi-pessimistic, and propose to bet on a stagnation of the traffic for the coming years. If we do so, the results that the WSB sought to achieve for 2015, i.e. the rationale underlying the plan appraisal, would still be far higher than the actual ones (see table 11).

Bridge	1999*	2010 WSB**	2015 WSB***	2009 real****
Flügelweg	30.600	50.000	47.500	42.500
Marien	37.400	40.000	43.000	33.500
Augustus	13.300	14.000	11.500	6.500
Carola	55.500	48.000	54.000	45.000
Albert	45.700	30.000	39.000	38.000
WSB	---	35.000	47.500	---
Blue Wonder	36.300	27.000	34.500	32.500

In vehicles per day
* Data from Schnabel and Scholz, 2004: 2
** Data from the City's submission for plan appraisal, 2000 "Unterlage 1 – Erläuterungsbericht" (p. 28)
*** 20031121 CA M "Progonose 2015 – Netzfall 2 mit zus. Elbquerung WSB" (traffic figures for 2015 with WSB)
**** Data from the CA, published online, October 1 2010 (i.e. without WSB).[69]

Table 11 - Forecasts 2015 corrected

In 2004, the Regional Directorate (henceforth RD) gave its official appraisal to the plans submitted by the City. In the plan appraisal delivered by the RD (p. 17), the figures for 1999 are included and suggest a new increase since 1995.[70] These values (in table 12) differ significantly from the data collected by Schnabel and Scholz (2004: 2). The document took back the forecasts initially calculated for 2015. Let us stick to these figures and compare the impact of the WSB to the decreasing values measured in 2008 and 2009, for example. Even if we consider a postulated stagnation in traffic from 2009 on, the most efficient solution (with respect to the goals in traffic reduction underlying the whole expenditure) would have been, ironically, and with respect to the costs of the

[68] URL: http://www.dresden.de/media/pdf/presseamt/Verkehrsmodell_Anlage_1.pdf
[69] Ibid.
[70] 20040225 RD OR "Planfeststellung für das Bauvorhaben Neubau des Verkehrszuges Waldschlösschenbrücke"

bridge, to do nothing but wait (see table 12).

Bridge	1999*	2015 model*	Impact WSB 2015*	2008 real **	2009 real ***
Carola	58.500	58.500	51.500	46.000	45.000
Albert	47.000	49.000	37.000	40.500	38.000
Blue Wonder	34.500	37.000	33.500	34.500	32.500

In vehicles per day
* Data from the plan appraisal from the RD – Figures for 1999 and Impact of the WSB in 2015
** Data from the CA, presentation published online, March 2011[71]
*** Data from the CA, published online, October 1, 2010[72]

Table 12 - Forecasts 2015 in comparison

In fact, compared to cities of its dimensions, Dresden is not what we could call a worst-case in traffic congestion. Figures delivered by the Technical University Dresden (Ahrens 2009) prove indeed that its traffic-situation is comparable to the one of cities of its size-group (see table 13). As a matter of fact, the average time spent daily in one's vehicle is the shortest of its category.

City	Inhabitants	Time per ride *	Time in vehicle**	Average speed	Time in traffic
Frankfurt / M	670.170	20,9 min	54,9 min	17,3 kmh	74,1 min
Düsseldorf	629.005	20,4 min	53,6 min	17,9 kmh	75,6 min
Bremen	547.735	18,4 min	56,0 min	18,5 kmh	69,9 min
Leipzig	515.418	19,4 min	47,0 min	15,8 kmh	82,3 min
Dresden	512.546	19,4 min	50,4 min	16,3 kmh	76,1 min
*Berlin****	3.506.239	22,1 min	58,9 min	15,5 kmh	82,3 min

* Average time per ride for vehicle user
** Average time spent daily in the vehicle
*** Capital city, given here only for comparison

Table 13 - Mobility in German cities

Traffic resolution was the major goal underlying this public expenditure. If this is not attained, i.e. if the figures of 2009 do maintain in the coming years (or worst: if they decrease even more), the public expenditure shall prove inefficient. The remaining positive effects of the WSB are mere projections. For example, it was postulated that a potential increase of traffic could occur once electro-cars or other concepts of the like will be introduced:

[71] 20110330 CA OR "Verkehrsprognose 2025 - Ergebnisse" (p. 10).
[72] URL: http://www.dresden.de/media/pdf/presseamt/Verkehrsmodell_Anlage_1.pdf

> „It is expected that the individual traffic will decrease, from an environmental perspective, isn't it? Car, engine, Co2, and hm well all these combustion engines that are less polluting. I am convinced that -and this is getting noticeable- that we will all drive electro-cars sooner than we think. Well, engines totally neutral to the environment. Don't you think? Electro, or water-in-fuel techniques, then the environmental aspect will be gone. The bad conscience, while driving a car, will fall away. I think that we will experience a certain renaissance of the individual traffic" (City Councillor, member of the CDU-faction, interview, 2010).

A second argument was the almost classical postulated economic-growth coupled with the building of traffic infrastructures. Indeed "it is common for proponents of major transport infrastructure projects to claim that such projects will result in substantial regional (…) development effects. Empirical evidence shows that such claims are not well founded, the main reason being that in modern economies, transport costs constitute a marginal part of the final price of most goods and services" (Flyvbjerg et al. 2003: 72). To these authors, growth may be created only in "regions where serious capacity problems exist in a network" (2003: 72), or when investments go together with investments in social capital (i.e. by increasing leisure activities), what was here not really the case (due to repeated frozen social expenditures and unstable municipal budgets). In fact, if we keep up with projections, the risk could be, instead, to induce more traffic than was originally planned for. So the Federal Environmental Agency in Germany: "effective infrastructure can be seen as a prerequisite for a functioning modern society. There are, however, many indications that further expansions of infrastructure in highly developed societies already blessed with good transportation routes lead at best to negligible benefits" (2005: 46). If we turn clearly pessimistic, a less likely and yet still potential consequence could become the occurrence of a Braess paradox (Braess et al. 2005). This paradox foresees that, under certain circumstances, an extension of the network "may cause a redistribution of the traffic which results in longer individual running times". This phenomenon is based on selfish routing of the users, their decisions while using the axes, and the resulting emergence of Nash-equilibriums in networks (Braess 1968: 259). This situation has already been identified in Boston, New York, or London at the Blackfriars Bridge (Youn et al. 2008). In such cases, cities would be actually better off closing specific axes.

Effectiveness and Efficiency

Misfits in traffic forecasts are common in large-scale projects and correspond often to persuasive strategies toward plans appraisals (Flyvbjerg et al. 2003). This phenomenon, however, is more common in private projects, where investments are needed, than in public projects (Skamris and Flyvbjerg 1997). Obviously, debating engineering and operational issues any further would go beyond the scope of this work. Nevertheless, from a socio-economic perspective, the traffic situation proves problematic. The municipality often argued with the idea that little public money was needed for the construction since 75% of it would be financed by the local State government. However, this logic hides itself behind a mere accounting construction, as depicted in figure 12 (the figure is adapted from Flyvbjerg et al. 2009: 177. Original "Local Government" was changed for "Municipality" to fit our case).

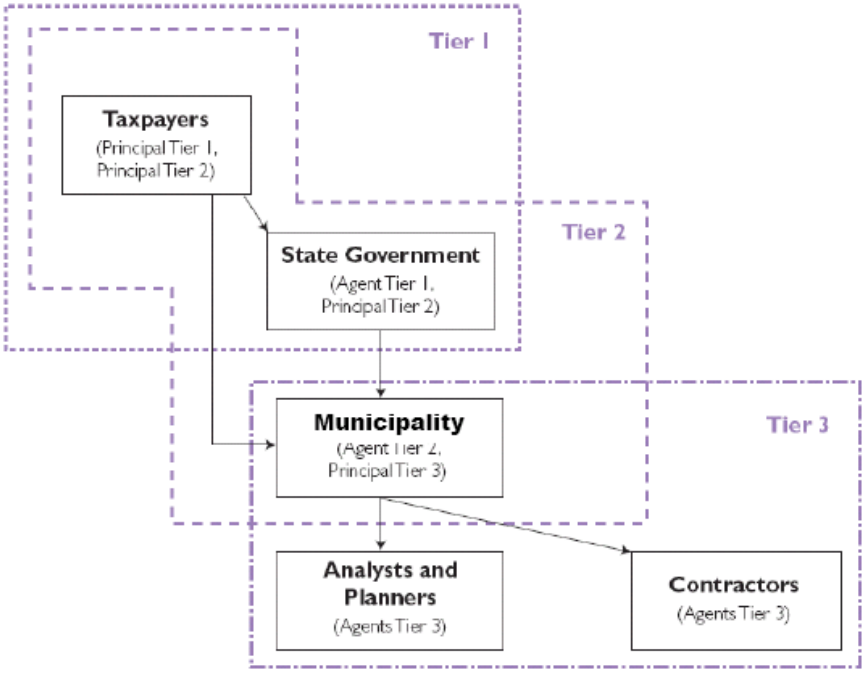


Figure 12 - Multi-tier principal-agent relationships

Path-dependent developments end up with (at least potentially) sub-optimal results for the community involved. According to Vergne and Durand, "a situation is suboptimal when there exists a tenable alternative situation which would increase agents' utility relative to the suboptimal case" (2010: 755). In Dresden, the effectiveness

of the solution proposed to the traffic problem contoured by the City is being questioned by the traffic problem itself. Obviously, the addition of a new traverse will most certainly shorten the average system performance of the network even more. Nevertheless, if we want them to be economically *productive*, "individual public expenditure programs or projects should be designed and implemented to provide given levels of outputs or achieve specific objectives at minimum cost" (Chu et al. 1995: 4). In Dresden, if we state it provocatively, the goals in traffic reduction could have been reached by observing the traffic-decreasing trend as it settled over Dresden. As a matter of fact, in parallel to the construction project, the budget situation of Dresden was yearly debated and often defined as critical. Several public expenditures were canceled or frozen over the years. "Improved efficiency and effectiveness of public spending (…) alleviates budget constraints as it allows achieving the same results at lower levels of spending or increases value for money by achieving better outcomes at the same level of spending" (Mandl et al. 2008: 2). To propose any alternative option is always a matter of speculation. Yet this project becomes very interesting if we look at the causes for its genesis and the factors that drove design and technical decisions (e.g. the Workshop participants arguing for a bridge with regional importance), with the claimed usage of the bridge years later as well as the traffic figures. In Dresden, the actual public spending on the project could have been saved totally or partly (e.g. by not building at all, or, if we speculate, by building where bridges were estimated at a lower price and with less conflicting potential). The difference resulting from the reduced spending could have been invested differently, thus increasing the community's utility *and* achieving the targeted traffic reduction. Instead, the WSB has become the most expensive traverse-construction ever in Germany. The stickiness to its construction provoked the withdrawal of the City from the most prestigious and popular program for cultural preservation worldwide (von Schorlemer 2009) and damaged an important recreational area close to the city center. Its inclusion into the traffic network, as for any new traffic axes, is to induce supplementary traffic (about 35.000 vehicles per day according to forecasts) and resulting emissions and noise. In other words, the efficiency of this public expenditure is questionable, at least from a strategic point of view (Sydow et al. 2009). With respect to path dependence theory, I argue that we face here a typical case of *second-degree* path dependence (Liebowitz and Margolis 2000). In other words: one could not know *ex-ante*; and, as they knew about it *ex-post*, it was too late and/or

too costly to shift. The next chapters will unpack the dynamics underlying the actual instantiation of the path, and explain how the project could cave-in that much. For the story did not stop in 1996. In fact, construction did not start before 2007; i.e. years after the decreasing traffic trend had entered the scene and supported by numerous critics from various levels of institutional pressures.

Chapter V

—

Period 2: The Bright Side of Path Instantiation

In the latter chapter we saw how a "path" emerged historically within the Dresden community, and how it influenced the finding of solutions to cope with traffic issues and traverses in the east side of the city. In other words: a way of thinking, or collective rationality (DiMaggio and Powell 1983), shared by a critical mass of supporters in the City and the community, emerged about traffic problems and the way to solve them. Out of this situation, a web of expectations was mutually constituted among citizens and members of the City as organization, and channeled the subsequent situations of decision-making.

Path Instantiation as Reflexive Structuration

The bright side of path instantiation should become clear enough at the end of this chapter. A project is indeed no island (Engwall 2003), and, as any organizational effort, its supporters need to nest it into its surrounding institutional context (Holm 1995; Sydow and Staber 2002) to make it progress from mere idea to concrete artifact. This appears to be particularly true of large-scale projects, when one considers the complex system of regulation in which they are embedded, as well as the conflicting nature of such efforts. With respect to path dependence, we saw that Sydow et al. (2009) and Pierson (2000) would call this an "enhancing context". For example, the actual construction of the bridge cannot start without an official plan appraisal from the regulating agencies. This appraisal cannot be prepared without an official consensus in the CC, etc. This process maintains and stabilizes the project as it unfolds. It is a *reflexive* process because it postulates the supporter's capacity to "understand what they

do while they do it" (Giddens 1984: xxii) and their knowledge of the structures that regulate and enable the functioning of their organization and of their community. Giddens' ideas, however, does not reach unanimity (Urry 1982). Indeed, it is difficult to "accept that it is possible to put Adorno, Althusser, Derrida, Durkheim, Foucault, Freud, Goffman, Habermas, Heidegger, Lacan, Marx, Weber, etc., together in a rigorous theory" (Hirst 1982: 78). The work of Giddens is indeed difficult to interpret, and it is likely that every users of his theory will develop an interpretation of theirs (Walgenbach 2006). For the sake of this case study, I follow Ortmann and his co-authors (2000) and attempt at making use of the core concepts of the structuration theory in an organizational setting as mere "sensitizing devices, nothing more" (Giddens 1984: 326).

Underlying Concepts: Reflexive Structuration

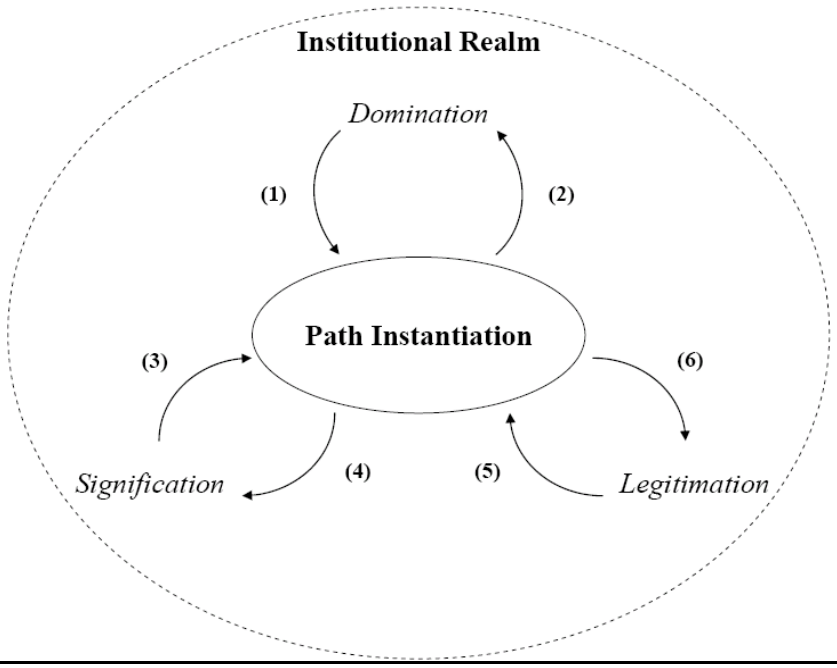
Giddens departed from the idea of actors as cultural dopes (a shortcoming that is classical to institutional theory; see Powell and Colyvas, 2008), by trying to understand how it is possible for human beings to function as agents of a social system (Giddens 1982). This theory understands structures as media for, *and* outcomes of, interactions among individuals. In this respect, structures and agency are bound by *the recursive nature* of their interplay. In their interactions, members of an organization draw on structures by means of specific modalities at hand. For example, structures of legitimation can be made available by means of moral norms. Structures thus only exist in practice and rely on the individuals' willingness to actually play the game. Individuals, in a social system, may communicate, exert power on each other, and judge each other's behavior. In this respect, *rules of signification* are enacted in communications via underlying interpretative schemes. These schemes correspond to a cognitive order in the social system and may represent myths, stories and history, symbols, or sensitive and aesthetic rules. *Rules of legitimation* regulate the normative order of the social system. It is enacted by means of moral sanctions and judgments, and draws on norms and laws of appropriate conduct. Finally, *resources of domination* are shared among *authoritative* resources, i.e. capacity to exert power over others, and *allocative* resources, i.e. capacities that extent over material phenomena and objects (Clegg, 1989; Jarzabkowski 2008; Orlikowski 1992; Ortmann et al. 2000). Finally, a last important idea concerns the idea of *reflexive monitoring of action*, defined as "the

purposive, or intentional, character of human behavior, considered within the flow of activity of the agent; action is not a string of discrete acts, involving an aggregate of intentions, but a continuous process" (Giddens 1984: 376).

It is with this rudimentary equipment that I propose to proceed with our analysis. With his inclusion of reflexivity and material resources, Giddens makes it possible to account for asymmetries of power and domination in path-dependent contexts. The idea of domination as structure is not uncritical. In this respect, Clegg (1989) points out the focus of Giddens on agency, and his (too) great confidence in actors and in their postulated knowledge of social life and institutions. As a result, Giddens has "one-sidedly marginalized objective structure" (Clegg 1989: 144). Taking this critic into account, I suggest that this major emphasis on agency (while still taking structures into account) keeps Giddens' framework particularly appealing for path-researchers interested in what people do with institutions and institutionalized distribution of power to act upon a lock-in. Indeed, considering path-dependent contexts, we cannot help but observe asymmetries among distribution of power relations. Microsoft dominates desktop market and has often been put before courts for that matter, accused of dominating irregularly the market (Dobusch 2008). In a similar vein, how can a team of engineers possibly develop any alternative to the QWERTY keyboard and promote it out of their garage without experiencing a painful flop? Such examples underline the great asymmetries in domination existing among incumbents and supporters of alternatives. Moreover, "those possessing power in the form of excess resources seek authorization and legitimation for its use" (Scott 2008: 49), and need to wrap their usage of power in meaning and embed their action in norms to make it acceptable and understandable to other agents. Hence if institutions of the rationalist order constitute an "iron cage" enacted in organizations by its members (as implied by DiMaggio and Powell 1983), path dependence could explain why actors use specific institutions to lock the door (Mark Kennedy, personal communication). The use of power, sanctions, and communication about instantiations of a path stresses the existence of dependences among those who make use of these structures to protect the path they have walked down and inhibit others from tracing new ones.

Reflexive Structuration and Self-Reinforcing Dynamics in the WSB

The figure 13 below echoes the illustration that we discussed in the theoretical chapter. The figure summarizes the recursive dynamics between *path instantiation* and the institutional realm on which the supporters and the City relied while unfolding the project. Here, the arrows (1) to (6) are infused with the Dresden case and aim at illustrating the main idea behind the figure.



(1) Resources are used to channel the path instantiation
(2) Self-reinforcement centralizes the relations of domination and stabilize the path instantiation
(3) Interpretive schemes are used to give meaning to the path instantiation
(4) Self-reinforcement thickens the narrative mode used about the path instantiation
(5) Norms and values are addressed to legitimate the path instantiation
(6) Self-reinforcement justifies the norms used and the legitimacy of the path instantiation

Figure 13 - Path instantiation as reflexive structuration process

My approach corresponds to what Giddens calls an *analysis of strategic conduct* with respect to the institutional order enacted in action. In such an analysis, "the focus is placed upon modes in which actors draw upon structural properties in the constitution of social relations". This means "giving primacy to strategies of control within defined contextual boundaries" (Giddens 1984: 288). In this case, the duality of structures (i.e. the idea that structures is reproduced in action but also enables and constrains) is more implicit than in other types of studies, in which the researcher would try and grasp how the institutional realm evolved across long periods of time and across space. In our case,

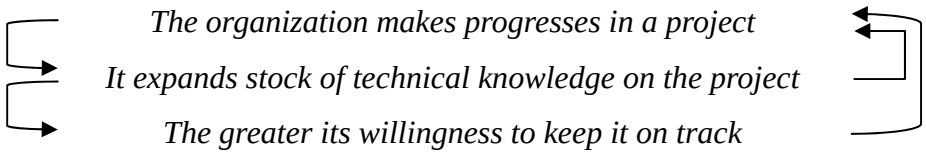
the period of time is fairly short. Duality is here implied with the idea that members of the City enacted structures to pilot the project within their institutional context and hereby accepted and reproduced this social order. The order considered here is the one implied under headings such as "bureaucracies" (Weber 1922, ed. 1995), and the influence of "two-party democracy" and related dichotomous political spectrums (e.g. Downs 1957; Riker 1982).

After this first data sense making, this chapter shows what main processes acted as sources of self-reinforcement to the current instantiation of the WSB-path. In the next sections, I will explain these processes in more details and illustrate their effects with empirical evidence. I would like, however, to start by introducing briefly the set of propositions on which these loops are building.

The Propositions behind Technical Problem-Solving as Self-Reinforcement

This loop is based on episode-based learning. The development of such a project implies deepening and recalibrating the knowledge stock about the dominant technical option along numerous phases, with different tasks to master and problems to solve, as decisions to proceed are made by the leading organization. The successive episodes trigger a phenomenon of knowledge accumulation and optimized fit among the solutions developed to master the project (i.e. a self-reinforcement driven by learning effects).

Contrary to sunk costs and resulting commitments, persistence is here less due to psychological barriers and the losing of invested resources (even though this clearly must have played a role at some point), but more to the increasing influence of the stock of knowledge in the solving of new problems; in other words: in the Dresden case, to the constitution of a sort of "WSB-expertise". In point of fact, this process reinforced the initial choice of a bridge at WS over time, and increased the supporters' willingness to proceed further in subsequent decision-making in the City (see table 14).

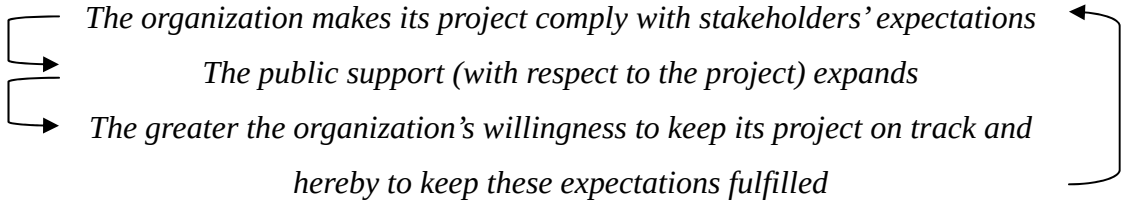


Observable Patterns	Episodes of technical problem-solving and optimization; accumulation and intertwining of knowledge
Examples of Activities	Expert studies; efforts of adjustments; evaluations

Table 14 - Analytical effort - Technical implementation

The Propositions behind Collective Mobilization as Self-Reinforcement

This loop is based on adaptive expectations. Under such a regime, "projections about future aggregate use patterns lead individuals to adapt their actions in ways that help make those expectations come true" (Pierson 2000: 254). Large scale projects are sensitive to this phenomenon, for they rely on their acceptance in public scrutiny. Their supporters necessitate an even larger base of critical support to reach completion. This is often regulated via compliance with norms and values, and storytelling about the project (Throgmorton 1992) to demonstrate how specific expectations are, or may be, addressed. Hence organizations tend to communicate to both reassure their bases of support and to persuade new masses. This reinforces and expands the resulting web of positive attitudes and expectations in the public, with respect to the forthcoming project. Over time, the organization's willingness to change or abandon the project diminishes accordingly (see table 15).



Observable Patterns	Increase in support; one-sided communication
Examples of Activities	Political positioning, communication, compliance with regulating agencies

Table 15 - Analytical effort - Collective mobilization

These two sources of self-reinforcement, i.e. technical problem-solving and collective mobilization, correspond to activities that are typical to the management of large-scale projects. To implement such a project, the organization in charge of the project needs to work along episodes of realization in order to give shape to the project, involving both the actual technical work *and* the dragooning of the public opinion, until completion (Flyvbjerg et al. 2003; Miller and Hobbs 2005). In this respect, the two processes feed each other. The occurrence of self-reinforcement in these processes further sustains the willingness of the organization and its members to further develop the project and to keep it on track at any costs. This process therefore implies the abandonment of flexibility overtime. As we saw in our theoretical discussion, the occurrence of self-reinforcement in organizations represent a form of organizational dilemma, in which actors see themselves tempted to pursue incremental developments, influenced by the occurrence of increasing returns. By doing so, however, the risk of constituting a lock-in is high, and can counteract the flexible capacity for change of the organization (Schreyögg and Sydow 2010a, 2010b; Sydow et al. 2009). I refer to this dilemma and its two sides, as the bright and the dark side of path instantiation. In this chapter, I focus on the bright side, i.e. how the occurrence of self-reinforcement motivates the organization to keep on the same trajectory by drawing on prior positive experience. In the Dresden case, we saw that the City started adjusting and operationalizing the new traffic concept shortly after its ratification in 1994. Eventually, numerous decisions were made with the support of a majority of members in the City as organization, for example in terms of location and technical priorities, engaging the project into largely incremental development stages. In this respect, these two sub-processes drove the project's trajectory and its nesting into the institutional realm. The processes, as well as their interplay, are summarized in figure 14.

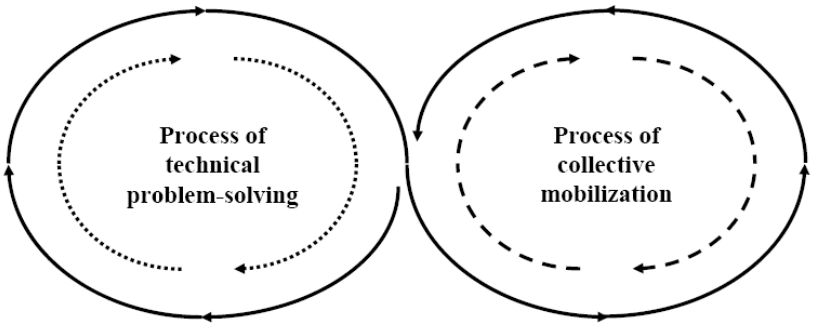


Figure 14 - Dynamics of self-reinforcement in path instantiation

In the next sections I explain these processes with more conceptual nuance and illustrate them empirically, using data from the project's records.

How to Build an Iron Cage? Structuring of Collective Action in the City

According to Friedland and Alford (1991), the institutional order of western societies is structured through a small set of higher institutional logics. Two logics are especially present in the Dresden case: the one of *Bureaucratic-State* (i.e. rationalization and regulation of activities via legal and bureaucratic control), together with the one of *Democracy* (i.e. participation and extension of popular control). Friedland and Alford conceive of individual action as nested into organizations and institutions, representing two different levels of constraints and opportunities for agency. The logics are hereby "concretized" via enactment of rituals and practices, like voting in a democracy, or buying goods in a capitalist economy. These societal influences were crucial in the development of what became the neo-institutional analysis. In line with the Weberian tradition, Meyer and Rowan (1977) concerned themselves with the rational-legal authority issuing from the bureaucratization of society and its impact on organizational forms. DiMaggio and Powell (1983) reminded their readers that, under the influence of capitalism, the rationalist order had become an iron cage to human action. Weber's approach was based on the seductive efficiency of formal reasoning as driver for the diffusion of the formal-rational bureaucratic order (Antonio 1979). To DiMaggio and Powell, this driver has been supplanted by the necessity for organizations and members of organizations to comply with the institutions structuring the fields and the communities they belong to. Keeping this background in mind, I applied the basic "model" of structuration theory to sort out my data and make sense of what the concerned actors did to structure episodes of collective action within the City, and hereby nest the project into an enacted "iron cage".

These agentic strategies are representative of the main phases in the active instantiation of the bridge from mere idea to concrete plan, ready for construction and legitimate to the eyes of a critical mass of future users. From the early debates in the 1990's until the final referendum on the matter in 2005, a few patterns are observable in

the data. Drawing on Giddens sensitizing devices, we obtain the summarizing figure 15.

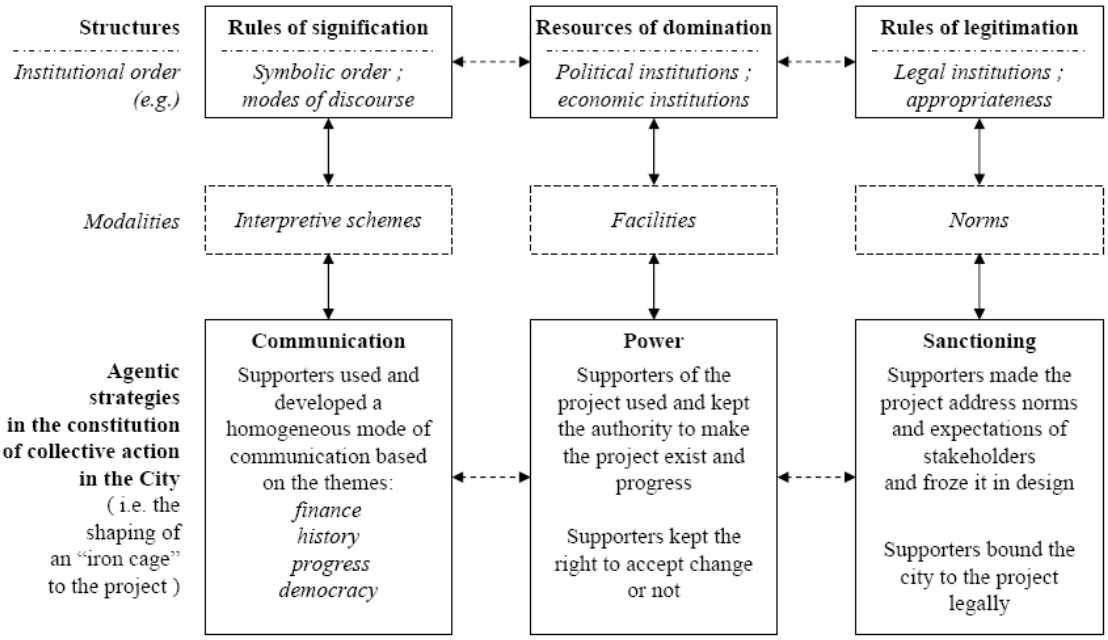


Figure 15 – Structuring collective action: the building of an iron cage

Power Retention

"Power defines reality", for power is "manifested in the ability to make one's own view of the world the very world in which others live" (Flyvbjerg 1998: 36). In the Dresden case, we can observe how the supporters made use of the resources granted to them by virtue of German law and by the municipal structures of a regime based on repeated democratic elections, at the different stages of the process. By *power* I mean here the capacity to bring reluctant people to contribute to instantiate the path under scrutiny.

In 1994, the WSB was one project among others. Its popularity however was suggested to members of the CA and of the CC via its historic character and its potential effect on traffic congestion. Nonetheless, in 1995, the City had remained divided among supporters of the WSB solution and two other groups, supporting other alternatives, namely the construction of a third Marien-bridge in the west of the city, and the supporters of the multi-bridge concept. In the City, the willingness to instantiate the long constricted idea of a bridge at WS drew on a critical basis of members in the CC

and in the CA. *Authoritative resources* were fairly well distributed.[73] The then Mayor, head of the CA, was in favor of the WSB, and, quite naturally, was channeling the work of the CA in this direction. The CA had been planning this bridge for years already, with the last instantiation in the late 1980's. At this point, however, the only obligation of the CA was to implement the policy of 1994 as a whole. This allowed opponents to the bridge in the CA to devote themselves to other alternatives. *Allocative resources* were drawn upon to sustain the WSB.[74] Indeed, to demonstrate the dominance of the WSB over other options, supporters had no difficulty to draw on the existence of the former plans, on the knowledge issued from the former instantiations, and on the presence of a physical layout in favor of the WSB, with the streets meeting on each side of the river at this location. Structuring the issue that way allowed demonstrating the suitability of the WSB as technical solution to come to terms with traffic issues. This argumentation made it possible for the supporters to find an access to governmental funds for this location and for nothing else. By drawing on the financing of the bridge, the supporters managed to establish a first basis of rationality for their preference and hereby to put this option to the fore.

This enabled the subsequent voting of the project with a large majority. In the CC, the supporters were in majority and could easily enact *authoritative resources*, in virtue of their power over the CA, as specified by the law. In June 1996, in consequence to the workshop, the Mayor, as Head of the CA, proposed the draft of a motion (Dresdner Hefte 2008: 72) on the construction of a bridge at WS to the CC. This decision was to legitimate the bridge with *authoritative effect* on the whole CA. The motion, however, did not receive a majority of votes. The influence of the Free State in the decision, i.e. the usage of *allocative resources of domination*, was especially criticized by the opponents in the CC.[75] The subsequent period of time thus became a moment of instability for the project and its supporters. In accordance, spontaneous initiatives were set up in the community, with citizens distributing flyers and stickers and promoting the bridge. Opponents, mostly active in the CC and in external environmental organizations, organized themselves in a rather loosely-defined social

[73] These are "non-material resources involved in the generation of power, deriving from the capability of harnessing the activities of human beings; authoritative resources result from the dominion of some actors over others" (Giddens 1984: 373)

[74] I.e. "Material resources involved in the generation of power, including the natural environment and physical artifacts" (Giddens 1984: 373).

[75] 19960628 PA SZ „Auf ein Wort – Zähne"

movement and tried to start a referendum on the matter. The narrowing process started at this time and had a strong effect on the decision-making. Most notably, the center-left faction (SPD) of the CC had not positioned itself clearly yet and was unsure about how to debate the project. As a consequence, a deal was made with the supporters of the bridge to make room for the decision-making. The factions agreed on a design with reduced lanes and a tramway, a strong symbol for public services.[76] An intern majority for the bridge was thus secured. This is exemplary of what Sydow et al. (2009: 700) call the desire "to end up on the side of the winners". Not knowing where the process would end, but back then convinced by the generalized wish for a bridge in the community, this side of the decision-holders could define herewith a compromising position.

In the meantime, the CA was to advance the WSB and its planning. To make sure that things would evolve along the line, the then Mayor withdrew the responsibility for the bridge development from the hands of his Head for Urban Development. Instead he set up a team, under his supervision, dedicated to the WSB. In August 1996, a study for the construction of a tunnel (instead of a bridge) was delivered to the CA.[77] The idea of a tunnel had been mentioned during the debate of the bridge workshop, and proposed as a compromise in this sensitive landscape. The study showed the limits of such an alternative and the technical challenges it would represent when compared to a bridge. The tunnel solution was ranked as *expensive* and it was doubted whether such a project could ever achieve conformity with the expectations of regulatory agencies. Hence this alternative was turned down. This being cleared, the CA met to succeed in submitting a new plan to the CC. In preparation for the vote in the CC, the WSB-issue was prepared technically. For example, pilot surveys on traffic were conducted in 1996, as well as feasibility studies for a bridge in the chosen area. The motion was prepared by the CA and submitted by the Mayor to the CC. On August 15, 1996, the CC, now a large majority for the WSB, voted the construction of a bridge at WS with 41 for and 22 against.[78] [79] After the debates in the CC, the bridge conception was specified and served as basis for the CA to proceed. In this respect, especially the right side was seen as problematic, due to differences in levels between the hill at WS and the River. In this same motion, the realization of an international competition was required to define the

[76] 19970417 PA SZ „Waldschlösschenbrücke jetzt doch mit Tunnel"
[77] 19960801 CA ES „Elbquerung am Standort Waldschlösschen - Tunnellösung"
[78] 19960815 CC OD Beschluss 1711-42-96
[79] 19960816 PA SZ „Nun doch: Neue Brücke für Dresden"

architecture of the bridge. From then on, the City as a whole was to dedicate itself to this project; any alternative could have made the object of sanctions in virtue of the administrations' obligation to run an economical budget. From then on, the WSB officially dominated: the City was now compelled to draw on its capacity to transform and act upon the physical layout of the meadows.

An architectural competition took place in 1997 and a proposal was selected. On February 12, 1998, as a result from the competition, the CC (still in majority represented by supporters of the WSB) *drew on its authoritative power* and voted a motion, asking the Mayor and his administration to use the winning proposal as basis for the subsequent implementation of a bridge at WS.[80] The other proposals were to be taken into account, especially for the development of a solution for the right river bank. *Allocative resources* were further enacted: the CC asked for precise cost estimations and financing plans to further start with the submission of plans for official appraisal. Indeed the debates on finances kept on coming back to the fore, with voices among the CC regretting the spending of money for a bridge when other social expenses were needed.[81] Opponents in the CC further proposed the delaying of construction work to span more time and thus control the spending.[82] Control over *economic resources* was needed more firmly among the supporters to keep the project on track. Although I do not know the details of the composition of this board, on April 11, 1998, after a seven-hour session, a member of the board for finances confirmed publicly that *the City had now a budget in which the WSB was included.*[83]

From then on, preliminary work could progress. In August of the same year, again, budget questions rose and started dismantling the coalition with the center-left party (SPD) disbelieving the calculations.[84] In October 1998, the CA announced its progress with respect to technical work: completion of related environmental studies and of preliminary work for the WSB.[85] In January 1999, the Head for Urban Development and the then Mayor presented the preliminary planning on the WSB to the

[80] 19980212 CC OD Beschluss 2940-71-98
[81] 19980213 PA SZ „Trotz Protesten Startschuss für Waldschlösschenbrücke"
[82] 19980306 PA SZ „Stadträte sehen Gefahr durch Waldschlösschenbrücke"
[83] 19980411 PA SZ „Finanz-Ausschuss feilscht um Haushalts-Millionen - Geld für Waldschlösschenbrücke ist jetzt eingeplant"
[84] 19980828 PA SZ „Wieder 15 Millionen Mark weniger für Bahn und Bus"
[85] 19981020 PA SZ „Ende 2000 Baustart für Brücke am Waldschlösschen?"

CC.[86] In the meantime, the bridge conception had changed from a steel-bridge to a mix of concrete and steel, a cheaper version. On February 4, 1999, the CC received positively the preliminary planning works.[87] The Mayor and the CA were asked to proceed and to stick to the variants herewith identified with some more specific changes that were recommended. On July 6, 1999, the City let know that it was performing additional studies to specify what connection would be best suitable.[88] The bridge was to be connected to the network via a complex of tunnels, crossing under the hill on the right river side. Tunnels variants were evaluated. In the meantime, the tunnels were reduced from three to two. On July 20, 1999, the CC voted for the withdrawal of the tramway from the WSB project, considered superfluous.[89] This necessitated new planning rounds and initiated the start of the in-depth planning. Concretizing these efforts, on September 7, 1999, the CC *voted a new allocation* of DM 2 Mio (EUR 1, 2 Mio, 2009 prices) to the further planning of the WSB.[90]

On January 14, 2000, the City applied for planning appraisal.[91] However, on July 14, 2000, the Regional Directorate announced its refusal of the plans as submitted.[92] On November 10, 2000, the CC voted the development of new plans for the right river bank, displacing the connection of the bridge to the streets closest to the meadow (i.e. shorter tunnels), and asking for specific installations related to this effort (walker-paths, bus stops, landscape design, etc.).[93] The connection at the right river side was changed completely and necessitated tremendous corrections. On March 1, 2001, the CC voted the new plans for the bridge head at the right river bank proposed by the CA.[94] Planning went on. New options were debated in the CA and in the CC. Meanwhile, *physical domination* was demonstrated by renovating connecting streets and surrounding installations to make them compatible with the future traffic load.[95] On February 18, 2002, the City announced a finance strengthening (*Konsolidierungsziel*) of EUR 92,8 Mio, to be reached until 2004.[96] However, nine priority projects were

[86] 19990120 CA PR „Nach 60 Jahre bekommt Dresden wieder eine neue Brücke“
[87] 19990204 CC OD Beschluss 3618-87-99
[88] 19990606 CA PR „Oberbürgermeister Wagner besteht auf Zeitplan“
[89] 19990720 CC OD Beschluss 0006-01-99
[90] 19990907 CC OD Beschluss 0060-FL-99
[91] 20000210 CA PR „Stand der Planungen für die Waldschlösschenbrücke“
[92] 20000714 RD PR „Stand des Planfeststellungsverfahrens für Neubau der Waldschlösschenbrücke“
[93] 20001110 CC OD Beschluss 0876-20-2000
[94] 20010301 CC OD Beschluss 1128-25-2001
[95] 20011029 CA PR „6.4 Millionen für die Priessnitzbrücke“
[96] 20020218 CA PR „Verwaltung Vorstand beschließt Haushaltssicherungskonzept“

selected, among them the WSB, and their financing secured. All other projects were frozen until 2004. Meanwhile, the City suffered historical levels of flood in the valley with most axes and bridges closed to traffic. This specificity got into the planning optimization. On February 18, 2003, the City submitted its plan anew for appraisal.[97]

New elections in the CC were coming in 2004. A blatant example for such usage of power retention: during the process of appraisal and evaluation, on April 10, 2003, the CC, still with its majority supporting the WSB, voted a new motion to reduce the planning and construction times in order to speed up the process. The CA was asked to design the edifice according to the RAB-BRÜ rules (*Richtlinie für das Aufstellen von Bauwerksentwürfe*, a set of norms that specify the form and content of designs and plans for constructions of bridges in Germany) and not only according to the Regional Directorate and its appraisal. The CA was asked to start planning the bid invitations parallel to the plan evaluations, to treat problems that would result from the evaluation as top-priority, to explicitly ask the bidders to provide proposals for the reduction of construction-time in their offer. The CC explicitly recognized in the motion that sunk costs could result out of this. Structuring efforts are blatant in this decision. The majority supporting the project decided to embed the effort even more into structures of domination (by voting the authoritative duty for the CA to speed up the process and by demonstrating the progress in the preparation of the physical construction) and of legitimation (by embedding the project into more sets of legal norms).

The plan appraisal was issued on February 25, 2004.[98] On August 23, 2004, the State certified that it would award the sum of 96 Mio EUR to the City if it decides to build the bridge.[99] In the City, however, the supporters had little time to celebrate. Nine years after the official decision voting the bridge, and in the same year as the reception of plan appraisal, the CC was newly elected and represented this time by a majority center-left, opposed to the project. Attempts were made to displace funds to support other projects, like the renovation of kindergartens and hospitals.[100] The CC and the Mayor "affronted" each others. On October 28, 2004, the State awarded the promised 96 Mio EUR to the City.[101] As it was later questioned about this money, the local

[97] 20030218 CA OR „Unterlage 1.1 – Erläuterungsbericht"
[98] 20040225 RD OR „Planfeststellung für das Bauvorhaben Neubau des Verkehrszuges Waldschlösschenbrücke"
[99] 20040823 FSS PR „Waldschlösschenbrücke: Freistaat steht zu 90-%-Förderung"
[100] 20040826 CC OD "Interfraktioneller Antrag"
[101] 20041028 RD OD „Zuwendungsbescheid"

government answered that, in case no majority would vote for the bridge, the money could be used for other projects by the City.[102] Hence fearing for their effort, the supporters (as political factions and joined for this occasion by the ADAC, i.e. the German automobile club, and other social movements run by citizens) decided to launch a referendum on the project to close the discussions and prevent the newly formed CC from disrupting their effort:

> "And this majority, one of its first actions back then was: 'we don't revoke the planning of the WSB, but we stop its financing. We do a break and we look whether we could invest it otherwise'. And in the same evening, I remember it well, in this very evening, I told to my fellow-councillor (…) 'now we get out and collect signatures' " (City Councillor, member of the local CDU-faction, interview, 2010).

> „We obtained enough votes eventually; the people of Dresden had decided" (Member of the Saxon State Parliament, local FDP-faction, interview, 2010).

On February 27, 2005, 50,8% of the electoral register participated in the referendum and was asked: "Are you for, or against, the WSB?" 67,9% of the electoral register voted YES. For the City, this result was binding until February 27, 2008 and could only be stopped with a second referendum until then. From February 2008 on, the decision could have been revoked by a motion from the CC, if this one was voted by two thirds of the Council. The supporters represented more than one third of the CC: the project was now all theirs. As a result, the power to decide about the construction became centralized within the supporters' hands, a situation they would eventually use strategically as the pressure for disruptive change increased:

> „And we simply said we want to do it now [i.e. to construct the bridge], because this is congruent with what the population wants. We have a democratic legitimation for it. It was a majority decision" (Member of the Saxon State Parliament, local FDP-faction, interview, 2010).

[102] 20050211 FSS OD "Offener Brief" (subventions are not locked for a bridge)

Binding the Project

Together with the use of power, the project needed to be rooted in values and norms, embodied by regulations and expectations about what is appropriate among stakeholders in the community. Obviously, the development of the project followed all rules and regulations in vigor in the local community and according to Federal law. In this respect, the workshop of 1996 further served as a platform to enact *rules of legitimation* by showing how the bridge at Waldschlösschen would address best the *norms and regulations* expected by local agencies in such projects, as well as the expectations of the citizens and their right to complain and to sanction such a project legally. The official voting of the project in the CC was based on this knowledge. Needless to say, it would have been illegal for the CA to refuse the implementation of motions voted in the CC. As a matter of fact, only the Mayor can appeal such decisions, resulting in a new session of votes. Hence the subsequent motions voted for the construction of the WSB diminished the scope of action from a legal point of view and could only be revoked with a new motion.

On September 13, 1996, the City had announced its Europe-wide architectural competition. In the conditions handed out, the project and related problems were contoured according to existent norms and legislations and to the guidance formulated in the municipal motions voted in the CC.[103] Results of former internal studies suggested linking the approximately 500 m long traverse with tunneling on the right river side, as a solution to bring the cars down from the hill to the traverse. The project was to take into account the restructuring of the road network at proximity, and the development of specific intersections and stations for the tramway and public transportations. Dimensions were specified, as well as more technical issues to address such as the requirements by the Water and Shipping Authority, adaptation of the proposal to the urban situation, streets and lines networks (waterlines, telecommunications, and electricity, gas, lightning, as well as drainage systems), access for disabled users, etc. With all these criteria in mind, the participants were asked to address moral implications like a blend in the location that would respect landscape, Heritage, and active and passive recuperation of the area, herewith stressing the respect for environmental issues. For example, part of the task was to determine whether the

[103] 19970625 CA OD „Realisierungswettbewerb Neue Elbebrücke am Standort Waldschlösschen in Dresden - Auslobung“

bridge was to rise high or not and its impact on visual relations, or whether the traverse would contribute to accentuate the effect of depth provided by the large meadows or not. On the right side of the river, various residential buildings are located, as well as the Waldschlösschen brewery with its restaurant and terrace with view over the water. This slope used to offer a specific view over the city center and the large meadows along the water. This spot was an important green, recreation-area for the citizens. The visual relations from this spot encompassed the skyline of the city center downstream, and the natural river banks, the slopes, and the Castles, upstream. City and participants eventually met for preparatory and corrective sessions, during which specifications were exchanged among competitors and CA, concerning minor wording issues, changes in dimensions after recent planning work by the City, technical norms, and some adjustments needed in design, to meet the expectation of specific regulative authorities. Technical specificities were also exchanged, from the alignment of the bridge to the tramway station, the roads, the design of the lightning, of the river banks, and of the area dedicated to a yearly local Folk-festival nearby.

All these specificities were taken into account in the design of the bridge and the subsequent planning work. Needless to say, missing attention to these issues could have had negative consequences for the progress of the project globally. This became flagrant in 2000 as the Regional Directorate refused the plans submitted. On January 14, 2000, the City had applied for the plan appraisal.[104] The regulatory agency in charge of such efforts is the Regional Directorate of Dresden. The plan submitted comprised (depending on the versions) 14 large lever-arch files encompassing all sorts of plans, maps, overview of alternative designs, a directory of construction works, lists of studies performed and summaries of their results, a directory of lands and properties acquisitions, reports on compensatory solutions for damages and disruption caused by the construction works, and one explanatory report accompanying the documents and detailing all sorts of details, from engineering and history of the project to figures on traffic and costs.[105]

Such project descriptions are the occasion to make sense of action with authority (Brown 2003) and according to the institutional realm in vigor (Weber and Glynn 2006). In this case, the description detailed the need for a bridge as a solution to traffic

[104] 20000210 CA PR „Stand der Planungen fuer die Waldschlösschenbrücke“
[105] 20000124 CA OD „Planfestellungsunterlagen“

problems was described and detailed, drawing on the known elements, like history, traffic congestion, funds, and official motion. The need was strengthened by traffic figures for the year 2010. On February 10, 2000, the City further communicated on the plan via press release and provided the community with details on technical dimensions, compensatory measures, and traffic issues during the construction work, demonstrating the course of action and its concretization in operational terms.[106] Costs were detailed as well as their take over. Information on related work of renovations and rearrangements like the construction of new garden units, were announced.[107] [108] The public was asked to react to the plan submitted and to send complains, if applicable, until March 28, 2000.[109] On July 14, 2000, the Regional Directorate announced its refusal of the plans as submitted.[110] The main reasons for this were "considerable shortcomings in planning" (2000: 1) with respect to noise protection and soundproofing. The figures provided were considered too high and the RD doubted whether the installation of shields as technical solution could be of any help:

> "Also, the RD holds the opinion that a high risk for complains from concerned citizens against the capital city Dresden as awarding authority can be anticipated if one holds the current planning without restrictions" (RD PR 2000).[111]

In November of the same year, the CC voted the development of new plans for the right river bank, displacing the connection of the bridge to the streets closest to the meadow, and asking for specific installations related to this effort (walker-paths, bus stops, landscape design, etc.) to address the weaknesses identified in the plan of 2000.[112] By so doing, the City was showing to the community its determination to take the citizens into account in the project. The connection at the right river side was changed completely and necessitated tremendous corrections. On March 1, 2001, the CC voted[113] the new plans for the bridge head at the right river bank proposed by the CA. Planning went on. Meanwhile, in 2002, the city suffered historical levels of flood in

[106] 20000210 CA PR „Stand der Planungen für die WALDSCHLÖSSCHENBRÜCKE"
[107] 20000525 CA PR „Schlankheitskur für Radeberger Strasse"
[108] 20000603 CA PR „Kleingartenkonzept hat sich bewährt"
[109] 20000124 CA OD „Planfestellungsunterlagen"
[110] 20000714 RD PR „Stand des Planfeststellungsverfahrens für Neubau der Waldschlösschenbrücke"
[111] 20000714 RD PR „Stand des Planfeststellungsverfahrens für Neubau der Waldschlösschenbrücke"
[112] 20001110 CC OD Beschluss 0876-20-2000
[113] 20010301 CC OD Beschluss 1128-25-2001

the valley with most axes and bridges closed to traffic. This specificity got into the planning optimization to make sure the new requirements resulting from this event were addressed. On February 18, 2003, the City submitted its plan anew for appraisal.[114] This time, the increasing traffic issue was projected until 2015. Technical fit with all social issues raised during the hearings of 2000 were addressed, for example dedicating a completely new section on landscape protection and compensation measures.

Hearings and evaluations took place to determine the weaknesses of the project with respect to environmental protection, noise, and the residents' rights. From March 10 to April 10, 2003, the Regional Directorate led public display of the plan.[115] On May 7, 2003, the Regional Directorate announced the end of the hearings for the public agencies and their administrators (*Träger öffentlicher Belange*) *as* well as the deadline for the objections of the public.[116] Over 1700 objections reached the Regional Directorate, 10% of which were considered effective in their dismay. Issues at stake were: traffic load, noise and emissions, architectonic, static and engineering aspects, over-dimensions of the bridge, missing of tramway on the traverse, impact on the visual relations and landscape, financing and costs, impact on other buildings and areas surrounding. The Regional Directorate submitted all complaints to the City to prepare its argumentation. Eventually, the City and its partners worked on the objections raised and addressed their argumentation to the Regional Directorate, with proposals for corrections if applicable. On October 20, 2003, the Regional Directorate sent a final list[117] to the City with issues to work on. On January 28, 2004, the CA communicated[118] to the Regional Directorate its now third round of corrections to the plan. The plan appraisal[119] was issued on February 25, 2004. The document summarized and made official the administrative process and documented the reasons for the permit: traffic reduction on the bridges Carola, Albert and Blue Wonder (all east from the city center), as well as the connection of the districts south-east (residential) and north-west (industrial), based on forecasts. This process is a strong symbol as such and stresses the

[114] 20030218 CA OR „Unterlage 1.1 Erläuterungsbericht"
[115] 20040226 RD PR „Regierungspräsidium schließt Planfeststellung für das Bauvorhaben Waldschlösschenbrücke der Landeshauptstadt Dresden ab"
[116] 20030507 RD PR „Regierungspräsidium schließt Anhörung zur Dresdner Waldschlösschenbrücke ab"
[117] 20031020 RD OD „Planfestellungsverfahren ‚Verkehrszug Waldschlösschenbrücke' – Nacharbeiten durch dir Landeshauptstadt Dresden"
[118] 20040128 CA OR "Nacharbeiten durch die Landeshauptstadt Dresden"
[119] 20040225 RD OR „Planfeststellung für das Bauvorhaben Neubau des Verkehrszuges Waldschlösschenbrücke"

alignment process of the construction effort with all potential requirements from the local community. The project had become acceptable in the eyes of the highest authority. It was tackling with fairness issues of environmentalism, the citizens disturbed by the construction, and it proved technically fitted to all the issues raised in the community. To put it simply, the bridge had become a "good" project, valid and legitimate in the eyes of the representatives of the community. On February 26, 2004 a press release issued by the Regional Directorate communicated the official plan appraisal for the WSB.[120] The Regional Directorate stated the need for a traverse at this location and that no other alternative could achieve such an impact on traffic, neither other locations nor a tunnel. The City was now allowed to build the long-awaited bridge:

> "A legal and administrative process that has been moving the Dresden community for years like no other reaches herewith its completion" (RD PR 2004).[121]

Developing a Myth of Rationality

In the planning of most large projects, achieving alignment among heterogeneous expectations is performed via persuasive storytelling (Suchman 2000; Throgmorton 1992). Such narratives, sometimes called tales, or stories, may take different definitions and analytical perspectives (see Boje, 2001; Czarniawska, 1998; Feldman et al., 2004; Gabriel 2000). For matter of cohesion, I call here a "myth" the dominant explanation encompassing the sum of "stories" about the bridge, as they have become taken-for-granted over numerous occasions for narrations (Boyce 1996). The evolution of the stories told contributes to the evolution of the encompassing myth as shared, collective rationality, reinforcing each other recursively. In this respect, stories are seen as carriers of cultural and cognitive influences, and illustrate how actors make use of the past (Haydu 1998) to justify their conduct and further establish a common understanding about what is coming next. Hence narratives provide both the collective *and* the rational dimensions that are central to this case study. Collective, because narratives are made of stories and of elements that are understandable to most of the

[120] 20040226 RD PR „Regierungspräsidium schließt Anhörung zur Dresdner Waldschlösschenbrücke ab"
[121] Ibid.

audience concerned, to make sense about events that have been attended collectively. Rationality is further provided by the very nature of myths: the seemingly logical flow of events in a story, starting with a beginning and ending with some results is performed to make sense of the events one recalls, while constructing logical links among them. Drawing on such data allows observing how actors (individuals or whole organizations) formulate their own account of events and hereby address the opinions they are expecting around them. In other words, the dominant narrative mode and the related myths become proxies to identify collective frames of thinking about shared expectations. Addressing expectations by telling current stories about the bridge and its development endorses the public support and the trajectory taken. It evolved along the major episodes of implementation, as depicted below:

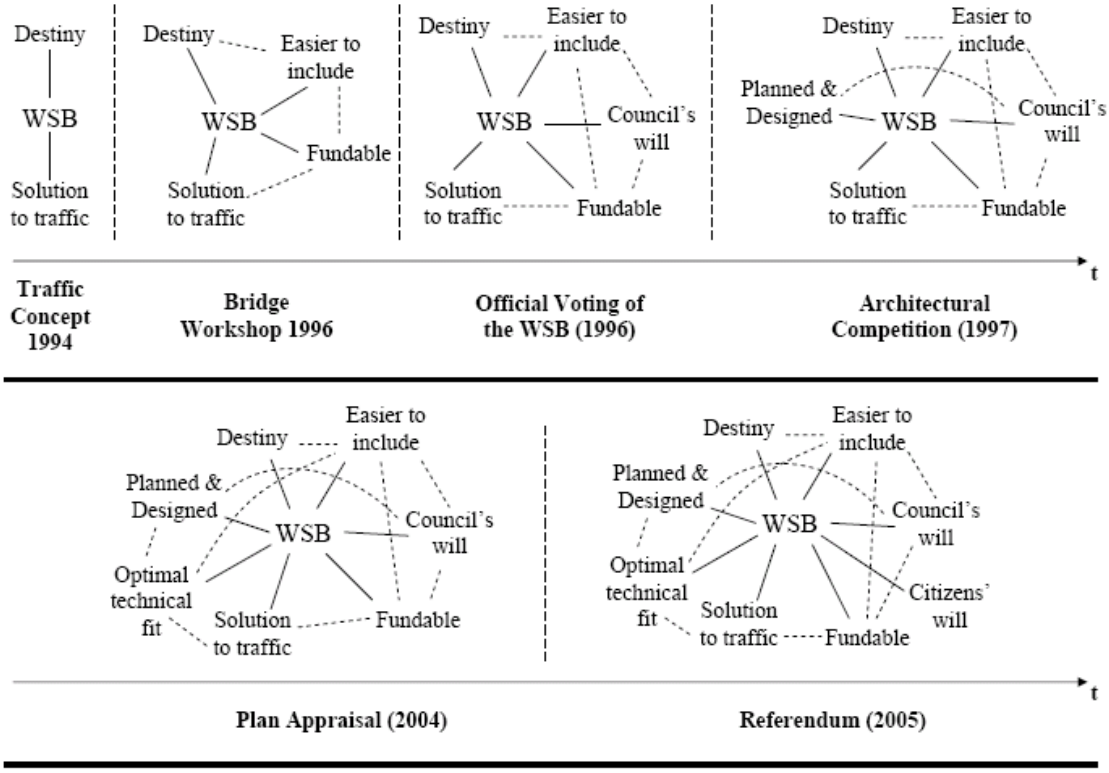


Figure 16 – Emergence of a dominant myth: What the WSB is all about

The small networks in figure 16 summarize the average "stories" told to the community at different stages of the project and depict the incremental development of the dominant mode of communication about the bridge. The dominant mode became particularly complex and accurate as the project evolved. This is this myth about the

bridge construction as most rational decision to make that was validated by almost 70% of the voting citizens during a referendum in 2005.

In 1994, the bridge was communicated as a potential solution (among others) to cope with traffic problem. The project was further linked to its historically constricted development (i.e. *destiny*). As things evolved in the City, the next rounds of communication built incrementally on the former narrative and linked the now old story to new elements, like the easier inclusion of this bridge as compared to other alternatives. In 1996, the public support for the bridge was based on a generalized need for more traverses, i.e. on the *meaning* the project had taken for the citizens, loaded with the hope that is would solve problems emerging. Thus, the bridge and its raison d'être evolved after the dismissal of other locations during the workshop. In consequence to the debates, the superiority of one solution became the dominant mode of communication within the City, as well as between the City and the stakeholders. Major *rules of signification* were enacted in this respect, with an argumentative mode that echoed, implicitly, the unstable financial situation of the City, the search for technical optimum and progress (i.e. *bureaucratic reason*), and the primacy given to the citizens (i.e. *democratic participation*):

> "That's why me must decide at last and stop the endless discussions. Or else we'll have only beautiful plans and no bridge (…). If I must balance between the impact on residential districts and on nature, I will always be on the people's side" (Mayor, PA SZ 1996).[122]

Eventually, the bridge entered new phases of deepening. On June 25, 1997, the conditions of the public offer were handed out.[123] In the document, the instantiation was now described as an official project, voted by the CC, i.e. the official representation of the citizens in the City's structures, and the City of Dresden acted as awarding authority. The guidelines insisted (page 6 of the document) on the realization of a solution that would blend into the sensitive location and would not harm the visual relations. Again, in this document, the City repeated the old history of the WSB:

[122] 19960530 PA SZ „Experten für Waldschlösschenbrücke"
[123] 19970625 CA OD „Realisierungswettbewerb Neue Elbebrücke am Standort Waldschlösschen in Dresden - Auslobung"

> "In this time [i.e. the 19th century] the idea of an external ring was born – 'external environ way'- in the course of the current Fetscher street – Stauffenberg alley (…) Until today, this bridge has never been concretized"
> (…)
> "The bridge construction shall become the task of the century for Dresden" (CA OD 1997).[124]

The competing models were exhibited publically until December 17, 1997.[125] [126] This was a unified CA that debated about the proposals, bound to its executive role in the City by way of the motions voted. The concept delivered by the Berlin-based team ESKR won the competition, praised for their successful design of the ramps, included into the landscape difficulties.[127] The exhibit of the model was a success in the city and the proposal remained the basis for subsequent development.[128] In other words: the bridge had taken shape.

> "The competition constitutes the fundament for the necessary planning work before construction start of the WSB voted by the CC in august of 1996" (CA PR 1997).[129]

Eventually, during the subsequent years of planning, gossip went on in the community and a lot of rumors about the project ran around. In October 1998, the CA announced its progress with respect to technical work: completion of related environmental studies and of preliminary work for the WSB.[130] A couple of months later, the CA reassured the community:

> "In almost all consultations about the WSB, Mayor (…) indicated that the increasing traffic problems in the city allowed for no adjournment of the bridge-construction whatsoever. 'There is no reason why we could not finally start with the construction in the year 2000', thus [the then Mayor]" (CA PR 1999).[131]

[124] 19971216 CA OD „Realisierungswettbewerb - Neue Elbebrücke am Waldschlösschen" (p. 18 and 21)
[125] Ibid.
[126] Ibid.
[127] 19971217 PA SZ „Neues Blaues oder Grünes Wunder"
[128] 19980103 PA SZ „Röhre oder Vierfüßler über die Elbe"
[129] 19990217 CA PR „Neue Elbebrücke Waldschlösschen"
[130] 19981020 PA SZ „Ende 2000 Baustart für Brücke am Waldschlösschen?"
[131] 19990606 CA PR „Waldschlösschenbrücke: Oberbürgermeister Wagner besteht auf Zeitplan"

A similar usage of communication was observable shortly after the refusal of the Regional Directorate to grant plan appraisal in 2000. In October of the same year, the Mayor, in a symposium about European cities in Dresden, announced to the audience (and eventually diffused via press release):

> "Dresden - city in Europe - if we want to survive the competition, we need to remain accessible. (…) This year, we will start building the WSB" (Mayor, CA PR 2000).[132]

Finally, in 2005, communication and the meaning that had been given to the project over the years played a crucial role in the conduct of the referendum. According to German law, a referendum must be answerable by a clear YES or NO. Hence both camps, i.e. supporters (YES to the bridge) and opponents (NO to the bridge), entered into an active communication campaign. For example the political party far-left (PDS, now *Die Linke*, "the Left") issued a newspaper on the bridge, in which it was said that the WSB would not solve traffic issues, that the WSB was too expensive, and that it would destroy the meadows.[133] Particularly interesting in this respect is the leaflet that was distributed by the CA to the City's households in February 2005. In 20 pages, supporters and opponents wrote about the bridge and each others, thus revealing the system of meaning that had emerged over the years of public discussions and arguments.

In this document, the supporters proposed a finalized plea for the project.[134] The broad range of arguments evoked very much the symbolic role played by history as shared basis of knowledge about the project among citizens, as well as their experience while attending the public debate over the years: "The WSB has been wished since 1859 and is needed today more than ever before to close the main streets network" (2005: 1). Their text addressed the negative expectations about the project and reassured the stakeholders about their interests being addressed and about the compensation of the negative impact of the construction, as well as its funded nature, with little load on the municipal budget. The necessity of the bridge, beyond the physical advantage of

[132] 20001026 CA PR „Herausforderungen und Chancen für Dresden als Europäische Stadt"
[133] 20040201 DL ID „Die Brücken-Zeitung"
[134] 20050227 CA ID „Bürgerentscheid Waldschlösschenbrücke 27. Februar 2005"

crossing the river more quickly, was further rooted in the importance of a tolerant traffic policy that would grant the same rights to car-drivers and users of public transportation:

> „Mobility is decisive for the freedom to choose one's social life and an important contribution to social integration (…). The versatile importance of all means of transportation, particularly of the car, for the daily organization and planning of life of numerous people must be accepted" (Supporters to the WSB, CA ID 2005).[135]

The opponents took the exact counterpoint. They argued more pragmatically and with less symbolism. They invoked the weak effect of the bridge on traffic issues, and stressed especially the financial implications of such a construction project for a City with unstable budget and weak capacities for financing in issues of social necessity:

> "A lot of citizens ask us: 'and what would be the alternative to the WSB?' We then ask: 'Why such a gigantic effort to build a bridge that does not solve our problems and bring a lot of new ones along?' The WSB is here and now completely out of place. It is hardly useful. It damages a lot. And it is only costly" (Opponents to the WSB, CA ID 2005).[136]

Their argument had little success in the poll. Almost 15 years had gone by since the discussion about this bridge had come about as a solution to the traffic problems of the city.

How Self-Reinforcement Locked the Door

This first analysis has shown us how the supporters within the City made the WSB an official task for the City and how they kept control over the project at every critical phase. From their perspective, this process is a "bright" one. This institutional analysis, however, does not tell us *why* would actors enact power for that bridge, why would they dock it into norms and laws, and why would they develop a myth around the necessity of the bridge. In response to these questions, path dependence not only explains where ideas come from; it also explains how preferences are constituted

[135] 20050227 CA ID „Bürgerentscheid Waldschlösschenbrücke 27. Februar 2005" (p.4-5)
[136] Ibid, p. 9.

overtime, by shedding light on the underlying *incentives*. Why would people refuse rocking their usage of QWERTY? Why would people refuse using subtitles when they may use dubbed versions of their favorite movies? This is the very issue of motivation that I now aim at addressing.

Page (2006: 88) delineates the ideas of increasing returns, positive feedbacks, and self-reinforcements with more precision, and suggests that these ideas are by no means synonymous. In his essay, he defines increasing returns and positive feedback as dependent on the amount of other agents making the same decision. Hence increasing returns correspond to benefits that rise smoothly over time (e.g. economies of scale), whereas positive feedbacks represent specific, one-shot bonuses that are provided to those who made the "right" decision in the first place as others follow (e.g. the introduction of complementary products). Self-reinforcements are more generous in their applicability and offer a better fit to organizational dynamics, in which such network externalities are inversed. For example, joining new colleagues in a new firm by adopting their work practices does not give any bonus nor cost-reductions to the older colleagues, but to the newcomer by easing her/his introduction. A self-reinforcing mechanism "means that making a choice or taking an action puts in place a set of forces or complementary institutions that encourage that choice to be sustained" (2006: 88). Building on this definition, we will now see what "hidden dynamics" (Schreyögg and Sydow 2010b) were at play behind the reflexive structuring of the project, namely: dynamics of self-reinforcement in the sense of Page.

Technical Problem-Solving as Source of Self-Reinforcement

Classical understanding of learning effect foresees the occurrence of increasing returns in the repetition of a specific task (Sydow et al. 2009), for example by enabling the occurrence of economies of scale. At the individual level, a classical example is the tacit trial-and-error process of one's hand trying to pick up a pen on a table (Morgan 1997: 85). The construction of a bridge, obviously, does not directly imply the repetition of specific tasks, not to mention the impossibility of decreasing costs per unit; indeed one shall build it only once. However, the process unfolding the project from mere concept to concrete roads remains a learning one, with optimization work on existing knowledge and episodes of problem-solving and knowledge creation. This learning

process is by no means an accumulative one only; instead technical knowledge related to the project and, more precisely, to its artifact, evolves along wakes of adjustments that diffuse throughout its diverse components towards a necessary best-fit. In this respect, what is interesting to us in this section, is how "under conditions of uncertainty, individuals' interpretation of their environment will reflect the learning that they have undergone" (Denzau and North 1994: 4).

Underlying Social Mechanism: Learning Effects

Learning processes may take many forms (see Huber, 1991, and Dodgson, 1993, for reviews). In our case, we address dynamics that bind together episodes of technical problem-solving and implementation. This pattern implies that specific arrangements made at T1 will serve as the basis for further developments at T2, henceforth narrowing the span of action until final completion. In practical terms, the more problems have been solved and codified into a repertoire of knowledge, the less attractive it becomes to step off the dominant solution. Inflating knowledge bases further reinforces the idea, within the organization, that building a bridge at WS was a smart thing to do. This logic addresses Page's (2006) call for explaining why the relative attractiveness of alternatives decreases in path-dependent contexts (see also Vergne and Durand 2010).

The construction of a bridge is an engineering achievement that is rooted in prior knowledge and experience. This knowledge and experience basis is enacted to reflect on current challenges and to find solutions for new issues as the project unfolds. In this respect, this knowledge-intensive process enters into the category of mindful-action (Levinthal and Rerup 2006). Here, learning is supported by repeated situations of problem-solving within the organization (von Hippel and Tyre 1995). A typical example for such a process is the one of product development in business organizations (Holmqwist 2004). Such processes "show trial and error (or, more precisely, trial, failure, learning, revision and re-trial) as a prominent feature" (von Hippel and Tyre 2005: 2). Constructing an artifact, be it a building or a bridge, generally implies high degrees of uncertainty with respect to the problems occurring on the way. How to integrate a still shapeless traverse into the location selected and its landscape? How to design pillars that will address the specificities of the water flows? How to address technical requirements issued by the regulating authorities? These are exemplary

problems met by the City. In a first time, these questions correspond to ill-structured problems, for which a solution-space is yet to be determined. Addressing these problems implies framing them, and developing ways of testing solutions (von Hippel and Tyre 1995). Besides the knowledge created with respect to engineering as a social-practice, a large stock of knowledge about the WSB (as "product" if you will) was gathered and codified explicitly (Brown and Duguid 2001).

"After knowledge is created through learning processes, it is embedded in a reservoir, repository, or retention bin in the organization" (Argote and Todorova 2007: 199). The process of technical problem-solving is constituted by successive episodes, each determined by specific goals to attain or problems to solve for the project to progress (similar to Logan, 1988). As a result, the process of technical implementation leads to a phenomenon of knowledge accumulation that counter-balances the exploitation-exploration trade-off (March 1991). By proceeding like this, the organizations and their members exploit and further enrich one repertoire of knowledge. It thus traces a steady incremental trajectory and circumvents alternative developments, making the organization dependent upon the (technical) way it has been walking down.

Similar to Miller's (1993) architecture of simplicity where organizations tend to refine and revise what they are better at, the project we consider here inevitably developed a repertoire of knowledge about the bridge option that grew far superior, compared to the knowledge about any other solution, and made the re-thinking of the project particularly unattractive as critics appeared. This accumulation process fed future decisions when radical change was being required and harmed the freedom to decide otherwise. This became, quite naturally, a trap for the organization. Because relying on the records of self-reinforcements makes the further implementation particularly attractive and each step brings the organization closer to completion, in a sort of pull-effect (Sydow et al. 2009). However, in a first place, this effect is a resource for the supporters, since every progress on the way brings the project closer to completion. As long as the effort appears as absolutely rational, each new step mastered is a success as such.

When Technical Problem-Solving Drives Knowledge Accumulation

We saw in the former chapter that technical preparation for the WSB did not

start from scratch. The first plans and analyses for feasibility in this area started between 1926 and 1935. Traffic studies followed in the 60's and the 70's. Between 1978 and 1979 an eight-lane bridge was projected. This was eventually reduced in 1984 and 1986 to six, then four lanes. In 1988 an architectural competition took place. The project, however, happened to be outdated as it was resumed in 1990, after the reunification. Under the lasting influence of these plans, new studies were performed between 1990 and 1994, along with the traffic plan of 1994 (V94), until an official decision in terms of location and technical option (i.e. turning down the tunnel option) was made in 1996. From then on, technical implementation of the WSB went on exclusively, until final plan appraisals in 2004. This incremental trajectory is pictured in figure 17.

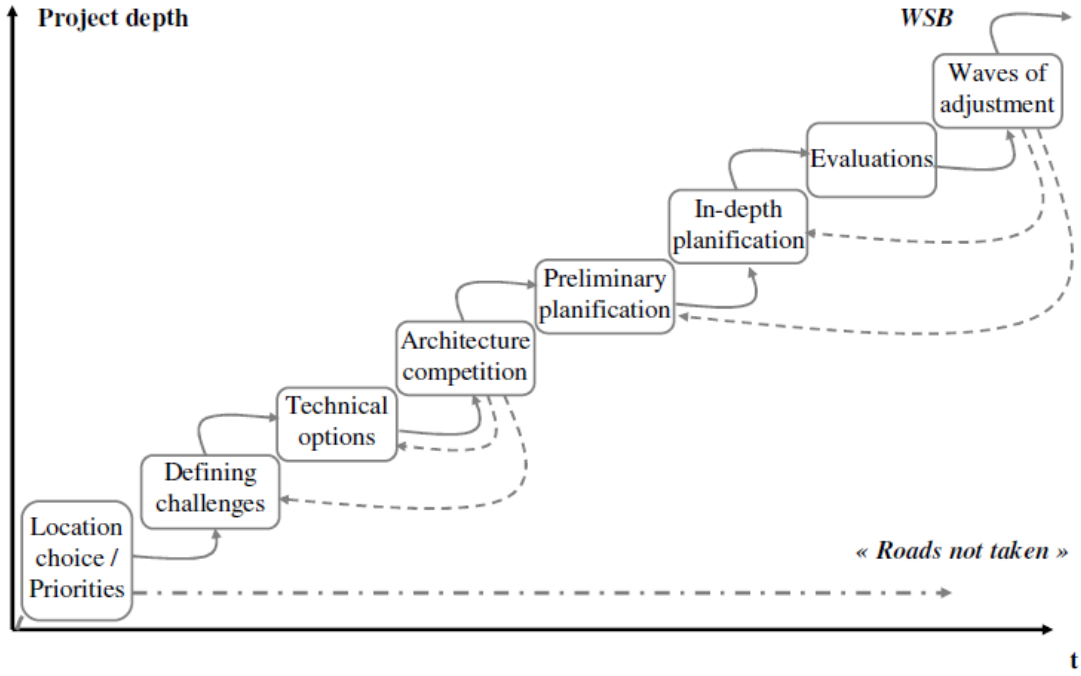


Figure 17 - Episode-based learning curve in the WSB project

(1) Incremental Development of a Knowledge Base. The episodes constituting this curve resemble the conventional approach to large-scale project governance. Indeed "the process of shaping and reshaping the project concept is cyclical" (Miller and Hobbs 2005: 45). If we now look deeper at the episodes and at the technical work, a first aspect of this self-reinforcing dynamics becomes clear: the occurrence of single-loop learning. According to Argyris (1976: 365), learning is defined "as the detection and correction of errors, and errors as any feature of knowledge or of knowing that makes action ineffective". In this respect, the knowledge

stock on the WSB option increased steadily and became the object of countless corrections and mutual optimizations. Learning could have occurred at two levels: an incremental correction of the trajectory taken, or an overall correction of that very trajectory. Single-loop learning corresponds to a corrective action that is isolated (i.e. episodic) and that does not change the overall theory of action applied. In other words: the correction tackles the consequences of a problem only. By contrast, double-loop learning tackles the underlying sources that provoke the experienced problem, and does not restrict itself with correcting the consequences of the problem only. Relying on single-loop learning only is a classical pitfall in organizations. As stressed by Huber (1991), the acquiring of knowledge is done via the knowledge already at hand, when it is confronted to new experiences attended collectively. To Probst and Büchel (1997), learning means changing frames of references, for changes in the area of organizational knowledge have a direct impact on the perception of options at hand, and on the construction of what is considered real and possible to the organization. In case this does not occur, incremental evolution proceeds, and radical breaches become even more unlikely. Quite typically for single-loop learning, in the case of the WSB, the framing of problematic issues toward solutions was achieved by adapting the overall concept and the solutions formerly developed to new challenges. Table 16 provides a systematic overview of the intertwining of the knowledge gathered (a point suggested by the dashed curves in figure 17).

1. *Location choice* → Evaluations along criteria of comparisons (traffic, environment, inclusion) (i) basis for comparisons to refute full-tunneling (ii) basis for preparing a plan for submission to the CC
2. *Plans submitted to the CC* → Defining rough technical dimensions and aims of the project (i) basis for defining technical challenges in design (ii) basis for preliminary planning
3. *Defining technical challenges in design* → Adjusting technical dimensions → Framing problems of inclusions into location and regulations (i) basis for the formulation of operational concepts and design proposals
4. *Designing the bridge (architectural competition)* → Operationalization of concept (dimensions, construction, materials, etc.) → Solution to ramp-issues and other structural problems (e.g. bearing capacity via arc-based construction; pillars, etc.), → Inclusion into the location (e.g. via height of, and access to the bridge)

(i) basis for preliminary planning, in-depth planning, and engineering (ii) basis for evaluations
(…)
7. *Evaluations by local authorities* → Identification of missing technical fit with social issues (e.g. norms and regulations, safety, environment, etc.) (i) basis for subsequent waves of adjustments (ii) basis for problem-solving during construction work (iii) basis for resolution of legal disputes
8. *Waves of adjustments* → Achieving technical fit with shortcomings identified by local authorities (i) basis for problem-solving during construction work (ii) basis for resolution of legal disputes
(…)
→: problems tackled and knowledge created (n): implications for subsequent episodes of problem-solving

Table 16 - Interdependent knowledge creation in implementation-episodes (excerpt)

Over time, the design and ideas provided after the architectural competition were quickly overrun by new elements and new questions that challenged specific components of the plans. Furthermore, the wish to address all expectations from potential stakeholders impacted the process of technical implementation and vise versa. The rounds of evaluations for plan appraisal further required the refreshing of knowledge or the search of new ideas to improve past solutions. For example, it was questioned during the plan appraisal whether the V-shaped pillars would provide enough safety in case of ice-formation on the water. To address this, the CA had to get back to this part of the knowledge stock, have it assessed via extern expertise that would point out difficulties in the current design and worst-case risks and scenarios. This particular point was then debated from December 2003 to January 2004 in numerous rounds of optimization work. The sessions would take place to determine the problematic issue and to find adequate solutions. In this case, it was decided that the pillars already developed should be equipped with additional 50cm-high elevation blocks with ice-breaking profile at critical positions, at least upstream. This had repercussions on related technical issues, and so forth. The process of technical implementation tackled numberless issues similar to the pillars and their ice-breakers. This work often implied the reformulation of former solutions. One could speak here of "wakes of corrections" (in a similar fashion as Boland and his co-authors [2007] did in their work on wakes of innovations), as illustrated here:

> "I don't know, we have adapted 30 additions [N.A.: '30' is here a rhetorical number] to this project. It means there was always new requirements from the politics that we… to which we had to react. So I don't know how often we planned the project anew, but… well this is… Yes, 30 additions, this means 30 times, we deviated from the original plans as we had submitted it, and we planned it anew, sometimes parts of it, sometimes the whole thing. This is the difference between a bridge and a high building: a bridge as such seems relatively similar, if seen from afar, relatively similar to its original concept. Now if you look at all the variants, I should explain all the differences to you, but if you come closer and spend time with it, the differences are blatant and geometrically also very complex" (Architect, interview, 2010).

Considering the heaviness of a project like this one, radical double-loop learning is getting even harder to achieve. The process thus became an exploitative one until the City finally reached completion of the plans. This narrowing process started very early. This is, again, congruent with Argyris' theory on organizational learning, in which "participants in organizations are encouraged to learn to perform as long as the learning does not question the fundamental design, goals, and activities of their organizations" (1976: 367). With respect to the work on alternative options between 1995 and 1996, a former member of the team for strategic development at the CA reported to me:

> "It was not possible to develop this concept. I mean the multi-bridge concept. There was always this weight in favour of the WSB" (Member of the CA, Interview, 2010).

(2) Related Willingness to Keep the Project on Track. A known effect of such a curve is that it somehow "helps itself" by reinforcing the attractiveness of the trajectory for its supporters (Steinberg 1987). Referring to learning, such a phenomenon may interfere with the decision-maker's capacity to think the whole trajectory anew. In this case, Argyris (1976: 365) warns against two sets of inhibiting influences: "the degree to which interpersonal, group, intergroup, and bureaucratic factors produce valid information for the decision makers to use to monitor the effectiveness of their

decisions", and "the receptivity to corrective feedback of the decision-making unit". Accordingly, we saw in the Dresden case that the WSB project had been pushed to the fore largely by virtue of its historical character. Eventually, technical debates took place under the influence of convictions already made about the options at hand. This was animated by political factions represented in the spheres of the CC and of the CA (although its influence is more informal in nature). Congruent with Miller and Hobbs' model (2005), a momentum was reached, when the strategic structuring of the solution ended, which allowed for the design and implementation of the artefact to unfold. According to Page (2006), path-dependent developments, if they present features of self-reinforcement, must present related forms of negative externalities that explain the lack of attractiveness of alternatives. While learning to use QWERTY drives my motivation to keep on using it, this is not this knowledge only that motivate my refusal to switch, but the expense of time to learn anew. Congruent with Page's discussion (2006), we see here how the self-reinforcing dynamics that was feeding incremental learning also developed negative externalities on time and planning-based knowledge:

> The Author: „abstractly taken, what were the reasons that prevented from a radical change of the course of action? [i.e. stopping the project, planning a tunnel, or a new bridge, etc.]
>
> Interviewee: Hm. There is a whole set of reasons. They are rooted partly in what had happened before. Well we have a plan appraisal for a bridge. One cannot build a tunnel instead, just like that. It means: we would have had to start the process all over again, with all the delays involved, and all the imponderability involved. Law evolves continually, and what was once licensable must not be licensable in a later point in time. We don't know yet, because we'd have to verify this first." (Member of the Regional Directorate, interview, 2010).

> „In case of a new referendum, with a result in favour of a tunnel for example (…) the city administration would have had to implement it. This means all the planning for the bridge and all the work already started would have been obsolete. And we would have had to go through a completely new plan appraisal process. With a timeframe of, we had estimated, 4 years at least." (Member of the Regional Directorate, interview, 2010).

Obviously, the impact of this process on the decision-holders in the City was strong. In this respect, changing such plans proves particularly unattractive, from a perspective intern to the whole organization, and thus pulls the incremental development even more:

> "Now that we've been struggling for it for so long, we should build it" (Spokesman of the local SPD faction, PA SZ 1997).[137]

> "You must realize that the actors who have been working there [i.e. in the CA], some of them since 1990, they have always been there. They spent their life planning a WSB. For 20 years. This has become their career in the administration"
> (…)
> "You will find little willingness to change but a thing to a plan that was already submitted. (…) All those who have been working on the plan -and if you reach plan appraisal we speak of piles of paper, 2 tons of paper were sent to the RD- no one wants to start all over with all that fun" (Former Mayor, Interview, 2010).

Advancing the project and concretizing it after each step reinforced the legitimacy of the decisions voted in the CC and made subsequent steps even more attractive and easier to push forward, thus dooming any chance for double-loop and radical learning. The existent stock of knowledge supported the framing and solving of new problems, guided by the norms and regulations we identified in the last section. Also, the supporters were even more able to provide tangible evidence of their efforts and hereby to justify subsequent episodes and decisions. At this point, it is important to note that the result of this incremental development was not only a technical dead-end fed by self-reinforcing technical-solving nor was it only driven by consumed time and piled blocks of knowledge. As a matter of fact, the numerous rounds of work on the plans also contributed to increase the City's willingness to keep the project on track as critics made their way through the discussion. At this point, it is interesting to note that the regulating agency framing such processes contributed to sustain the incremental nature of the process. The quotes from the documents are exemplary in this respect:

> "The Mayor is asked to develop preliminary plans based on the work of the first

[137] 19970804 PA SZ „Waldschlösschenbrücke - fällt sie in Finanzloch?" (p. 1)

prize owner (…), and with respect to the evaluations of the jury" (CC OD 1998).[138]

"After evaluation of the complaints raised by concerned private persons, of the statements delivered by the public agencies, and of the hearings, we ask for complementary optimizations to the following points [statement followed by a list]" (RD, intern note to the CA, plan appraisal process 2003).[139]

"For example it was necessary [for the plan appraisal process] to evaluate alternatives, fundamental alternatives, also with the tunnel, but only to the depth that would make clear, well, is it the best option or not" (Member of the Regional Directorate, interview, 2010).

Collective Mobilization as a Source of Self-Reinforcement

The episodes of technical progress were accompanied by phases of debates and communication on the solutions, dragooning a large part of the public sphere. This technical progress was also specified by the compliance to norms and codified expectations issued by the local regulating agencies, more or less directly. This second, encompassing process is what I call the *process of collective mobilization* as a source of self-reinforcement. Contrary to institutional analyses, in which expectations are institutionally given and provide a rather unified frame, this process of collective mobilization builds on the idea of *adaptive* expectations, and the evolution of expectations of expectations (Sydow et al. 2009; Koch 2011), a social mechanism that is key to path dependence theory. This more dynamic approach unpacks the joint evolution of external expectations from diverse perspectives and illustrates their self-reinforcing potential for the organization that chooses to reproduce them endogenously.

Underlying Social Mechanism: Adaptive Expectations

The construction of a bridge is largely a matter of alignment "across

[138] 19980212 CC OD Beschluss 2940-71-98
[139] 20031020 RD OD „Nacharbeiten durch die Landeshauptstadt Dresden" (p.1)

heterogeneous human and non human elements" (Suchman 2000: 312). A strong basis of support among the stakeholders to the project is necessary to keep it on track. Hence related challenges imply the management of heterogeneous expectations about the project and their alignment in subsequent rounds of decisions to support the technical implementation detailed above.

Observable elements in this respect correspond to a steady increase of support from various constituents of institutional pressure: citizens, legal jurisdictions, regulatory agencies, and the rise of a one-sided pattern of communication about the project. I suggest rooting this phenomenon into the self-reinforcing mechanism *adaptive expectations*. In this perspective "preferences are not considered to be fixed; instead they are assumed to vary in response to the expectations of others" (Sydow et al. 2009: 700). Pierson walks a similar path and defines adaptive expectations as the need individuals may feel "to pick the right horse" (2000: 254). To him, "it derives from the self-fulfilling character of expectations. Projections about future aggregate use patterns lead individuals to adapt their actions in ways that help make those expectations come true" (2000: 254).

The management of a City is, at least partly, driven by political interests and the constant expectation of forthcoming elections (cf. Downs 1957). It is also sensitive to stakeholders and institutional constituents to which it must comply to proceed with its daily tasks. All these expectations are taken into account in the work of the City and must be addressed adequately. In the chapter about the history of the WSB, we saw how expectations had been at play to channel the position of a large majority of members in the CC in favor of a bridge at WS. This mechanism remained present and served as a resource to support the actual instantiation of this idea. In this respect, Sydow et al. (2009) write about expectations of expectations. As stated above by Pierson, the very consequence of this comes close to the notion of self-fulfilling prophecies. Indeed, "once they [i.e. individuals] have assigned some meaning to the situation, their consequent behavior and some of the consequences of that behavior are determined by the ascribed meaning" (Merton 1948: 194).

In Dresden, the apparent support increased itself and diversified its sources overtime. As a consequence, the conduct of the supporters to the project evolved along a perceived set of expectations. This fed the idea that stepping back would counteract the collective preferences that have been thus built. This process fostered the incremental

development of a one-sided rationality around the project and contributed to doom subversive accounts to failure. At this point, it is important to understand that this development has little to do with coordination or complementary effects (Sydow et al. 2009), even though relying on shared expectation may become a source of coordination among partners and stakeholders (David 1994). In Dresden, the idea behind telling the story of the bridge continually was to address the expectation perceived by the decision-holders that the citizens want this bridge, and to confirm these expectations, thus reinforcing continually the idea that the WSB was to come and help the community.

Addressing Citizens' Expectations, and the Collective Constitution of Priorities

As we saw in the former chapter, the community expected a rise in traffic. The situation, as perceived by most citizens and described by the politics, was bad. The members of the City were expected to act and were aware of it. In this context, one solution emerged. However, from a potential solution to local problems, as it was defined in the concept of 1994, the WSB became a matter of course. During the time in which the public support expanded, the communication of the City became even more complex and accurate, as the City tried to endorse the expectations of the public sphere.

(1) Perceiving Expectations. Here also, the data on Dresden tells plenty. First of all, we saw how the situation in the 1990's had influenced the early days of the debate on the new traverse. We also saw how the decision-holders perceived this set of expectations, and how they decided to address it specifically. The political parties supporting the bridge were rewarded with high scores along the project implementation. Obviously, inferring any correlating effect would be mere conflation. But the influence of perceived expectations at this point did play a significant role. Before getting at what decision-holders say about it, figure 18 (adapted from a document compiled by the CA in 2008) gives a first spur for this guiding pressure.[140] The map depicts the proportional impact of citizens' participation to elections among the different districts (average data compiled until 2006). We can see that the districts most active and with the greatest impact on elections (for Mayor and the CC) are located on the east side of Dresden. These are also the districts that would be best deserved by a new bridge at WS.

[140] 20081101 CA ES "Indikator politische Repräsentanz" (indicators on the city, p. 24)

Especially the citizens living in the districts 43, 42 and 41, and east-onward are deserved by one bridge only between the far end of district 43 and districts 12 and 06.

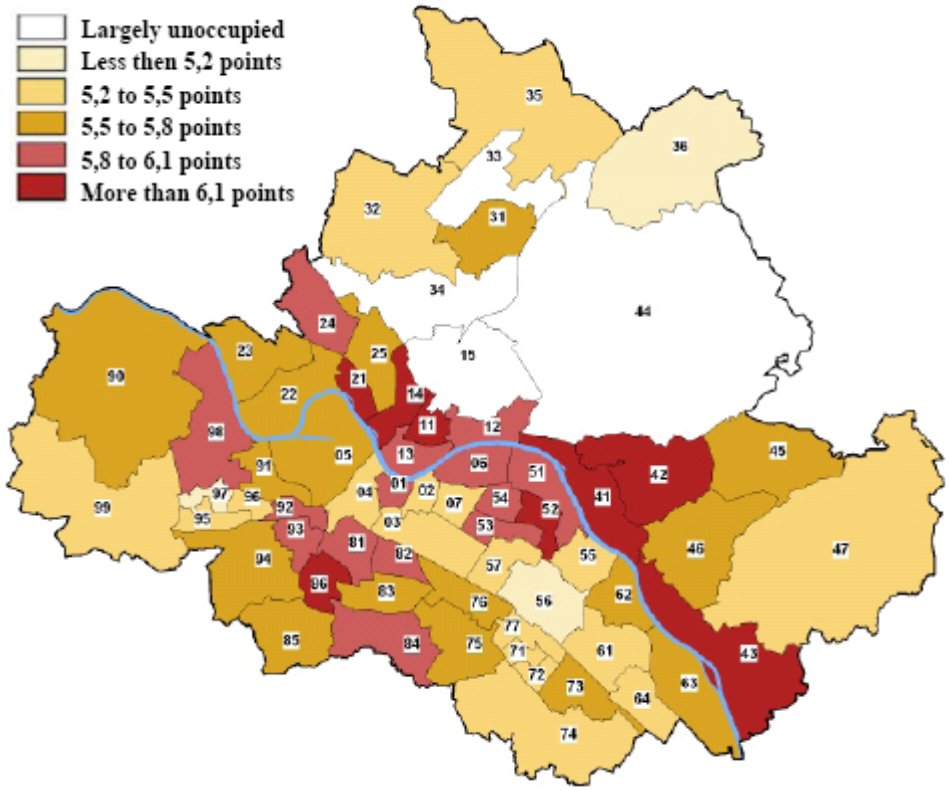


Figure 18 - Political participation in the city[141]

In the community, this situation was specifically addressed by the supporters, by means of communication during the implementation process. Repeated election granted them the legitimacy to push forward their preference in terms of bridge construction. From the very beginning, the supporting parties had made the project a part of their programs. From this perspective, they clearly benefited from a form of first-mover advantage.

> "The Referendum stands between God and the Constitution. (…) That's how they argued, you see? They argued as if it was the case. Obviously, because it was a very own interest of the CDU [i.e. one of the supporting parties]. First of all they wanted it. Secondly, it was a sign to show that they are powerful and strong. The

[141] 20081101 CA ES "Indikator politische Repräsentanz" (p. 24)

> CDU lives less, especially here in the East, from its program, and more from the fact that it can, that it knows where to head at, that it is enabling progress, that it can reconstruct. This is its image" (City Councillor, member of the local SPD faction, interview, 2010).

While this last quote appears clearly provocative, the supporters, somehow, confirm this positioning. This illustrates further the suggestive effect of the perception of citizens' expectations and the positioning of the supporters with respect to issues of urbanism:

> "We want to employ all our energy to pursue continually with the positive development of the city and set the following priorities: (…) Improvement of the traffic infrastructure, especially via the construction of the highway, the WSB, the tunnel of Bramsch, and the bypass in the west" (Declaration of the spokesman of the CDU faction, PA SZ 1998).[142]

> "I think we will always have individual traffic. And we need it. For a reasonable urban development, we need capable streets and a supply of possibilities for individual traffic. We need that. (…) And there we have a categorically different position. And they [i.e. opponents in the CC and outside of the City] lost against the WSB because the majority, or say, the largest majority, of the citizens in Dresden sees it this way too" (City Councillor, member of the local CDU faction, interview, 2010).

Decision-holders of public administrations tend to "adjust their behavior in response to new signals, tempering their reaction in light of signals to come" (Carpenter 1996: 287). Congruent with this statement and with classical arguments of path dependence in organizations (Sydow et al. 2009), the expectations of expectations in Dresden pulled the process forward. For example, we saw how an important part of the CC shifted its position in favor of the WSB at a crucial decision in 1996, influenced by the emerging public support. Eventually, this influence was addressed by demonstrating the willingness of some to further implement the project:

[142] 19980821 PA SZ „CDU Fraktionsvorsitzender"

> „We are a party that is positioned clearly in favor of the bridge. And this brought us a lot of electorate. Because somewhere down the road the citizens had enough. They said 'what are you doing here, you have decided to build this bridge, what are you doing, why don't you build it?' They could not understand it. A lot of them" (Member of the Saxon State Parliament, local FDP-faction, interview, 2010).

The supporters were comforted in their effort by feedback from their electorate. As a matter of fact, the referendum confirmed and further institutionalized the signals perceived by the decision-holders among the supporters. The participation and the clear positioning of the voting citizens in favor of the bridge received significant attention in the community. In 2004, the CA commented the referendum as follows:

> "Above-average was the amount of voters in the strongholds of the CDU, FDP [supporters] and even of the PDS [i.e. opponents] who said 'Yes'. Contradictory was the vote in the strongholds of the Green party: there are districts in the new city center with up to 80 percent 'No', but also a clear majority for the bridge-construction in more 'middle-class' residential districts" (CA PR 2005).[143]

(2) Collective Constitution of Preferences. The supporters to the WSB, and eventually the city as a whole, bounded to the referendum and its result, perceived a decisive trend in favor of a WSB. But sticking to the old conjecture saying that political interest did it all would mean stopping the analysis when it gets interesting. Hence what was it that was being collectively constituted? Using Hacking's (2000) discussion of the 'social constructionist' tradition, we mean here a 'social product' (preferences as the result of history, rules, mental models, practices, etc.) that has been constituted on the basis, indeed, on an objective, actual 'object' or situation (options at hand for the construction of a bridge as technical solution to a problem). Thinking this way is not about saying that anything is being collectively constructed and therefore could work out; instead it is about looking at what do we do with actual options at hand and how do we erect one of them and how do we do so.

In point of fact, by *addressing* these expectations, the City kept validating the citizens' attitude about traffic congestion and the subjective perception of traffic

[143] 20050228 CA PR „2 Drittel der Dresdner Abstimmenden für Waldschlösschenbrücke"

increase, or, at least, its expectation in a near future. As we just saw, the decision-holders perceived signals about what the citizens would want them to do in specific situations. Logically, over time, the supporting actors kept on reassuring the public opinion about the evolution of the project, thus demonstrating that their preferences were being understood and addressed. The debate thus started running a closed loop. Retrospectively, when asked about the implication of this process on potential disruptions of the project, as it was later suggested by the experts from Aachen and the ICOMOS, supporters and opponents comment as follows:

> „This was a masterstroke performed by the CDU [Center-right] and the FDP [liberals], to suggest to the people that the bridge was the most important issue in the city" (City Councillor, member of the local SPD-faction, interview, 2010).

> "Once you've got all the parameters, and brought them to the point, you cannot, once you have it, if you give it up, it is almost impossible, in such a situation, to overthrow it all and to start all over again. People would pronounce you legally insane" (City Councillor, member of the local CDU-faction, interview, 2010).

We saw in the section on the building of a myth of rationality how the successive episodes of the project added elements that would provide rational arguments to the trajectory taken. Along these milestones, the City developed a *one-sided pattern of communication*, not least motivated by the numerous attempts at disrupting the project (more on that in the next chapter). For example, in 1997, the Mayor declared to the press that:

> "Someday the fog will clear away and free the view over the WSB. There are, basically, only two options: either a bridge or not any" (Mayor, in PA SA 1997).[144]

This declaration is no isolated example and, at this point, we can see how the two loops (i.e. "technical problem-solving" and "collective mobilization") nurtured each other. For example, in 1995, as internal discrepancies arose in the CA, the Mayor told to the press in an interview:

[144] 19970322 PA SZ „Irgendwann verzieht sich der Brücken-Nebel - Oberbürgermeister Herbert Wagner zu Bauten, Elbwiesen und Ampeln"

> „There is no muzzle. All I said was that the next planning work was to be concentrated on the WSB only. The reason for this is a new evaluation by Schlegel and Spiekermann [i.e. an engineering consultancy]. The study, led over several months, arrives at the conclusion that the next bridge necessary for Dresden is the WSB." (Mayor, in PA SA 1995)[145]

Until the next episode of technical problem-solving in the form of a workshop in 1996, the debate was polarized among a set of three camps (pro-WSB, pro-multi-bridge concept, and pro-bridge in the west, at Erfurter Str.). From 1994 to 1996, the multi-bridge concept had been in fact more popular than the other two, if we believe the reports by the local press. Besides, the general opinion was particularly demanding to the City. For example, shortly before the workshop of 1996, a public survey, ordered by the CA, reported that 94% of the citizens were requiring more services in public transportation.[146] This need was especially addressed by the multi-bridge concept, with its focus on a scale-like supply of public transportation.[147] At the same period of time, in April 1996, we saw how the center-right party CDU stated its position for a WSB in its yearly session. Eventually the results of the workshop of 1996 gave credit to the WSB. This event helped providing rationality (i.e. experts and their opinions) and legitimacy (i.e. experts voting to decide democratically) to the option selected. After this event, the span of options in the communication to the public reduced dramatically and began concentrating on the WSB exclusively, until the debate about a tunnel was caught upon again, around 2004. In July 1996, as the City prepared to vote for the construction of the WSB as final option to consider, the Mayor commented as follows:

> „*Journalist*: Do you still believe in the construction of a WSB?
> *Mayor*: Yes, I believe that reason will prevail. We will know more on august 15, after the CC session of the CC." (Mayor, in PA SZ 1996)[148]

Later, in August, after the voting of the motion, the by now classical usage of history

[145] 19951202 PA SZ „Weshalb schämt sich Dresden seiner Brücke?"
[146] 19960406 PA SZ „Bürger fordern mehr Einsatz für Nahverkehr"
[147] Please note that I do not here mean to claim fort he technical feasibility of this option. I rely only on its concept and its reception in the community.
[148] 19960713 PA SZ „Weniger Träumereien, dafür Sinn fürs Machbare"

appeared in the reactions again:

> „The WSB was planned in the 1930's already. How many lanes it will support, this is what experts must decide." (Local engineer, in PA SZ 1996)[149]

Eventually the city engaged into planning and preparation work for the architectural competition of 1997. The question whether to connect the bridge to the network via a tunnel, or not, was still open. Meanwhile, social movements in favor of the bridge emerged. The project, while already reduced in its span of options, was not completely set up yet. One of these social movements was particularly active, taking the name "WSB, this one or nothing" and distributing stickers throughout the city to inform other citizens about the situation and dismiss critical perspectives.[150] This situation started being annoying for the citizens. In 1997, the local press organ reported that only 18% of the inhabitants were satisfied with the work of the City in this respect, thus confirming the perception that the citizens expected the City to act at last.[151] This was eventually compensated by launching the architectural competition, which was, as we saw earlier on, positively welcomed by the citizens. However, the narrowing process typical to path dependence was not yet fully shaped. For example, the Head of urbanism, asked about the WSB, commented:

> „*Journalist*: Will we get a bridge or only mere planning games?
> *Head of Urbanism*: The Bridge at Meißen has cost DM 26 Mio. The one in Pirna, over DM 50 Mio. This is exactly the dimension we rely on when we speak of having two bridges for Dresden. That Dresden wants to authorize ten times the costs of Pirna is, considering the scant public purse, almost irresponsible." (Head of Department, Urbanism, in PA SZ 1997)

Nonetheless, based on the winning architectural draft and the motion of 1996, the CA dedicated its resources to develop the planning of the WSB. In 1999, the CA demonstrated the progress accomplished and the gained coordination accordingly:

[149] 19960817 PA SZ „Stimmen zum Beschluss"
[150] 19970222 PA SZ „Aufkleber für Brückenbau"
[151] 19970514 PA SZ „Auf ein Wort – Überraschung?"

> "The construction of the last city bridge dates back 60 years. Now Dresden receives finally a new traverse over the Elbe. Mayor Dr Herbert Wagner and the Head of Urban Development and Construction Gunter Just presented recently the preliminary planning for the WSB. In case the CC validates this, it can be started with constructing in October of 2000." (CA PR 1999)[152]

Eventually, during the plan appraisal of 2000, the City used traffic figures of 1994/95 and simulations for the year 2010 as a rationale.[153] This point is particularly interesting with respect to Pierson's definition of adaptive expectations, in which: "[p]rojections about future aggregate use patterns lead individuals to adapt their actions in ways that help make those expectations come true" (2000: 254). The City expected a 14% increase in traffic on all bridges.[154] With a bridge at WSB the increase on all bridges would have represented 4% only.[155] The simulations, as we saw, were based on the expected rise in traffic experienced since the early 1990's and suspected to sustain this until 2010 onwards. Based on the simulated results, the City further argued for strong demand for public transportations.[156] So Nerlove, in his seminal article on expectations in the context of markets: "Induced expectations are the result of movements in past prices" (1958: 231). Similarly, Arrow and Nerlove argue that "past and present prices reflect forces which determine the level about which future prices may be expected to fluctuate" (1958: 298). In Dresden, in place of prices fluctuation, the perception of traffic issues had taken the lead in the discussions in the City and motivated the decision to resume the planning of a bridge at WS. This expectation of increase proved exact until the years 1999-2000 approximately. The values concerning crossings over the bridges, however, have been stable since 2000, with a slight decrease, reaching 198.000 vehicles per day in 2009, i.e. 4.000 less than in 1994. However, the perception of traffic problems remained largely present within a large part of the population. This phenomenon is similar to the difference between perceived and real inflation. Agents make their own account of inflation by observing fluctuations in their average daily consumption (bread, gasoline, etc.). In our case, indicators for perceived traffic congestion could well be the fairly low mean daily speed over the bridges,

[152] 19990120 CA PR Nach 60 Jahren bekommt Dresden wieder eine neue Brücke"
[153] 20000124 CA OD „Unterlage 1.1 Erläuterungsbericht"
[154] Ibid, p. 20.
[155] Ibid, p. 20.
[156] Ibid, p. 21.

ranging in 2006 from 12,1 km/h over the Blue Wonder (east) to 17,8 km/h over the Marien Bridge (west).[157] In its decision-making, the City relied on the expectation of a strong increase, as we saw in earlier sections of this work. In its initial forecasts, the City expected 233.000 vehicles per day in the year 2010. During the plan appraisal process, the Regional Directorate asked for a similar simulation for the year 2015. The forecasts for 2015 were calculated in the year 2001-2 and delivered in June 2002 by the firm PTV AG. Those simulations remain black-boxes to the interested observer, for little is said about the postulates used to compile the results. Apparently, the figures transmitted to the CA build on a hypothetical increase of the surface for sales and business by 44% until 2015 and computed the simulation of a corresponding increase in traffic. Unsurprisingly, the trend until 2015 was verified. The forecasts demonstrated an increase in traffic by 34% in comparison to the year 2003, and served as basis for further debates and discussions about the economical nature of the bridge and its cost-use efficiency (see Schnaubel and Scholze 2004: 6).

In sharp alignment with this trend, on November 27, 2002, the City announced the results of a communal public opinion survey.[158] 9000 citizens were asked (with a response rate of over 33,4%; n=3008). 26,2% of the respondents evoked *traffic* as a major source of problem in their daily life. The construction of a traverse and the renovation of the streets were especially present in the open-end responses, and, among all the municipal issues proposed, the political discussions on the WSB were mentioned as a source of frustration by 11,3% of the interviewees. This period of time was particularly delicate for the project, for the city was preparing its planning submission to the Regional Directorate. As we saw in the section on structuring, this episode was the stage at which most of the local norms and institutionalized prerogatives were to be addressed to demonstrate a complete fit with the community's concerns. This, as well as subsequent events bound to the plan appraisal was communicated accordingly:

> "The planning of the WSB keeps going without adjournment. The motion of May 2nd, 2002, passed by the CC constitutes its basis. One anticipates the submission of the plans for a plan appraisal from the Regional Directorate at the end of the year." (CA PR 2002)[159]

[157] 20060724 CA PR „Reisezeitmessungen 2005, Verkehrsprognose 2020"
[158] 20021127 CA PR „Zwischenergebnisse der kommunalen Bürgerumfrage"
[159] 20021021 CA PR „Planungen zur Waldschlösschenbrücke gehen weiter"

> "[a journalist at the local paper], brings the problematic to the point: "We've never been thus far", commented Mayor Roßberg – which is true. He does not say that we can build the bridge –which is also true." (…) "Hence the situation in bridge construction has not changed, says Schutz [i.e. Spokesman of the City]. One cannot talk here of backpedaling"." (CA PR 2004)[160]

> "The Regional Directorate in Dresden transmitted the approval letter [i.e. concerning financial subventions] for the WSB to the CA of Dresden. (…) It represents a total of exact EUR 95.914.800 for the years 2005 to 2008." (CA PR 2004)[161]

From then on, the project was on stable ground from a legal point of view and was received as such in the community. The financial aspects, the legal aspects, and, at least formally, the normative aspects had all been addressed and validated on a democratic basis. The observing of public opinion, however, took a decisive and official role in the same year, with the organizing of the referendum to settle the debates in the newly elected CC. On February 27, 2005, 50,8% of the electoral register (n=398.247) participated in the referendum. After an intense campaign of communication led by all camps, 67,9% of the voters (137,152 citizens) voted in favor of the construction of a bridge at WS.[162] As the conflict evolved to include the WH Convention and its representing actors, several studies by the sociology department of the Technical University of Dresden sounded the population to verify these results and their evolution; their results reinforced this perception. In June 2008, as the City was not bound to the referendum anymore, 58% of the interviewees (n=715) said they would vote again for a bridge in case of a second referendum.[163] In July 2008, after the decision of the WH Committee to list the City as a site in danger, they were even 60%.[164] Embracing this trend, the following quotes illustrate the communication of the City around that period, rooted in history and in the free-will of the citizens:

[160] 20040510 CA PR „WALDSCHLÖSSCHENBRÜCKE: Sturm im Wasserglas"
[161] 20041103 CA PR „Foerdermittelbescheid für WALDSCHLÖSSCHENBRÜCKE liegt vor"
[162] http://www.dresden.de/dyn/wahlergebnisse/be/index.html
[163] 20080821 TUD ES „Neue Telefonumfrage zur Elbquerung"
[164] Ibid.

> "The citizens of Dresden were for the rebuilding of the Frauenkirche church and at the same time, they are for the building of the Waldschlösschenbrücke Bridge" (CA ID 2006).[165]

> "Only meters away from the Dresden city hall, in autumn 1989 many people of Dresden hold demonstrations for freedom and democracy. Head to head with the authority of the state, they fought to get the voice of the people heard, finally, after forty years of despotism. In view of this experience, in Dresden the authorities are today still judged by how they deal with the will of the people" (Mayor, letter to the WHC, 2008).[166]

Individuals, however, are knowledgeable agents (Giddens 1984) and their preferences, accordingly, are not frozen in time. In the study of July 2008, the researchers performed a second round of questions. This time, they informed their interviewees about other alternatives. In their study, they stressed the tunnel option, favored by the UNESCO and its WH Center. The results changed, with 47% of the informants for a tunnel and 45% for the bridge; the other 8% were undecided. The researchers then informed the interviewees about the possibility for financial assistance from the federal government to compensate extra costs in case of a compromise. With this information, they were 54% who plead for the tunnel option. Nevertheless, and beside all options for technical compromise, the overall conviction that a traverse was urgently needed remained. For example, they were only 12% of the citizens who would have voted for a complete stop of the construction.

[165] 20060300 CA ID „Waldschlösschenbrücke bridge and World Heritage status" (p. 19)
[166] 20080826 OB PS "World Heritage – The Waldschlösschen bridge" (Letter to Mr. Bandarin, p. 1)

Chapter VI

—

Period 3: The Dark Side of Path Instantiation

The latter empirical chapter was the occasion to see how a "path" (i.e. a schematic solution to a collective problem, repeatedly instantiated in practice) has been instantiated by members of the organization. We saw how specific coalitions further managed to structure collective action in the City, drawing on strategies for power retention, myth development, and normative binding of the project. Finally we saw also how this structuring process, clearly influenced by Giddens' terminologies, was fed by sources of self-reinforcement, at the interplay of learning effects and adaptive expectations.

The analysis stopped in the year 2005 (with the exception of some material coming from the years 2006 and 2008), with the end of the planning work, the referendum, and the authorization for the City to construct. Until then, the process had run in favour of the supporters, i.e. it showed its "bright side". Things, however, did not end in this point in time. Instead, the actors opposed to the bridge, for all sorts of reasons, refused to let it be with the project. They were not only reluctant to do so; in fact they tried even harder to stop the project, or, at least, to make it change in favour of other locations or other forms, like a full-tunnel.

This fourth empirical chapter illustrates the unintended dynamics that resulted from the actions depicted earlier under the heading "bright side" and shifts the perspective to unpack their "dark side" by:

(1) illustrating how the overall process of path instantiation triggered dynamics of contestations among the decision-holders and the stakeholders, and how these dynamics followed a form of vicious circle; and by:

(2) reporting on the negative impact of this for the municipality as a whole, for

example by illustrating how the fronts hardened over time and lost trust in each other, by shedding light on the related evolution of the project-costs, and how the WSB as solution to a problem was institutionalized independent from the problem it was to tackle.

In this respect, the Dresden case represents a typical case of path dependence, at the interplay of an organization, its members, and the stakeholders in its immediate environment. In this section, we will see how the "sub-optimality" (for the broader community, as we saw it in the first empirical chapter) of the whole process increased as others tried to disrupt it. This makes the Dresden case particularly appealing, because we can observe both a case of path dependence instantiated in practice, *and* the repeated disruptive efforts by the dominated mass of opponents to the project. Obviously, this third "period" sees its origins melted into the second one (a.k.a. the bright side). However, for the sake of clarity, I tried to keep them clearly separated analytically.

Fighting the Path, Teasing Its Immune System: Conceptual Background

So far, we saw how a critical mass of supporters, endorsed by a critical mass of support in the community, managed to nest the current instantiation of a century-old idea into the organization and the local institutional realm, drawing on structures of democratic participation and state-bureaucracy. The incentive to do so was based on both the returns on knowledge creation that resulted from subsequent implementation phases, and the continuous addressing of expectations with respect to traffic increases. We saw that this discussion, however, was based on postulates and trends that steadily proved outdated and inaccurate, thus questioning the overall need for the current instantiation. With this last empirical chapter, we will see how actors engaged into activities of path disruption and how this actually fed the path instantiation process and worsen the situation. To develop these ideas and analyses I relied on three main lines of research: the structuration theory and its concept of dialectic of control, the image of organizational immune system, and Masuch's work on vicious circles (1985).

Dialectic of Control

The idea of dialectic of control is prominent in Giddens' work. Nevertheless, applications are scarce in organization studies. According to the formulation of the structuration theory, the usage of resources of domination does not remain unchallenged in the social system under scrutiny. Instead, the actors do very much notice when power is being exercised and what resources may be at hand for them to exercise a power of their own and thus balance the relation of domination in the system. Indeed "all forms of dependence offer some resources whereby those who are subordinate can influence the activities of their superiors. This is what I call the *dialectic of control* in social systems" (Giddens 1984: 16 – emphasis in original). In more practical terms, Giddens further defines this dialectic as the "two-way character of the distributive aspect of power (power as control); how the less powerful manage resources in such a way as to exert control over the more powerful in established power relationships" (1984: 374). Whittington goes even further when he comments: "So long as actors retain the capacity to refuse, even in suicide, they remain agents" (1992: 696).

As Manning and Sydow (2007) stress it in their study of TV-movie productions, the dialectic in power distribution can become source of tensions and contradictions in project networks. In a similar application, McIntosh showed (1995) how manipulations of profit in accounting could be interpreted as strategies for subordinates to bypass or influence the action of their superiors, themselves ruling under the influence of late-capitalist frames of thinking. To claim that public administrations are also fed with politics and contestation is almost a common place. Indeed, while virtual structures from the wider society, as the idea of democracy or the logic of bureaucratic rationality, 'exist' in people's minds (in the sense of Berger and Luckmann, 1966), the corresponding rules and resources for actors to draw on "are consciously established, maintained, fought over, and argued about rather than taken for granted as if they were unchangeable features of the world" (Sewell 1992: 24).

I propose to use the idea of dialectic of control as a sensitizing device to interpret the empirical findings gathered in the Dresden case for this last period of data (2006-2009). This period was particularly turbulent for the project and its supporters. Inspired by different rationales, like the protection of the environment or the feeling that the supporters were manipulating democracy, the opponents kept on trying and attack the

bridge construction, drawing on a multitude of jurisdictions, arguments, and partners. In my argument, the supporters did so to counteract the perceived relation of domination, heavily in favor of the supporters, as a result of the power retention strategy we learned about in the last chapter. The supporters, in return, would not let the opponents fight their project without counteracting. In this dialectic game, the dynamics of a vicious circle can be observed.

Path Disruption as Vicious Circle

With respect to the results from the last chapter, it can be said that instantiating a path will most probably provoke the constitution of asymmetries in power distribution. Such asymmetries may be the cause of resistance, path-breaking and counteracting strategies among the stakeholders and/or members of the organization involved. This phenomenon of resistance is not new in institutional analysis, as we saw in our theoretical discussion. However, this is often explained by the existence of different and numerous institutional logics and the inability of concerned actors to find ways of compromise. Pache and Santos (2010) write of break up among organizational constituents, thus explaining the resistance. In my opinion, this is stopping with the analysis when things become interesting. Indeed where does institutional pressure come from? Who is actually enacting it? And why do organizations react the way they do? Typical explanations from institutionalists, in spite of taking pluralism of contexts into account, keep on implying the actors' idiocy and their blind acceptance of "their" very own institutional context as the only real one to "follow".

Obviously, things are not that simple. The idea of dialectic of control among the members of social systems can account for the motivation of a minority of actors in disrupting activities. In return, the resistance of the supporters of the path can be rooted in the dependences thus built and in the myth of rationality that has evolved along the process of instantiation. Drawing on the Dresden case, I propose to go one step further and to see how actors locked-in defended their project and how opponents addressed this defense in subsequent attacks. This conflicting perspective, if it really takes place in the context of a lock-in, opens the door to a form of prisoner's dilemma (see table 17, adapted from Masuch 1985).

		Supporters of the solution locked-in	
		Let Go	***Persist***
Opponents to the solution locked-in	***Let Go***	Compromise? (+/+)	Start construction (–/+)
	Disrupt	Stop construction (+/–)	Conflict (–/–)

Table 17 – The WSB: A prisoner's dilemma doomed to failure

The table 17 depicts the strategies of actors, once they find themselves in a lock-in. At this point of the discussion, it should be specified that the concept of prisoner's dilemma is here applied in a metaphorical sense, and less based on the original idea of payoff matrix. As in subsequent applications in the fields of political economy and studies of public goods, we attend here a situation where "the dominant strategy for each player is noncooperation regardless of what he or she thinks anyone else will do" (Cornybeare 1984: 6). In the Dresden case, two camps oppose each other (supporters and opponents to the project), and must decide, repeatedly, whether they will cooperate with (i.e. find a compromise to solve the conflict), or defect each other (i.e. persist in their strategy, opposing or supporting the project). Four strategies can be identified in this respect. Actors who benefit from the lock-in situation (or at least who do not consider the lock-in and its effect as a reason sufficient for disrupting the status quo) most likely decide to persist with the course of action. Actors interested in breaking out of the path in order to propose an alternative course of action most likely decide to disrupt the path. In this case, the lock-in evolves into a conflict. In virtue of the features of a lock-in, such conflict will escalate until one of the two parties decides to let go or is forced to do so. If this happens, one of the two attains its goal: maintaining the path as instantiated, or stopping the instantiating effort. Finally, a sort of win-win situation could occur, potentially, if both camps settle a way to reach partly their goals, even though this situation would remain less advantageous than defecting for both camps.

In the context of a lock-in, if we consider the theory of path dependence, such a dilemma is "doomed" to failure, for none of the two coalitions has an interest in compromising if compared to sticking to their very own interests. A majority of actors is locked-in and blinded by the way the actors have walked down. The other camp detects

the inefficiency and is not willing to let it go, feeling oppressed by the mass, in a typical form of dialectic of control. As a matter of fact (and it has been already demonstrated in the context of competing technologies), to identify a compromise is not always easy, yet sometimes almost impossible. In such cases, for the incumbent firms, "trying harder is part of the problem" (Gilbert and Bower 2002: 95), since it contributes to nest even more the firms' structures and business models in increasing returns, positive feedback loops, and self-reinforcing dynamics, and thus contributes to perceive the disruptive attacks as threat and not as opportunity (Gilbert 2005). A second metaphor, the one of an "immune system" inherent to the path instantiation, is particularly relevant in this respect. This metaphor was put to the fore by Birkinshaw and Ridderstråle (1999), in the context of subsidiary initiatives when these are decoupled from the firm's directives.[167] These authors demonstrated how the firms manifest actions and strategies comparable to those of a body and its immune system against outside attacks. According to the authors, a set of interpreted predispositions among corporate managers filters the initiatives, often at the costs of their innovativeness, due to ethnocentric suspicion of the unknown and a latent tendency to resist change.

With respect to path dependence, I propose that the reflexive structuring process of path instantiation, together with the sources of self-reinforcement experienced by the organization, serve as "immune system" to protect the path and maintain its existence. In this perspective, the *vicious nature* of such a conflict over path disruption should become plain enough: the more the opponents try to attack a path, the more occasions they actually give the supporters to counteract disruptions (i.e. to draw on the knowledge gathered, on the expectations of others, or on other sources of self-reinforcement). If the supporters are successful at doing it, then disruption actually *reinforces* the perceived rationality of the path, and further embeds the solution into its institutional realm, thus granting the path with even more maintaining power. In virtue of the *dialectic of control* at play in social systems, the opponents will try harder upon each failure. This provokes an escalation of the situation. Such developments are particularly likely in path-dependent contexts, due to the stickiness of actors locked-in and negative externalities may occur in plus of the institutional anchoring of the path, for example by increasing the social inefficiency of the path under scrutiny, or by reducing the potential for inclusive compromises and on-path evolutions. Drawing on

[167] The authors reckoned the influence of the work by Arie de Geus in this respect.

these ideas, and with respect to the Dresden case, the situation evolved as depicted in figure 19.

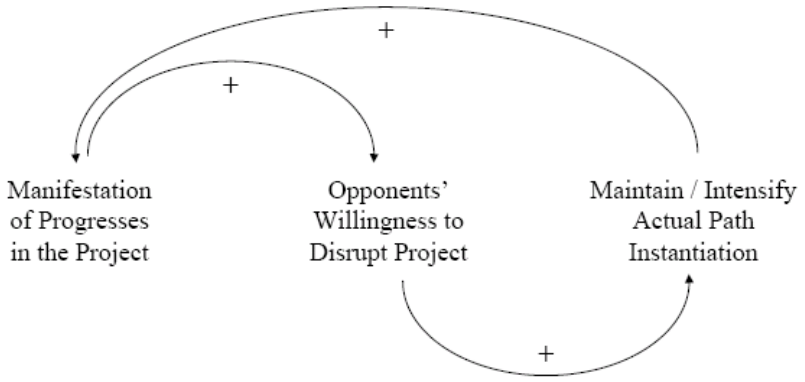


Figure 19 – Vicious circle in the conflict escalation in Dresden

In Dresden, each momentum of path disruption ended in such a way that it actually nurtured the lock-in by (1) reducing the participants' willingness to compromise about the lock-in (i.e. preventing a sort of "on-path" evolution), (2) accelerating the *institutionalization* of the organizational path, (3) contributing to increase cost-overrun and institutional conflicts until the final deletion from the list of UNESCO-WH sites. A sub-optimal lock-in that sees its existence getting even more embedded institutionally over time does certainly not improve its sub-optimal nature. Instead it amplifies the lock-in effect and dooms potential change to failure. The situation becomes murkier, and the mass of users heavier to move. As such, one could picture this evolution as in figure 20.

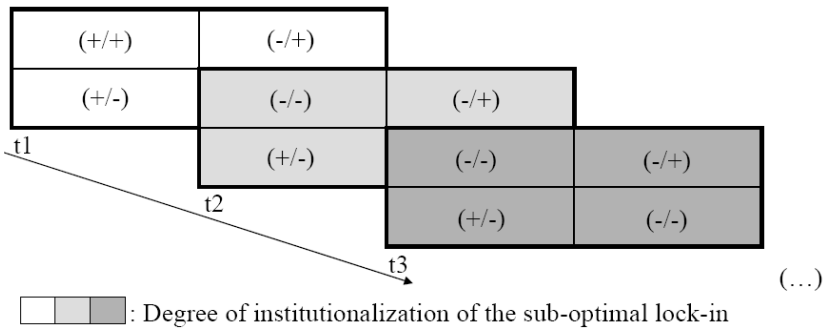


Figure 20 – Conflict escalation in a lock-in situation

In this figure (inspired by the work of Masuch, 1985), the negative outcome at t1 (i.e. the reinforcement of the sub-optimal lock-in towards full institutionalization)

serves as a starting point to the next round of actions. In the best of all cases, the participants can end the escalation at this point. In the worst case, they dig deeper and hereby institutionalize the lock-in. In extreme cases, defending a solution at any costs can indeed lead to phenomena of goal-displacement, in which a solution locked-in becomes institutionalized into an end in itself, decoupled from the actual problem it was to solve. In Dresden, these dynamics of contestation worsened the situation in such a way, and went as far as to make the bridge construction a matter of principle. To put it more provocatively: the opponents played the game of the supporters and, by losing each disruptive battle, helped them to win the war. Once an arrangement reached such stability in its being, every new attempt can do nothing but increase costs and reduce the actors' willingness to reach an on-path compromise.

In relation with our conceptual discussion on conflicts and vicious circles in lock-ins situations, we will start with by seeing in first empirical sub-section how the opponents contributed to intensify the maintenance of the path by trying to disrupt it. In a second sub-section, the vicious effects will be given with more details.

Dialectic of Control and Conflict Escalation in the Dresden Case

A fundamental point in path dependence theory is its accounting for persistence in spite of the potential necessity to change. Path dependence becomes relevant as a diagnosing tool when shifts in the environmental conditions make the observed decision pattern sub-optimal. In the Dresden case, we saw how the shift in traffic trends remained unchallenged in the discussions, while the supporters were particularly active to structure collective action in the City and bound the organization to the project. This situation was further inflated by growing institutional pressure urging those involved to think the project anew, not least illustrated by the risk to lose the UNESCO-World Heritage label newly acquired by the City. Lock-in-situations indeed imply a certain lack of ability to recognize potential inefficiencies and the incapacity to move the whole organization off its path of action. The construction of a bridge at the location of WS received critics from its earliest days. Resistance against the project went onward. First attempts to stop the project occurred in the early 1990's with the reluctance of members of the CA to develop the WSB, not convinced this would suit the situation in Dresden. We saw in the last chapter how the supporters, building on a critical mass of support in

the community, managed to structure collective action in the City in favor of the WSB. Eventually, the critics displaced themselves from an intern debate towards more institutional depth. We will start now by seeing how the opponents contributed to intensify the maintenance of the path by trying to disrupt it.

The Early Days of the Conflict

This process started in 1996, during the discussion on variants. A petition for referendum was organized, led by center-left political factions in the CC. 21,838 signatures were collected.[168] This made the plea for a referendum legitimate. The voting was observed by the press and largely debated:

> "Obviously, democracy is also a game. Yet [this is] a game with rules. After a long quarrel, the City Councilors had decided to build a WSB in Dresden. A social movement collected votes against this decision, and brought scant 20.000 signatures. This is enough to call for all Dresden citizens to the poll" (Local journalist, PA SZ 1997).[169]

On March 3, 1996, the CC voted the legitimacy of the referendum with 36 for and 35 against, with the following formulation:[170]

> *Are you for the construction of at least two Dresden-typical, shorter, and cheaper bridges with, in total, higher relieving effects on traffic, instead of the landscape-destroying, long WSB?*

This decision heated the atmosphere in the CC.[171] The Mayor filed an objection and proposed the question "are you for the construction of the WSB" instead.[172] The compromise did not seduce the opponents. On March 21, 1997, the CC voted, again, the legitimacy of the referendum with the old formulation.[173] On April 3, 1997, the Regional Directorate, as monitoring authority, intervened and gave right to the Mayor

[168] 19961119 PA SZ "Stimmenzahl reicht"
[169] 19970305 PA SZ „Auf ein Wort – Regeln"
[170] 19970306 CC OD Beschluss 2026-53-97
[171] 19970213 PA SZ „Bürgerbegehren"
[172] 19970311 PA SZ „Kompromiss im Dresdner Brückenstreit?"
[173] 19970321 CC OD Beschluss 2195-54-97

with respect to the suggestive content of the question. No referendum took place. In addition, a second social movement, called "WSB and nothing else" started threatening with the organizing of its own referendum, asking: "are you for the construction of the WSB".[174] The debate on petitions was frozen in early 1997, as the decision-makers in the CC voted the WSB and the start of its planning officially. This was a first demonstration of a stabilizing answer to a disruptive attempt. This pattern repeated numerously and reached a monthly basis during the conflict with the UNESCO-WH program. This decision was arguably frustrating for the opponents and contributed to feed the overall suspicious feeling about the project. We saw the important role that resources of domination had been playing in the process. This did not remain unnoticed among the opponents. As one of them told me in an informal conversation "democracy is not given. You've got to go and fight for it".

Eventually, several attempts at disrupting the project were made internally during the process of planning. This occurred mostly by shedding light on the financial situation of the City and the great expense that a bridge of this side would represent in the weak municipal budget. The solution proposed was the delaying of construction work to span more time and thus control the spending.[175] Yet we saw it in the last chapter, on April 11, 1998, the spokesman of the center-right CDU confirmed that the City had now a budget in which the WSB was included.[176]

The opponents saw a new opportunity to balance the process in the application for plan appraisal, and shed light on potential failures and/or missing details in the planning work done by the City. The City had to tackle theses complaints and to determine whether and how the planning was addressing theses issues. For example, this was the occasion for the City to specify in more detail why it did not proceed with a tunnel as solution instead of a bridge, why its solutions with respect to compensatory measures address the negative impact of the bridge on the local landscape, how the design was thought in order to respect actual heritage relations, or how it is supporting goals of the FFH-area, a protection landmark encompassing the Waldschlösschen location. Eventually, during the hearings of 2003, former members of the CA, supporters of the multi-bridge concept, communicated their critics to the RD, stressing the decision-making of the City and the influence of external factors in the motion voted

[174] 19970405 PA SZ „Freunde der Waldschlösschenbrücke machen mobil"
[175] 19980306 PA SZ „Stadträte sehen Gefahr durch Waldschlösschenbrücke"
[176] 19980411 PA SZ „Finanz-Ausschuss feilscht um Haushalts-Millionen"

by the CC eventually, like financial issues from the local State. Here again, the RD could nothing but reckon that the City had voted democratically the project in the CC.

From then on, the disrupting trend, inherent to any large project, took more institutional depth. The project, having reached plan appraisal, had now become much too nested in its immediate institutional environment. The plan was accepted in 2004 and eventually adjourned by the CC and its new majority. The consequence became the referendum of 2005 and the majority of the voting citizens speaking out for the construction, thus binding the City to the instantiation for at least three years. The result heated up the opponents:

> „The alternatives were not clearly put on the table, the first process- the plan appraisal had to come and ask 'where is the tunnel alternative you once talked about? Where is the study?' Then they excavated a tunnel-study, an old one, and actualized it. This is an absurdity. Here is the entanglement. And since the CC had no majority to build this bridge after the plan appraisal (…) they kicked off the referendum. And to get a referendum, with a majority, this is not difficult to say one bridge more is better than one bridge less" (Former CA employee, interview, 2010).

The referendum made room for three years and more, as long as no motion would be voted against the referendum by the two-thirds of the CC. The control over the project was thus fully in the hand of its supporters. During the planning process, the members of the CA opposed to the bridge were turned down. The Head of the urban affairs left in 2001 and with him the team for strategic planning. Some of its tenants started feeding the public debate on the project with expert knowledge on technical alternatives. A social movement named "VerkehrsFluss" (TrafficFlow) was funded under the patronage of diverse actors and local social movements, most notably the Nobel Prize laureate (medicine) Günter Blobel.[177] In February of 2002 a study was delivered, with the former chief of the team for strategic planning at the traffic concept, ILF (engineering consultancy) for the construction feasibility, Baugrund Dresden

[177] A NYC-based German scientist, he is honorary senator of the Technical University of Dresden. He funded the US-based society "Friends of Dresden" to fundraise money for the reconstruction of the Frauenkirche, the protestant church demolished during the firebombing in 1945. He gave a substantial part of his Nobel-money to the cause.

(engineering office) for the geological and hydrological expertise.[178] The study was further supported by expertise from professors from the Technical University of Dresden. The study criticized the impact of the bridge on the visual relations at this critical location, as well as the cost-intensive effort to bridge the valley at its largest. The full-tunnel option, depicted as extensive as the bridge option (their calculations), would contribute to preserve the visual relations and the green landscape. In the summer of 2005, the conflict took a critical depth and burst into the international scene. Since 2004, the City of Dresden and its surrounding valley had been part of the seminal list of World Heritage sites under the patronage of the UNESCO. After the defeat in the referendum, a couple of opponents informed the Paris-based World Heritage Center (i.e. the operative body of the international convention for the protection of the World Heritage) about the project.[179]

The Conflict on World Heritage

The Convention Concerning the Protection of the World Cultural and Natural Heritage, ratified in 1972 under the patronage of the UNESCO, has become one of the most popular international treaties worldwide (von Schorlemer 2009). For the interested reader, a note on the Convention of 1972 and on the functioning of the program can be consulted in the appendix 3. Since its creation, the program, administered by the WH Committee, has penetrated steadily through most of the continents (see figure 21 – source: data available from the WHC website). Conflicting cases of incompliant sites, in return, remain low and problems are solved regularly, keeping their proportion to the total amount of sites fairly minimal. As for geographical repartition, Europe and North America alone account for 49,4% of the sites. As for differences among countries, Germany counts among the best doted, together with China, Italy, France and Spain (see figure 22). Dealing with the UNESCO WH program is not the exception in Germany.

[178] 20020201 EO ES „Elbquerung am Standort Waldschlösschen - Tunnellösung“
[179] 20050624 GL OD communication with UNESCO-WH delegates (bundled)

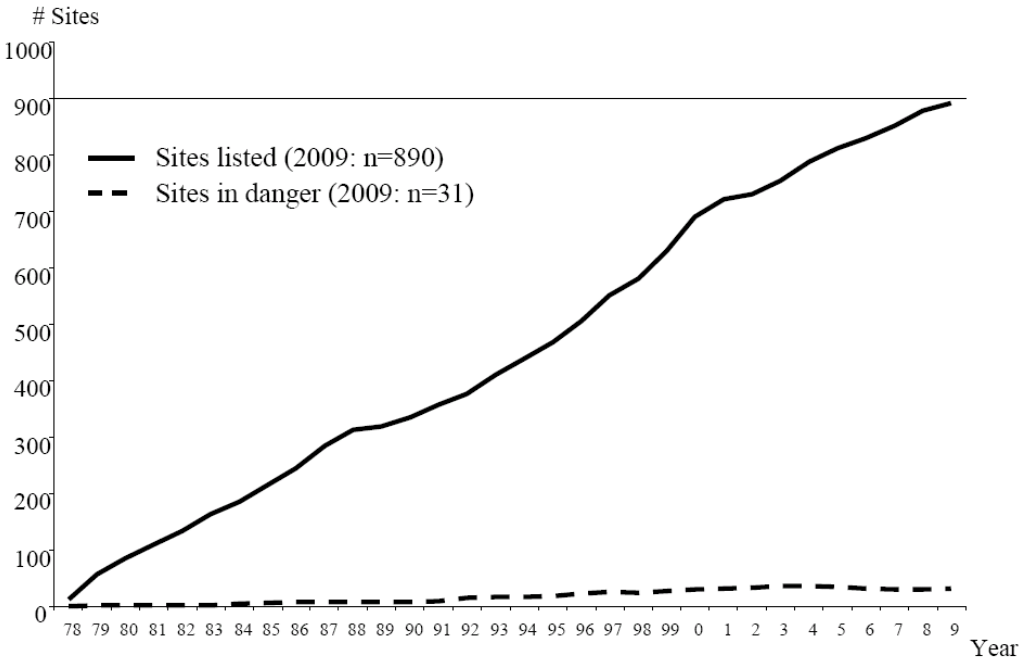
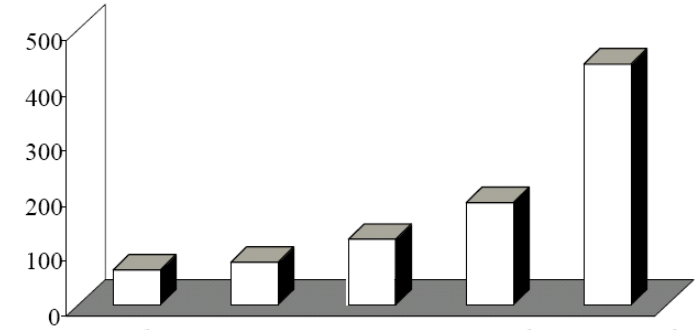


Figure 21 - Label diffusion, 1978-2009



	Arab States	Africa	Latin America	Asia and Pacific	Europe and N. America
# Sites	65	78	121	186	*440*
In %	7,3	8,76	13,60	20,90	*49,44*

Top 5 (2009)

Country	# Sites
Italy	44
Spain	41
China	38
Germany	33
France	33

Figure 22 - Repartition of the label per region (2009)

A first attempt at listing Dresden took place in 1989. It targeted the city center. It failed due to the lack of original historical matter, since the destructions of WW2. In 1998, the Conference of German Ministers of Education and Cultural Affairs suggested the listing of Dresden and the Elbe Valley as a landscape instead. In 2000, a group was set up to prepare the application work. On December 9, 2002 the City decided officially to submit its application for WH status and sent it in January 2003 (IUDRP 2006).

The application file specified that five options for bridges had been taken over in

the general plans for urban development.[180] Among them, it was specified that the WSB was the only project that had been officially voted by the CC. Nonetheless, the WSB was again mentioned in the application as one of the sources in developmental pressures on the landscape. Finally, the project was the object of a one-and-a-half page appendix, written in German (please note that the official languages of the WHC are French and English, as in any diplomatic service).[181] In this appendix (N°20 – Crate 3/3) the bridge is defined as a necessity to bind the resident district in the south to the industrial areas of the north. The City specified that there had been imagined conceptions for more than hundred years to that purpose.

The application proposed a core zone of 1930 ha over 19,5 km length. The site was presented as ongoing cultural landscape, a new category that was introduced in 1992 (Rossler 2000). Famous examples of WH cultural landscapes are the Upper Middle Rhine Valley, Germany, (65 km length; 27 250 ha; buffer zone: 34 680 ha), and the Loire Valley between Sully s/ Loire and Chalonnes, France (85 394 ha; buffer zone: 208 934 ha).[182] [183] The City defended its universal singularity as based on its mixture of major urban settlement, not existent in comparable natural sites, like the area of Saint-Emilion, in France, and of natural surroundings, like Florence, in Italy, to which Dresden is often compared.

> "The preservation of the vistas to and from the city and the fact that the Elbe river meadows were kept free and not built upon were due to farsighted rules for town planning. Thanks to this Dresden has a unique connection between surrounding landscape and architecture" (CA OR 2003).[184]

> "The special feature of the cultural site of Dresden is the harmonious connection of an urban living space grown over the years with the natural surroundings and an agriculture rich in traditions" (CA OR 2003).[185]

[180] 20030106 CA OR "Dresden Elbe Valley – Cultural Site – Nomination for inclusion on the World Heritage List"
[181] 20030106 CA OR "Kurzerläuterung zum Projekt Waldschlösschenbrücke"
[182] http://whc.unesco.org/en/list/1066 - known for its castles, historic towns and vineyards, the Rhine Valley is home to the cliff "the Loreley", inspiration to the eponymous poem by Heinrich Heine.
[183] http://whc.unesco.org/en/list/933 - known for its numerous castles, all particularly well preserved, and vineyards along the river.
[184] 20030106 CA OR "Dresden Elbe Valley – Cultural Site – Nomination for inclusion on the World Heritage List" (p. 3)
[185] Ibid, p. 4.

The potentially conflicting situation was already part of the discussions before applying. The local government informed the City that the Free State of Saxony could propose a site for nomination in a near future. The then Mayor decided to take the opportunity. However, the City already felt the constraint of such a global dictate and that the rationale of the UNESCO would be quite different to those of an agglomeration. On April 2, 2003, the local State-Minister for Science and Arts informed the diplomatic services of the Federal Republic about the State's attitude and comprehension with respect to the application:

> "The category 'developing landscapes' newly created by the UNESCO is understood dynamically, and in such a way that it does not only not exclude, but also authorize projects of planning, development and construction that are already specified in the application, as well as projects that shall result from future evolutions and changes not foreseeable yet" (FSS, letter to the Ministry for Foreign Affairs, 2003).[186]

The application was processed anyway and the WHC commissioned the International Council on Monuments and Sites (ICOMOS) to inspect the site and evaluate the dossier. The bridge location was then shown to the expert persons.[187] This was confirmed to me by numerous interviewees. Eventually, the bridge was mistakenly mentioned in the final evaluation sheet delivered to the WHC, described as being planed in the west side of the city center, instead of the east.[188] This mistake became a source of argument among the parties eventually. However, according to the operational guidelines of the Convention of 1972 for the protection of the WH, it is the duty of the sites listed to inform of any projects or *new activity* (e.g. construction work) that would change the nature of the property.[189] In this respect, there are no "once for all" agreements. The fact that the experts sent by the ICOMOS did not question the project can not be considered as an allowance for building. At this very point, the City failed

[186] 20030402 FSS OD Letter to foreign office (p. 2)
[187] 20031208 ICOMOS ES "Comments and observations on the application by the City of Dresden and the Free State of Saxony for Admission to the World Heritage List"
[188] 20040301 ICOMOS OR "Dresden Elbe Valley (Germany) No 1156"
[189] 20050202 WHC OD "Operational Guidelines for the Implementation of the World Heritage Convention"

apparently its obligation, drawing on the idea that having notified the WHC about the project and its official character was sufficient. The guidelines prescribe the accompanying of such projects by the WHC as operative authority.[190] Later, the new Mayor recognized:

> „.For me it was important that the UNESCO said clearly: 'we can only exploit the information that is sent to us'. And there we need, I think, if one is honest, to accept in the CA that specific reports were sensitive to interpretations [*interpretationsfähig*]" (Interview given to a documentary film, aired on the Franco German channel *Arte*).

Dresden and the Elbe Valley entered the seminal list of sites of unique and universal value on July 7, 2004.[191] In his speech, the then Mayor praised the "harmony between architecture and nature, city and landscape".[192] Dresden as a WH site was a special case. The great reputation of the city echoed its destruction during the Second World War. As such, Dresden has become a *lieu de mémoire*, i.e. a place "where memory crystallizes and secrets itself" (Nora 1989: 7). Numerous interview partners told me that this factor had made Dresden's inclusion on the list of WH sites a strong symbol for the importance of Human Rights, arts and culture, over wars and conflicts. The destructions during WW2 further played a role in the selection of the site.[193]

In 2005, members of the WHC allegedly first heard of the progress made on the traverse by way of press. In June 2005, the opponents sent information on the WSB, notably about alternative locations and options, stressing the possibility of a tunnel instead of a bridge, and later met with the WHC.[194] Between September and December 2005, the WHC communicated its worries about the planned bridge repeatedly, asking the German Ambassador at the UNESCO for more specificities than the description received in the application dossier.[195] [196] With respect to the international program of

[190] For example, the site of the Rhine Valley debated the design of the projected bridge across the Rhine River together with the WHC for years before receiving approval for construction. A similar case of bridge in a WH site was the one of Bordeaux.
[191] 20040707 WH OD Urkunde Dresden (certificate)
[192] 20050624 OB MP "Rede von Oberbürgermeister Ingolf Roßberg"
[193] 20041029 WHC OD "Decisions adopted at the 28th Session of the World Heritage Committee - WHC-04/28.COM/26"
[194] 20050624 GL OD communication with UNESCO- WH delegates (bundled)
[195] 20050912 WHC OD "State of conservation of the World Heritage property of Dresden Elbe Valley (Germany)"

preservation, the construction was taking place in the area that it had defined to be protected (see the mark and the black circle in figure 23), where the valley is at its widest, and where the river banks form an elbow with their largest meadows.

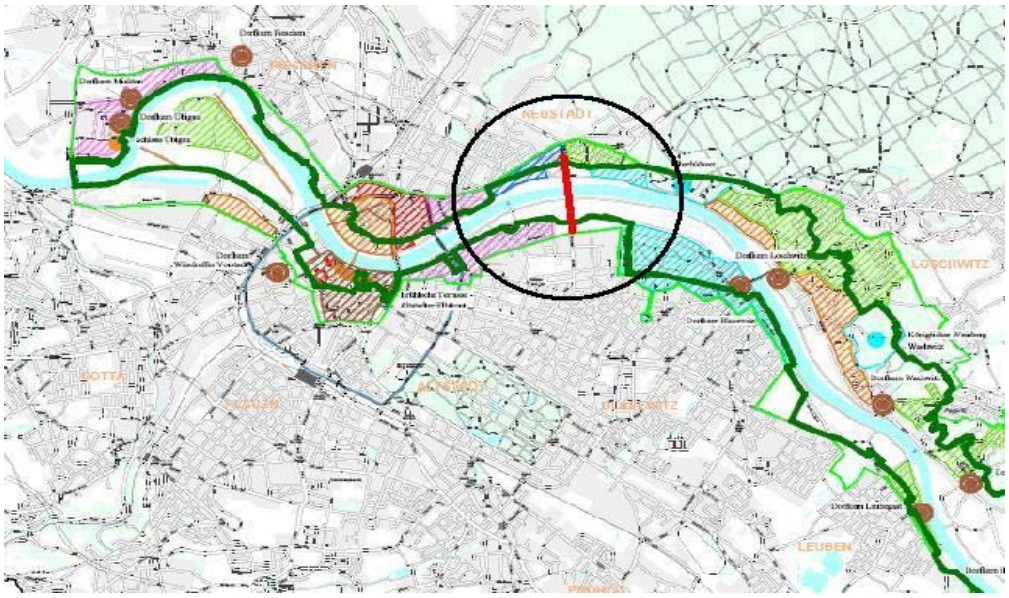


Figure 23 - Dresden WH site

In March 2004, several environmentalist organizations went before court against the bridge project. The Higher Administrative Court of Saxony rejected all legal actions against the bridge in December 2005, parallel to the critics from the WHC, and issued resolutions in favor of the construction. In connection with the referendum of 2005, this contributed to reinforce and secure the plan from a legal point of view, throwing the opponents into even more attacks on the newly opened UNESCO-front.

On January 4, 2006 the WHC reiterated its criticism, claiming that the bridge was no acceptable solution for the traffic situation.[197] On January 12, 2006 the CA postponed the construction, initially scheduled for March 2006, to start discussions with the WHC.[198] On January 26, 2006, the Saxony's Department for Trade and Industry opened the subsidies to any alternative and thus left room for the tunnel option to enter the debate (Dresdner Hefte 2008). In March 2006, the bridge-visualizations ordered from the RWTH Aachen University reached the WHC. In June, the Center took a position against the bridge, because:

[196] 20060105 OB MP „Rede des Oberbürgermeister zur Stadtratsitzung am 05.01.2006“
[197] Ibid.
[198] 20060112 CA PR „Einvernehmliche Lösung mit Welterbe Komitee angestrebt“

> "The Waldschlösschen Bridge does not fit in with existing series of Dresden City bridges; (…) The Waldschlösschen Bridge cuts into the cohesive landscape of the Elbe river bend at its most sensitive point, splitting it irreversibly into two halves" (WHC OR 2006).[199]

In May 2006, an official delegation of Dresden politicians visited the WHC in Paris and met with its Director with little success.[200] In July, a few days before the yearly session of the WH Committee, the former Minister President of the local State, and member of the very delegation, claimed:

> "The citizens of Dresden have already decided. And what is irritating me is the postulate, underlying all this process, that the citizens of Dresden could not make a very own responsible evaluation of their higher interest, between the beauty of the meadows and the necessity of the WSB. Here is an institution, unknown to most Dresden citizens, that lay claim to know better" (Interview given to the DNN, 2006).[201]

During its yearly session, and after debates invoking deletion and more flexibility as much as the so-called red list of sites in danger, the WH Committee put Dresden and the Elbe Valley on the so called 'red list' of endangered WH sites on July 11, 2006, thus voting the draft proposed by the WHC as amended.[202]

> "The WH Committee (…) ***notes with great concern*** that the construction project of the WSB is located in the core area of the cultural landscape (…) ***urges*** the State Party and the City authorities to halt any construction until further discussions are taken up with all stakeholders to find appropriate solutions for the safeguarding of the values and integrity of the WH property (…) ***requests*** the State Party to urgently review the construction project in the core zone" (WHC OR 2006, emphases in original).[203]

[199] 20060609 WHC OR "Item 7 of the provisional agenda: Examination of the state of conservation of World Heritage properties – WHC-06/30.COM/7B" (p. 199)
[200] 20060512 CA PR „Delegation des Stadt fährt nach Paris"
[201] 20060706 DNN PA "Biedenkopf: Wir haben entschieden, wir sind das Volk. Punkt" (p. 1)
[202] 20060716 WHC OD "Draft summary record – WHC-06/30.COM/INF.19"
[203] 20060609 WHC OR "Item 7 of the provisional agenda: Examination of the state of conservation of WH properties – WHC-06/30.COM/7B" (p. 198)

The CC, still led by a majority against the project, voted a motion asking the then Mayor, supporter of the bridge project, to prepare a new referendum to ask the citizens for their opinion on the matter.[204] In their opinion, the decision of the WH Committee represented a new element, unknown at the time of the first referendum, thus justifying a new call for the poll. In this same motion, the CA was asked to postpone the allocation of construction work.

On July 25, 2006, the Mayor vetoed the decision of the CC, with the argument that such a motion would harm the binding nature of the first referendum and the City's duty to fulfill the citizens' will.[205] In sharp contrast, the head of the CA asked for decisions in the allocation of construction work. The City commented:

> "This decision should by no mean be understood as an affront to the UNESCO (…) the veto is much more the expression of particularly difficult legal situation for the capital-City [i.e. Dresden] " (CA PR 2006).[206]

On August 10, 2006, the CC voted, again a motion asking the then Mayor to prepare a new referendum on the situation and to postpone the allocation of construction work.[207] The Mayor vetoed, again, the decision, for the same reasons as in the preceding month.[208] On August 14, 2006, the Regional Directorate had to intervene and declared illegitimate the motion voted by the CC, giving right to the Mayor. The situation sheds light on the growing frustration.

> "Above all, the demand of the CC in its motions of July 20 and August 10, 2006, to the Mayor (…) is pointless and seems more suitable to delay or inhibit the implementation of the referendum" (RD PR 2006).[209]

From then on, the dialectic of control accelerated its escalating movement. On August 24, 2006, the CC voted two motions, vetoing the decision of the Regional

[204] 20060720 CC OD Beschluss A0308-SR35-06
[205] 20060725 OB OD „Widerspruch des Oberbürgermeisters"
[206] 20060726 CA PR „Widerspruch gegen Stadtratbeschluss zur Brücke eingelegt" (p.1)
[207] 20060810 CC OD Beschluss V1368-SR36-06
[208] 20060811 OB OD „Erneut Widerspruch des Oberbürgermeisters"
[209] 20060814 RD PR „RP beendet Blockade des buergerentscheides zur Dresdner Waldschlösschenbrücke" (p. 1)

Directorate asking the then Mayor to prepare a new referendum on the situation and to postpone the allocation of construction work.[210] [211] The opponents were thus blocking the implementation of the decision made by the Regional Directorate. On the next day, the Regional Directorate commanded the City to execute the decision made a couple of weeks before and communicated its execution by substitution in the allocation the construction work. As long as the CC would not vote a new referendum with a two third majority, the refusal to comply with the first referendum would remain illegal. The City went before court. On August 30, 2006, the administrative court of Dresden gave right to the City.[212] The Regional Directorate, in the name of the referendum, appealed the decision.[213] In virtue of its institutional anchor, the path instantiation was being protected now by the immediate institutional bodies, independent (at least formally) from the City's wish, and even from the supporters' interventions.

On September 5, 2006, the CC voted for the fourth time the end of the construction project and asked the Mayor to engage the City before courts if necessary.[214] The then Mayor vetoed the decision.[215] On September 21, 2006, the RD communicated its sending of argumentation to the Higher Administrative Court of Saxony.[216]

On October 10, the CC proposed the allocation of the construction work in its agenda; the motion was refused. The debate became a symbol in the City, for example by becoming the major theme of the podium discussion during the "Week of Democracy" organized by the City in November, asking:

> "We want citizens' participation! – But which one? What we can learn from the debates around the WSB" (CA PR 2006).[217]

On November 8, 2006, the Higher Administrative Court recognized the difficulty to debate a conflict between a local referendum and a convention under international

[210] 20060824 CC OD Beschluss V1378-SR37-06
[211] 20060824 CC OD Beschluss V1376-SR37-06
[212] 20060830 AC OD Beschluss 12 K 1768/06
[213] 20060901 RD PR RP „Dresden legt Beschwerde beim Oberverwaltungsgericht ein"
[214] 20060905 CC OD Beschluss V1402-SR38-06
[215] 20060907 CA PR „Erneuter Widerspruch gegen Beschlüsse des Stadtrates"
[216] 20060921 RD PR „RP reicht Beschwerdebegründung beim Oberverwaltungsgericht ein"
[217] 20061108 CA PR „Dresdner Demokratiewochen"

law.[218] Considering the fact that one of the two shall "lose" in such a legal war, the court suggested mediation among the parties involved before passing such a decision. During December 2006 and January 2007 the mediation took place (including representatives from the ICOMOS, the City, the Foreign Affairs), without success however.[219] [220] On March 9, 2007 the Court ruled in favor of the referendum: the City of Dresden was to follow the democratic decision to which it had been bound; a non-appealable decision.[221] Again, the path instantiation had made one step deeper into the institutional blur surrounding the conflict, making its way back even more difficult.

Nonetheless, on March 22, 2007, the CC voted a motion asking the Mayor to lodge constitutional complains with respect to the situation.[222] This was eventually refused by the Saxon Constitutional Court and by the Federal Constitutional Court.[223] On the same day, social movements organized a manifestation against the bridge project. A week later, the Mayor vetoed the decision of the CC. Two institutional frames were thus colliding.

> "The moral legitimation for this action [i.e. the demonstration by the opponents] is provided to you by your subjective judgment, now affiliated to the UNESCO, about the aesthetic impact of the planned WSB. With your demonstration you want to create a backstage of intimidation and hope to oblige the City of Dresden and the Free State of Saxony to ignore the sentence from Bautzen [i.e. the local Court] that you do not accept" (A supporter to the bridge about the opponents, CDU OD 2007).[224]

In virtue of the popularity of this institution, the situation provoked wakes of mobilization and received prominent attention from all local media and most of the national press. The debate moved from a municipal discussion up to a debate among a diversity of institutional constituents at the regional level (e.g. debates in the Saxon State Parliament), national level (discussion in the Federal Parliament), and international level (involvement of the German Ministry for Foreign Affairs, WHC,

[218] 20061108 HAC MP „Rechtliche Auseinandersetzung Waldschlösschenbrücke – 4 BS 216/06"
[219] 20061212 CA PR „Mediationsverfahren zu Waldschlösschenbrücke beginnt"
[220] 20070124 CA PR „Mediation um den Bau der Waldschlösschenbrücke beendet"
[221] 20070313 HAC OD Beschluss 4 BS 216/06
[222] 20070322 CC OD Beschluss V1720-SR47-07
[223] 20070503 CCS OD Beschluss Vf. 53-IV-07 (HS) - Vf. 54-IV-07 (e.A.)
[224] 20070322 CDU OD Open letter against demonstrations by social movements

ICOMOS).[225] [226] [227] More and more local and national observers took position in the debate, e.g. the Academies of Arts of Berlin and of Dresden, the Federal Board for Culture, German artists, the local Chamber of Commerce, and even the Catholic Church, to support either the opposition or the advocates of the WSB. Eventually, several demonstrations took place locally and the conflict polarized heavily, separating the supporters of culture from the supporters of development. In April 2007, the Federal Minister of Transport, Building and Urban Affairs communicated his concerns regarding the financing of a project that was in conflict with an international convention to which the Federal Government was committed by ratification. He proposed financial assistance for any solutions that would satisfy the WHC, thus bouncing the dispositions with respect to allocative resources of domination (Giddens 1984) in the City.[228]

On April 12, 2007, to sort of bypass the legal situation, the CC decided, again, to block the construction work now led by the Regional Directorate in substitution, and to prepare a perspective workshop to prepare alternative plans for a WSB that would satisfy both the WH Committee and the binding decision made by way of referendum, thus addressing both legal restrictions.[229] Again, the Mayor vetoed the decision, and the Regional Directorate intervened.

In May 2007, a so-called 'Perspective Workshop' tried to determine architectural solutions to present to the WH Committee as potential compromise. Major architects participated to this forum.[230] Nonetheless, Volkwin Marg of Gerkan, Marg und Partner, famous for the construction of the new main train station of Berlin, provocatively refused to participate, taking position for the construction of a tunnel in an open letter. On June 12, 2007, the City voted the sending of one of the proposals to the yearly session of the WH Committee in Christchurch, New Zealand.[231] Meanwhile, the Regional Directorate allocated the construction work in the name of the City.[232]

From then on, and due to this escalation, the work would actually run decoupled from the City's own decision-making, in the hands of the local monitoring body, the

[225] 20060914 FSS MP "Plenarprotokoll 4/59"
[226] 20070301 BUND OD „Drucksache 16/4460 – Beschlussempfehlung und Bericht"
[227] 20070223 FO OD Letter to Kultusminister der Länder
[228] 20070611 BUND OD Letter Tiefensee - Bund may pay for costs - duties as WHC member
[229] 20070427 CC OD Beschluss A033-SR50-07
[230] 20070608 CA PR „Sechs Varianten zur WALDSCHLÖSSCHENBRÜCKE vorgestellt"
[231] 20070612 CC OD Beschluss A0459-SR55-07
[232] 20070608 RD PR „RP trifft Vergabeentscheidungen fuer WALDSCHLÖSSCHENBRÜCKE"

Regional Directorate.[233] Legal discussions and assertions followed between City and Regional Directorate on the matter.[234] However:

> "The Regional Directorate has no legal scope of action anymore to go into so-called proposals for compromise on the Elbe-traverse at WS. The WSB must be built in the form validated by plan appraisal in 2004 – and that without delay" (RD PR 2007).[235]

On June 25, 2007 the WH Committee decided to keep the site on the red list and suggested, again, the construction of a tunnel.[236] Meanwhile, a set of environmental organizations lodged complains about the bridge due to its potential impact on a protected sort of bats, present in the region. The Regional Directorate appealed before the Higher Administrative Court; the City was granted with the right to proceed with construction and asked to install specific speed limits at night to address the risk of collisions with the bats.[237]

On November 19, 2007, the construction of the bridge started and was accompanied with harsh protest by activists.[238] The discussion put the idea of a full tunnel to the fore, as suggested by the opponents and, since its last session, by the WH Committee. In March 2008, the City of Dresden was freed from the referendum in legal terms. Hence the debate around the tunnel option gained strong attention. In January 2008, the City prepared plans for a new WSB to be presented to the WHC.[239] [240] A referendum was started to ask for the construction of a tunnel instead of a bridge. Meanwhile, the Federal Ministry for Traffic, Construction and Urban Development confirmed the possibility to unlock financial assistance for a compromising solution.[241] A mission was sent by the WHC and the ICOMOS in February and made clear that no

[233] 20070614 RD PR „Regierungspräsidium trifft Vergabeentscheidung für Brückenkörper der Dresdner Waldschlösschenbrücke"
[234] 20070619 RD PR „Landeshauptstadt Dresden unterliegt in Sache Waldschlösschenbrücke vor Gericht erneut"
[235] 20070622 RD PR „Presseerklärung des Regierungspräsidium Dresden zum Sach- und Verfahrensstand Waldschlösschenbrücke' (p. 3)
[236] 20070731 WHC OD "Decisions adopted at the 31st session of the World Heritage Committee-whc07-31com-24e"
[237] 20071112 HAC OD Beschluss – 5 BS 336/07
[238] 20071116 CA PR „Erste Arbeiten an der Waldschlösschenbrücke bereits am Montag"
[239] 20080128 CA PR „Veränderter Entwurf kann Waldschlösschenbrücke und Welterbetitel in Einklang bringen"
[240] 20080125 CA ID "Waldschlösschenbrücke 1997-2008"
[241] 20080208 BUND OD Letter - Money for tunnel would not be impossible

bridge could be built at this location, allowing only for the tunnel as option and regretting that the decision would now rely on the CC and its incapacity to find a two third majority in its decision-making.[242] On March 6, 2008, the Technical University of Dresden communicates the results of a seminar that had brought together faculties from the architectural department and from the civil engineering department. Their discussions argued for the feasibility of a tunnel instead of a bridge.[243]

On March 11, 2008 the Mayor received 42,299 signatures asking for a new referendum in favor of a tunnel.[244] Several problems were found in the formulation, for example the lack of information on costs.[245] Unsurprisingly, the CC voted its legitimacy.[246] The then Mayor appealed this motion, eventually confirmed by the RD, drawing on legal specificities (dates of signature collections, deadline to propose a referendum against a vote in a CC).[247]

In its 2008 session, the WH Committee maintained the site on the red-list of endangered sites as a last-chance gesture before deletion. A deletion had never occurred so far in Europe, and only once since the start of the program in the 1970's. In the same year, the Mayor was newly elected and reckoned her willingness to proceed with the bridge construction anyway. In the following months, legal affairs went on without success for the opponents until 2009 and are, at the time of writing, still ongoing (mostly put forward by environmental organizations).[248] In contrast, the construction proceeded straightforwardly. The Mayor hold a speech during the yearly session of the Committee in 2009, arguing for a delay, suggesting the evaluation of the bridge in the site upon its completed construction.[249] This did not convince. On June 25, 2009, the WH Committee voted for the deletion of the site Dresden and the Elbe Valley from the list of WH sites.[250]

[242] 20080310 WHC OR "Reinforced monitoring mission to the Dresden Elbe Valley World Heritage property Germany 4-5 February 2008 – Mission report"
[243] 20080306 TUD ES „Fachklausur Elbtunnel Dresden"
[244] 20080402 CA PR „Buergerbegehren Elbtunnel: Mehr als 35000 gültige Unterschriften liegen vor"
[245] 20080407 OB OD "Anlage – Rechtliche Bewertung des Bürgerbegehrens"
[246] 20080422 CC OD Beschluss V2361-SR66-08
[247] 20080612 RD PR „Buergerbegehren zum Waldschlösschentunnel ist unzulässig"
[248] 20081030 AC OD "Urteil – 3 K 923/04"
[249] 20090625 CA PR „Rede der Oberbürgermeister vor dem Welterbe Komitee"
[250] 20090625 WHC PR „Dresden is deleted from UNESCO's World Heritage List"

Conflict as Vicious Circle? Why Path Disruption Makes Things Worse

As we saw in the last chapter, the process of path instantiation is a process of reflexive agency. This idea is one of the main components of structuration theory. Indeed "it is useful to speak of reflexivity as grounded in the continuous monitoring of action which human beings display and expect others to display" (Giddens 1984: 3). In accordance with this conception, we saw in the latter empirical sub-section how the opponents and the supporters entered a conflict by drawing on the institutional realm to maintain the project on one side and to disrupt it on the other. Both camps demonstrated great degrees of reflexivity in the process, with a clear advantage on the side of the supporters. This movement had direct negative implications on the project and on the common good. Conflicts in lock-in situations can run a vicious circle in this respect, and we just saw in Dresden how each attempt at disruption indeed helped reinforce the path instead of dooming it. I propose now to unpack the dark edge of this vicious circle, by shedding light on the successions of negative outcomes.

Vicious Effect 1: Worsening the Expenditure

The issue of costs played a preponderant role in the argumentation on path dependence and sub-optimal outcome.[251] We saw that the relation between municipality and citizens is the one of a principal-agent towards public good maximization and economical usage of public money (a point especially stressed by German laws on public management). As far as I know, only one study tackled such issues systematically and with a large dataset on large-scale projects. In this study, average cost overrun in fixed links infrastructure (bridges and tunnels) reached 34%, for an average project length of 6,6 years of implementation (i.e. period between decision to build until completion of construction and start of operations), with outliers reaching 15 years of duration (Flyvbjerg et al. 2004). The Dresden project was decided in 1996 and, at the time of writing, i.e. early 2011, is not yet completed. Completion is expected for early 2012, i.e. 16 years after decision in the CC. This above average delay is based on initial mistakes in planning (e.g. refusal of plan appraisal in 2000 and other details), as well as in the delays provoked by the opponents and the many discussions all along the way.

[251] All costs in this section are given in 2009 prices.

The project was originally estimated for EUR 113,7 Mio (DM 190 Mio) in the early years of debate (1994).[252] The financial frame, back then, was not sufficient. It was estimated that only 40% of the construction projects could be carried by the City. The costs quickly increased, as the necessity to link the bridge to a web of tunnel under the hill became necessary for its appraisal in the community. Indeed during the debates in 1996, the experts in conservation and Heritage had expressed the necessity to build the traverse as low as possible to make it acceptable for eventual plan appraisal. This implied either the building of access ramps running down the hill, or the access via tunnels across the hill. The ramps down the hill were problematic considering the sensitive nature of the site. Some planning work was done in this direction anyway: On October 10, 2001, in a press release, it was announced that such a version was proposed by the CA to the CC.[253] According to the information thus given, this could have made the project EUR 29,5 Mio (DM 50 Mio) cheaper. The tunnel-connection remained a priority nonetheless, thus increasing the initial estimates. The official decision to start the project was made in august 1996 for a budget of EUR 114,9 (DM 186 Mio).[254] Three years of planning later, in a press release, and after having performed the preliminary planning works on the award-winning proposal of 1997, the CA estimated the costs for the project (i.e. including tunnels) at EUR 178 Mio (DM 297 Mio).[255] Today, the project is expected to reach the sum of EUR 182 Mio (estimated in 2010, i.e. a while before completion).[256] It is estimated that delays of all sorts provoked an extra EUR 28,6 Mio. The willingness to disrupt the project impacted this increase with immediate effect. Each stop in construction and allocation represented a breach in the contract for the firms contracted. In some cases, this even impacted the prices of the commodities (steel and concrete). Conflict-related delays represent a large part of the extra cost, as assembled in table 18.

[252] 19940501 CA ID „Verkehrskonzept der Landeshauptstadt"
[253] 20011010 CA PR „Waldschlösschenbrücke wird deutlich kostengünstiger"
[254] 19960816 PA SZ „Nun doch neue Brücke für Dresden"
[255] 19990120 CA PR „Nach 60 Jahren bekommt Dresden wieder eine neue Brücke"
[256] Obviously, the whole amount is not carried by the city alone. An amount of EUR 131,2 Mio is to be taken over by third parties and by the local State, presumably. An amount of EUR 51 Mio is still to be assumed directly by the city. This is twice more than was told to the citizens during the referendum.

Postponement and delayed allocation – Bridge	17,500,000
Postponement and delayed allocation – Tunnel	6,200,000
Postponement and delayed allocation – Streets	700,000
Costs due to planning work for WH compliance	600.000
Total "conflict costs"	EUR 25.000.000

Table 18 - The costs of the conflict

If we consider the initial EUR 114,9 Mio budget, this situation corresponds to a theoretical (since the construction is not completed yet) cost-overrun of 58,4%, i.e. largely over the average elaborated by Flyvbjerg (et al. 2004), and some more EUR 25 Mio to take over by the City.

Vicious Effect 2: Dooming Trust and Chances for On-Path Compromise

The discussion on the WSB started smoothly, with the CA drawing on the memory of the former failed instantiations of the WSB as mere virtual idea to solve forthcoming traffic issues. However, the suggestive effect of the former instantiations on the decision-holders collided with the willingness of a minority to challenge the idea with alternative options. We observed how the supporters eventually managed to structure collective action, thus unleashing processes of self-reinforcement fostering the trajectory taken. The opponents, coming from different backgrounds (architects instead of engineers, newly moved to Dresden from some of them) were reluctant to let go. And yet, instead of successfully disrupting the project, they reinforced its nesting into the surrounding institutional landscape. As a matter of fact, each new attack became the occasion for the supporters, and for the City now engaged as a whole into the project, to maintain the instantiation and to embed it even more in the public discussion and the legal framework of the community.

The identification of a path in the Dresden case drew on the idea that the instantiation proves questionable in terms of efficient public expenditure. This was particularly supported by the eventual withdrawal from the list of WH-sites, stressing the negative impact of the bridge in the landscape and its preservation, and by the decreasing traffic trends, i.e. the original goal for the project. We saw that the conflict

served the institutional anchoring of the project. Interestingly, the numerous attacks and attempts at path disruptions also played an important role in the hardening of the suspicion among the supporters and the opponents, and hereby contributed to doom any chance for reaching any on-path compromise. For example, during the discussions on a referendum in 1996, representatives of the different political factions in the CC regretted already the hardening process among the factions and the polarization of the issue:

> „To the negative points [in the CC] belong the deadlocked fronts among the factions, especially in the bridge discussion" (City Councillor, Green Party, PA SZ 1997).[257]

As the opponents started using the WH Convention to their cause, the situation got worse and each step in favor of the bridge, via blocking decisions in the CC, reinforced among them the impression of a well-thought system, and their motivation to disrupt it once for all (see table 19). One of the leading opponents about the supporters of the bridge project in the CC commented:

> „They could not care less about the UNESCO, because they had a referendum and could play the democratic card. And with it they won elections, with it they became interesting for many citizens: 'they hold their word, they give us [i.e. us, citizens] a bridge, and they don't care about the UNESCO' -which is unbelievable actually- 'it seems we [i.e. we, the citizens] are more important in the end' " (Former CA employee, interview, 2010).

A similar evolution occurred among the supporters. Indeed a "little layman psychological instinct suffices to recognize that this is mostly uncertainty that is hidden behind political stubbornness" (translated into English from Bartsch 2008: 84). The repeated blocking of decision in the CC was motivated by the lack of trust remaining among the participants. Seeing the energy and creativity of the opponents in their disruptive attacks, the supporters hold the project in firm hands and refused any potential two-third majority in decisions for a compromise:

[257] 19970219 PA SZ „Langatmigkeit der Stadtväter nervt"

„We had, among us, no trust left. The opponents did not accept the referendum and tried and act against the bridge via court procedures and the UNESCO. Thereby there was no consensus possible, like: 'we look in each other's eyes and we agree with each other, we build a bridge, but a bridge that would satisfy the UNESCO. (…) We reckon that the bridge like it is today, maybe we would build it differently now, because it is too massive. We make a break, and we think about a new model, we present you this model, UNESCO, and you evaluate it benevolently (…) This could have been a possibility, a line of compromise. But there was no trust left, because my party and the CDU said, they had learnt to know the others, if we had allowed for a one-millimetre shift in this bridge, we would have opened it all again, the whole project would have failed" (Member of the Saxon State Parliament, local FDP faction, interview, 2010).

Issue	**The Characterizing Power of the WSB**
Source	Exemplary Quotes
Declarations to the Press	"We did not manage to successfully present the difficult legal and political situation in Dresden, and herewith to move the UNESCO towards a better compromise (…) This is why I place little realistic chances in the implementation of today's decision. Rather will it deepen the dikes within the township" (Mayor, CA PR 2008).[258] „As a matter of fact, discussions about alternatives, what we always hoped for, never took place with us. We know about no alternative bridges, no plans for a tunnel, no other concept for traffic routing – nothing. The City showed us one bridge, this one, slightly corrected, and that's it" (Director of the WHC, PA SZ 2008).[259]
Interviews	"The problem is also that no one believed anybody. Well if someone tells me, if a specialist would tell me, a tunnel is feasible, and he comes from the other edge, the opponents to the bridge, then already I don't believe him anymore" (Member of the Saxon Parliament, local FDP-faction, interview, 2010). „One must make a difference. Nothing is impossible. Simply in this point, we'd have to burry the plan appraisal and plan everything anew. And this was the goal of the opponents to the bridge, precisely to reach this. That we abandon this plan appraisal. For the opponents to the bridge this had always been a means to an end. I say it deliberately, the opponents to the bridge they do not care much about the World Heritage. For them this had always been a means to an end to prevent from the bridge" (City Councillor, member of the local CDU-faction, interview, 2010).

[258] 20080704 CA PR „Statement des Ersten Bürgermeisters zum UNESCO-Beschluss"
[259] 20080510 WHC I Bandarin im SZ "Wenn Dresden stur ist, sind wir es auch"

Documents	"The CC is worried about the fact that the unsolved conflict will affect durably the political climate and the democratic decision-making in the City of Dresden" (CC OD 2008).[260] "The conflict of ideas between the Waldschlösschenbrücke bridge and the World Heritage status is based on limited perceptions. On the part of the bridge's opponents, the bridge is seen as a danger for the city's cultural heritage. (…) The proponents of the bridge often reduce it to its infrastructural necessity. While this is the reason for building the bridge, it is not its ultimate purpose: in the cultural landscape of the Elbe Valley a bridge must be more than just an efficient connection between A and B" (CA ID 2006).[261]

Table 19 – The charaterizing power of the WSB

We see here the development of a dialectical relation. In this respect, Sorge (1991: 161) once commented: "there are always two kinds of people: those who think that there are always two kinds of people and those who don't". The WSB project developed a specificity that becomes particularly interesting for path dependence research: the path had loaded the power to characterize actors in such a way that people were either supporters or opponents to the bridge construction. The greatly polarizing power of this artefact leads us to a third vicious effect: the institutionalization of the organizational path.

Vicious Effect 3: Institutionalization of the Organizational Path

Besides the direct, observable effect on the costs of the project and of the decreasing willingness to cooperate among participants, the attempts at disrupting the construction of the WSB further supporter the institutionalization of the organizational path by enjoining the City to reiterate the collective mobilization work performed during planning, and to anchor the project even more into the institutional realm.

We saw in the conceptual part of this chapter that the reflexive structuration and the sources of self-reinforcement experienced in the organization and beyond could serve as an "immune system" to the path. It was also suggested that the more one tries to disrupt a path, the more one embeds the path. As we saw in our theoretical discussion, institutionalized arrangements are taken-for-granted carriers of moral

[260] 20081211 CC OD Beschluss A0698-SR76-08
[261] 20060300 CA ID "Waldschlösschenbrücke bridge and World Heritage status" (p.18)

authority, and provides them with a characterizing force. The WSB as organizational path took a similar evolution during the conflict. As the conflict caved-in, the positions became matter of principles, delineating clear and dichotomist positions about normative appropriateness, with the advocates of democracy and the others. In line with the very idea of reflexivity, the effect and intensity of action from the supporters' side varied in response to the occurrence of disruptive events in order to keep on dragooning enough support. One can further suggest an intensification of the defensive communication, its improvement and its adaptation to the situation as the conflict evolves. In defending discursively, the institutional realm kept on being drawn upon by the actors. This had a direct impact on the organizational path. For example, we saw repeatedly how the idea of *democracy* was practically enacted in communication and as a justification for decisions. If we consider the communication by the City (see figure 24, own creation) three main momentums are observable in this respect.

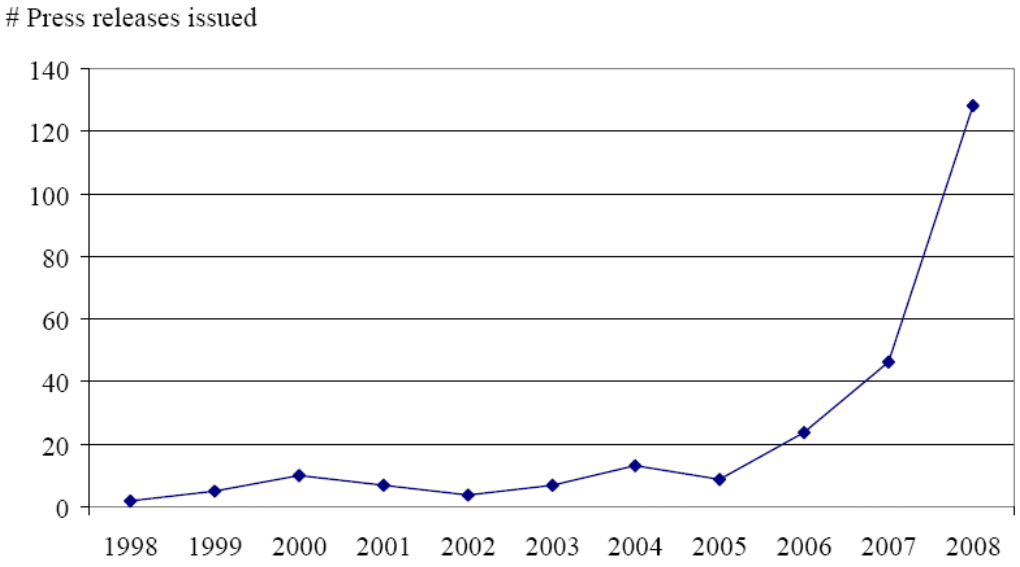


Figure 24 - Press releases issued by the CA on the WSB (1998-2008)

A light increase in activity occurred in 2000 to support the submission of the plans for appraisal at the Regional Directorate. Upon refusal, the communication load diminished. It increased again in 2004 with the successful plan appraisal submitted in 2003, and diminished again. As the conflict escalated, in the city but also outside the community, the number increased dramatically from 2005 onward, with an average of one official announcement to the press every three days in 2008. These figures only

account for the official communication of the City and not for other public statements given by individual members of the CA or of the CC. Similarly, the construction and technical work proceeded after a brief pause from 2004 to 2007, due to the conflict escalation. The City, under the direction of the Regional Directorate, started construction work in spite of ongoing discussions with the representative bodies of the UNESCO-WH Convention.

Main narrative line	**Dual implications for the debate**	**Exemplary quotes**
Constructing is, actually, contributing to WH	To be against the bridge in the name of WH preservation is absurd, for it goes against WH itself	*"In June 1905, four students (...) founded the group which was to revolutionise the fine arts in Germany: »die Brücke« »The Bridge«. In Dresden, the word »bridge« seems to stand for the fusion of different interests, for the interrelation of old and new - of the past and the future*" (CA ID 2006).[262] "*The bridge whether real or on paper has always been a part of city development, and that is precisely what the World Heritage status is all about*" (Ibid.).[263]
Constructing means Democracy	Stopping the project is an affront to democracy and the citizens	*"I don't take stock in conducting a second referendum, since the situation did not change, and, to my opinion, because it would harm the democracy if the impression emerges among the citizens that a decision made by a 2/3rd majority constantly caved by the politics gets challenged, and finally considered irrelevant"* (Member of the Federal Parliament, FDP faction, PS 2006).[264]
Constructing is Rational Technically	No other option can, technically, financially, and environmentally, overcome the bridge solution	"*In its construction it would be far easier to protect against high water levels than a tunnel, which requires highly complex construction for the design to be flood proof and would do really great damage to the Elbe floodplain*" (CA ID 2006).[265]

Table 20 - Narrative defence of the WSB

In this respect, every new disruptive attack was the occasion, strategic or not, for

[262] 20060300 CA ID "Waldschlösschenbrücke bridge and World Heritage status" (p. 12)
[263] Ibid, p.11.
[264] 20060819 FDP PS Open letter
[265] 20060300 CA ID "Waldschlösschenbrücke bridge and World Heritage status" (p. 10)

the City and/or the supporters to defend the path as instantiated and to anchor it even more into the institutional realm, hereby making it a matter of principles, more than a matter of techniques. This phenomenon shows the strength of the suggestive effect developed in favor of the bridge over the years. The defense occurred for a major part on a discursive basis, since the technical planning was already all set up. However, the demonstration of physical work also contributed to this development, rending irreversible every more step toward physical completion. In their communication, the supporters have been drawing on three major narrative themes that were the results of adaptation efforts to the situation as it evolved. Here, we see how and why the assertion made by Garud et al. (2010) on narrative use as path-breaking tool fails to apply in the path-dependent context of Dresden. As a matter of fact, actors locked in are best equipped to argue for remaining on track (see table 20 below).

After the first critics from the WHC, the CA communicated about ways of thinking of a compromise in suggesting the inclusion of the bridge into the idea of heritage protection. After over 10 years of debate and of structuring of action during the repeated sessions of decision-making, the City as a whole communicated decidedly in favor of keeping the bridge on track as the easiest solution. It started with defending the necessity for both parties to find a solution. In the data I could interpret a will to distinguish the construction project as pragmatic issue from the notion of Heritage protection depicted as abstract one:

> "A mutually satisfying solution for adding new structures to the Elbe Valley's cultural landscape can only be found if the conflict is resolved on the conceptual level" (CA ID 2006).[266]

> "The value of the 'World Heritage Site' seal of approval rests upon the UNESCO's decisions in concrete situations being understandable and appropriate, as the criteria of universality, authenticity, integrity etc. are very general and abstract"(Ibid.).[267]

[266] 20060300 CA ID "Waldschlösschenbrücke bridge and World Heritage status" (p. 19)
[267] Ibid, p. 19.

Constructing the bridge is presented as more than one more piece of infrastructure. This shows us already that the solution to the problem started institutionalize and become an end in itself. The data shows that a compromise could not take the path of a dialectical synthesis of both conflicting parties (as Hargrave and Van de Ven [2006] would propose). This suggests a strong lock-in effect. Compromising means building the bridge as projected:

> "City bridges often provide a panoramic view. The space which a bridge spans in the city generally allows viewers to see and take in a larger part of the city. These panoramic views are an experience rather like a bird's-eye view. For this reason, bridges are inviting places" (CA ID 2006).[268]

> "If it was not accepted that a bridge could be integrated into the cultural landscape, then its WH status would not be justified" (Ibid.).[269]

> "At the end of the 1880s, after visiting the site of the Gotthard Tunnel construction, Friedrich Nietzsche described it in almost euphoric terms as an engineering masterpiece. The train trip through the completed tunnel, however, made him feel anxious. (…) A tunnel is, and will always be, a claustrophobic experience" (Ibid.).[270]

In the following years, the WHC received the evaluative reports and took a position against the construction at this location, thus undermining the early inclusive efforts of the City. The CC voted motions to pause the project so as to reflect. Meanwhile, we saw that numerous sources started defending the tunnel solution, to demonstrate its feasibility, at least in abstract terms. In sharp contrast to this new development, the Regional Directorate, in virtue of its monitoring role, was making pressure for the project to proceed and for the respect of the referendum. In this same period of time, numerous legal decisions reinforced the project, thus making any postponement a legal affront. The institutional pressure, or iron cage, showed its force over the opponents. The project had become, from a regulative perspective on institutions (Scott 2008), already strongly institutionalized. The line of argumentation of

[268] 20060300 CA ID "Waldschlösschenbrücke bridge and World Heritage status" (p. 14)
[269] Ibid, p. 19.
[270] Ibid, p. 14.

the supporters from then on took a more polemic turn and drew decidedly on more cognitive and normative perspectives of institutionalization (Scott 2008), like values and norms of appropriateness, at hand via the idea of democracy.

Dresden had been going from one dictatorial regime to another during most of the twentieth century. After having suffered the National Socialist regime from 1933 to 1945, the City was ruled by the one imposed by the Russian occupation until 1949 and became eventually part of the German Democratic Republic from 1949 to 1990. This experience is present in the texts, for example when a local politician writes about the "Totalitarian Elites", i.e. the local intellectuals and environmentalists engaged against the bridge:

> "When the citizens stop bending under the dictate of their pathetically uplifted forefinger/index/index finger, then they look in panic for new partners, everywhere in the world. The lower elite of definition ask for help from the upper elite of definition. In this case the UNESCO" (Member of the Federal Parliament, CDU faction, PS 2007).[271]

> "When Dresden was still part of the GDR and Ulbricht [Chairman of the Council of State, 1950-1971] had the Saint Sophia's Church demolished, the UNESCO showed no interest in this city. It is not before one becomes a Democracy that one gains the right to be patronized and kept in leading-strips by them" (Ibid.).[272]

The end of the binding deadline of the referendum approached in the end of 2007 and loosened the impression of an institutional, regulative straightjacket around the project. Accordingly, the debate on democracy took a more technical and pragmatic turn. Studies of organizational learning tend to "identify strategic renewal as the underlying phenomenon of interest" (Crossan, Lane and White 1999: 522). In studies of path dependence, returns on learning processes actually inhibit this renewal. For the supporters of the bridge, this effect acted as a safety lock, securing the project development even more after each new step. In 2008, after the WHC and the ICOMOS had sent its last monitoring mission to Dresden, the City answered the resulting report with an extensive letter to the WHC in Paris. The Mayor addressed the proposition to

[271] 20070316 CDU PS "Vaatz - Die totalitären Eliten" (p. 1)
[272] Ibid, p. 3.

shift to a tunnel-alternative:

> "The objective obstacles against a tunnel have already been indicated in a letter from the capital city Dresden to the WHC: There is no plan for a tunnel yet, but only preliminary studies. There are neither pilot studies nor basic designs, no ecological, hydrological and technical expert reports, no hydraulic studies or construction allocation plans, no security concept, no official motions, no official plan appraisal, no plan of execution, and therefore also no precise cost data" (CA OD 2008).[273]

Eventually, the studies and technical work were put to the fore to counteract this development. The incremental and undiversified nature of the knowledge accumulation became particularly clear. A technical rationality was involved, for the City was not prepared to implement anything but a bridge. Years of plan-development had gone by. It was easy to position the bridge as the technical optimum. For example, the city stressed the help this would represent in dramatic situations like in cases of high flood levels, as in 2002, or the technical fit with the institutional landscape:

> "Neither a tunnel nor alternative bridges will be ready for construction until the binding period of the referendum will have run out" (RD PR 2007).[274]

> "If flooding occurred, a bridge at this spot would be indispensable for disaster control and to ensure the city was properly supplied" (CA ID 2006).[275]

Interesting to our discussion is the fact that the question whether to stop the project or not for traffic reasons slowly disappeared behind the debates. We observe here the full institutionalization of the organizational path (here the construction of a traverse), independent from the original problem it was to tackle. This effect served as a maintaining mechanism for the path. What institutionalists call "goal displacement" occurred here as a result of the public defense of the path.

Goal displacement is an old concept that has been present in organization studies

[273] 20080416 CA OD Reaction to the mission report of February 2008 (p. 2)
[274] 20070622 RD PR „Presseerklärung des Regierungspräsidium Dresden zum Sach- und Verfahrensstand Waldschlösschenbrücke" (p. 1)
[275] 20060300 CA ID „Waldschlösschenbrücke bridge and World Heritage status" (p. 10)

since the 1940's. Merton first coined the idea: "Adherence to the rules, originally conceived as a means, becomes transformed into an end-in-itself; there occurs the familiar process of *displacement of goals*" (1940: 563). In early applications of the concept, Zald and Denton noticed how some organizations "seem to displace original goals, becoming more rigid in operation and detached from their potential membership base" (1963: 215). Eventually, this decoupling between official and operative goal received specific attention in studies of public administrations (Selznick 1949; Scott 1967; Warner and Havens 1968) and the idea gained prominence in the literature on social movements also (e.g. Zald and Ash 1966; Schwartz, Rosenthal and Schwartz 1981). Organizations constantly need to reformulate and reposition their goals to achieve cooptation and inclusiveness in face of changing institutional environments and new stakeholders (Couto 1988). Social movements were indeed relevant contexts of applications, illustrating how such organizations would move from their original missions towards even more hierarchy and ultimately, mere survival of the organization, independent from the original goals. This has become a problem typical to public administrations, where evaluating the direct impact of specific policies is more difficult than to count for actual output (Bohte and Meier 2000). Thinking in terms of path dependence, the risk becomes a displacement of goals without taking notice of it, with members of the organization blinded by running self-reinforcements and repeated actions, thus decoupling means from original ends (Weick 1976). The "drama" in such a perspective is that the customers, or resource-holders for the organization, hide this displacement, making it a sort of invisible movement until the mission of the organization (or here of the project) runs loose from the actual goals it was aimed at attaining.

The Dresden case illustrates how a technical solution dominates the problem it is supposed to solve, and how the solution becomes an institutionalized end in itself. While the original policy of the City was to improve the traffic situation, the focus shifted from "construct to unburden" to a sort of symbolic action, with constructing the bridge as symbol for democracy, in spite of decreasing traffic flows, a symbol that was further anchored into the institutional realm of the City as organization and beyond its boundaries, via the dragooning of public support. In our theoretical discussion we saw how Emirbayer and Mische (1998) accounted for such divergences by recalling the fact that every individual evolves according to her/his own sociality and will respond

differently to similar stimuli. In this case, the opponents kept on arguing about environmental protection and aesthetic, whereas the supporters kept on arguing about the necessity for more infrastructures as support for development.

> „This was also very much an ideological fight. One did not exchange arguments anymore, instead one had positions. 'Why don't you build finally, everything is all set up'. And the opponents would say: 'You just don't notice it, what you are doing, how you destroy the landscape, and what you are doing practically to the city, in case you build this disgusting monument'. And there we could not find any consensus" (member of the Saxon State Parliament, local FDP-faction, interview, 2010).

The conflict over the organizational path clearly displaced the discussion on a bridge from its original mission: to solve the rising traffic problems observed in the early 1990's. With the dikes thus dug among the participants to the debate, the bridge became an end in itself, more than a mean. For example, the discussion became a seemingly factual one, comparing the monetary value of the WH label with the costs of the bridge:

> „There is among numerous people the conviction that a UNESCO WH title would be a touristic award. In my opinion it is absolutely not the case. (…)
> For me the UNESCO label is really the commitment, from the City, to a sustainable development. (…)
> With the title, one has somehow, in my opinion, a legitimation or at least a sign: wait we should look after this and these criteria. Yes. In my opinion, this went a little lost in this context" (Member of the CA (marketing), interview, 2010).

This process of displacement became blatant as the conflict reached its zenith. The discussion on WH indeed was reduced to discussions on money and the little awareness among tourists about this label. A discussion on urban sustainability and about long-term strategies, drawing on the symbolic of this label, did not take place:

> „We defended the WH quasi against the will of the citizens, which is insane, because normally this goes the other way around. The UNESCO prepares a field so that the population or the City Administration makes it. This occurred with the Master-plan,

> we tried it, but it was never published for example (City Councillor, member of the Green Party, interview, 2010).

The decreasing traffic trend and this difficult politico-legal situation did not really become an occasion to think the project anew, thus stopping further expenditures and sunk-costs in planning and construction. This is particularly representative of a strategically inefficient lock-in situation at this point in time. In fact this displacement started early. The project design had indeed been developed in the years 1996-1997, as it was recommended to develop a traverse that would welcome high volumes of public transportation. The implementation of a tramway line had been, during the bridge workshop of 1996, one of the strongest criteria for the local State to unlock funds. Indeed a tramway line could only have made sense at this location, and thus was it pushed forward. However, the calculations made by the local transportation provider proved that the demand for such a line was way too low to justify the development of a new line, thus challenging the relevance of this criterion and herewith of the decision. During the workshop, the representative of the state present that day asked for a traverse that would carry *nation-wide traffic* and that would take *supra-regional responsibility*, thus declining the multi-bridge concept:

> "In addition, for a subvention, it is decisive that the bridge contains the tramway also. Furthermore, it is important that the bridge gathers supra-regional traffic" (CA MP 1996).[276]

Taken from this perspective, the location selected could have proved ideal. The requirements from the City, however, shifted as the discussion tackled issues of design and planning. Aware of the difficulties of the location for a bridge construction, the CA asked the participants to the competition to conceive of a bridge that is *not* supposed to take a regional position in transit traffic (1997: 6).[277] Eventually, such shifts in debates occurred repeatedly along the process. In the end, the project was based on subventions unlocked for a traverse that would welcome nationwide traffic flows and public transportation. The decisions were made accordingly. Eventually, the implementation of

[276] 19960528 CA MP „Niederschrift zum Workshop Dresdner Elbbrücken am 28./ 29.05.1996" (p. 13)
[277] 19970625 DD OD „Realisierungswettbewerb Neue Elbebrücke am Standort Waldschlösschen in Dresden - Auslobung"

public transportations became the mere running of one bus line. As the conflict arose, the nausea in debates sustained this shift, with the City insisting now on the thin and delicate nature of the traverse, describing it as a normal urban bridge. Yet the choice of location remained. At the end of the road, the project became a matter of fact and "enjoyed" such a prominence and frustration in the broader community that it seemed as it was being ran without much management needed: the bridge had to be built, no matter what. The organizational path was institutionalized.

Chapter VII

—

Persistence in Organizational Conduct, Institutional Pluralism and Path Instantiation: A Discussion

This volume reports on an organizational history, infused with theoretical considerations at the interplay of institutional analyses and path dependence studies of organizations. All in all, the goal of this study was "to provide step-by-step accounts of particular social processes" and to make use of methods "in the service of showing the plausibility and presumed strength of the various linkages involved in the constructed analytical narrative" (Van Maanen et al. 2007: 1147).

With the analysis of the Dresden case, I aimed to make a few points that are –hopefully– of some relevance to the broader field of organization studies. First of all, I proposed to consider the interplay of institutional effects and of path dependence in the analysis of an organization and its subsequent decision-making. Secondly, as for any social convention (Gomez and Jones 2000; Giddens 1984), I suggested considering "paths" as mere virtual schemas of solutions to collective problems, and to label their actual manifestations "path instantiations" (instead of a focus on dependence only) in order to observe how actors engage into active reproduction and stabilization of paths. In this respect, I discussed the potential interplay of both theories, showing in particular how path-researchers could learn from institutional accounts, by observing how actors in organizations draw on their institutional context to nest these instantiations. A last point was made in stressing the potential for actors to disrupt the constellations, despite path dependencies. It was argued that the relations of power among actors in a lock-in situation would explain the motivation of the dominated to act disruptively. Individual and organizations would most probably do so because they identify the sub-optimality

of the path as arrangement, and herewith smell the opportunity for innovation. They could also react more impulsively, in virtue of the dialectic of control inherent to human nature (Giddens 1984), and react to the asymmetries in power relations among the ones who benefit from the path as it is instantiated, the critical mass of "users", and the "critical thinkers" who do not manage to bore through this constellation. Disrupting a path, it was argued, may thus be caught into a vicious circle, with supporters of the path benefiting from critical resources to win disruptive battles, and the opponents, in virtue of the dialectic of control, becoming even more motivated at disrupting the dominant constellation in subsequent rounds. I propose to formalize this study a little more and to propose a short model and a set of related propositions.

Discussing Findings and Alternatives

This study reported on an organizational history of the city of Dresden, with respect to the conflicting construction of a new bridge at Waldschlösschen. The core of the conflict was the City's decision in 1996 to proceed with the planning and construction of the four-lane bridge in the middle of what eventually became known in 2004 as the UNESCO World Heritage Cultural Landscape "Dresden and the Elbe Valley". The project was criticized due to its impact on the landscape, to its questionable effect on traffic reduction, and its expensive nature, and provoked the withdrawal of the site from list for WH sites, a premiere in Europe.

First, I proposed to consider the interplay of institutional effects and of organizational path dependence in the analysis of an organization and its subsequent decision-making. Secondly, I suggested considering "paths" as mere virtual schemas of solutions to collective problems, and to label their actual manifestations "path instantiations". In this respect, I claimed that path-researchers could learn from institutional accounts by observing how actors in organizations draw on their institutional context to nest these instantiations, thus offering a more complete view of path-dependent arrangements. A last point was made by stressing the potential for actors to disrupt instantiations of paths, and how such disruptions may actually reinforce the path under scrutiny.

Main Findings, or the Hypothesis of a Path

Looking at how actors made sense of their past and of the history of the project, we found out that the idea of a bridge finds its origins in the late 19th century. The historical events of the German reunification in 1990 and their consequences on the citizens in the following decade had made new traverses necessary for the city. Forecasts and simulations of traffic flows were thus compiled, reinforcing this expectation. The working hypothesis of a path in the City was documented accordingly. Changes in automobile distribution and motorized transport had become palpable and traffic jams were, according to testimonies, a burning issue. In this context, we observed how members of the City, decided to instantiate a century-old bridge conception. For decades, a bridge at Waldschlösschen had been proposed as a solution to a diversity of traffic problems. Each project was constricted due to economic or historical issues (e.g. World War II). As such, the process was an asymptotic one, i.e. dependent upon its own history, but not deterministic in the sense of a reactive sequence (Mahoney 2000). In line with this, we saw the existence of expert studies, arguing that the older projects were independent from each other. In clear relation to a rather classical theory of organizational path dependence, during the discussions on technical alternatives, we observed three influences for selecting Waldschlösschen as location: the expectation of expectations between City and population; the influence of former plans in the late 1980's; the opportunity for the City to secure financial help by building a regional traverse (other locations being too far into the city centre or too narrow for it); and a certain degree of familiarity with this solution within the population. Based on these insights, we then looked at the actual instantiation of the WSB as abstract mainstream solution to the city's problems. The decision-holders of the time contributed to instantiate the idea of a bridge at Waldschlösschen by drawing on the institutional frames provided by democracy and state-bureaucracy. This insight is new for organizational path dependence, for it shows how paths are nested into their institutional context (see, however, Holm 1995). Strategies of power retention (i.e. the power to make others align with one's trajectory), myth development (i.e. the telling and nurturing of a myth of rationality), and normative binding (i.e. the nesting of the project into local norms, regulations, and expectations) were employed to support the development of the project. This institutional effort was rewarded by self-

reinforcements, in the form of technical problem solving (i.e. the development and intertwining of a knowledge repertoire for the WSB and no other option) and of collective mobilization (i.e. the addressing of expectations from the public scrutiny). These effects, for the supporters of the path, developed great synergies and stabilized the project. As a result, attempts at disrupting the path instantiation proved unsuccessful and, in fact, rather unpopular in the broader community. This observation reinforced the validity of the path hypothesis; stressing the resource a lock may actually develop for its supporters to counteract off-path movements. Based on this implication, it was argued and demonstrated that these disruptive efforts actually contributed to stabilize the path by supporting its institutionalization, granting the domination of the solution over the problem it was thought to solve. This last insight contributes to support the postulate of organizational lock-in as state of extreme rigidity by profiling even more the drama of such situation, a point that should be taken into account in forthcoming studies on (allegedly) effective path breaking.

Excluding the Commitment Hypothesis

Of all concepts competing with path dependence, the idea of commitment comes closest to one's mind while reading the Dresden case[278]. In fact, the realization of a project is a classical example for cases of escalating commitment and commitment to sunk costs (e.g. Maxwell et al. 1997; Royer 2003). The Dresden case proposes striking similarities indeed, especially if we compare it superficially with the work by Ross and Staw (1993) and their case study about a Nuclear Plant project. We have here a large project, the involvement of the politics, time and resources consumed, and the reluctance to let go among decision-holders.

In this alternative view on administrative rigidity, it is the commitment to the very decision starting the process that feeds the willingness to keep things on track. In this model (Ross and Staw 1993), the mechanisms take a different succession, starting with project determinants (e.g. objective positive aspects of a project), then psychological determinants (individual-based reluctance due to commitment to the decision), social determinants (the fear of losing in front of others), and ultimately

[278] I owe gratitude to participants in the doctoral seminars at Pfadkolleg, Freie Universität Berlin, for this comment.

organizational determinants (internal support and fit to organizational structures). Schreyögg and Sydow stress it: it is "the (increasing!) individual or organizational commitment to this initial investment, which is at the heart of the process" (2011: 328). In commitment arguments, the rigidity is largely bound to individual motives and emotional reactions in contexts of blatant failures.

However, a set of specificities inherent to the Dresden case make the alternative arguments of 'escalating commitment' and 'commitment to sunk cost' fall short: the historical influence (in comparison to mere one-shot investment decisions), the idea of expectations (in comparison to individual motives only), the suggestive effect of learning effects (in comparison to sunk cost on resource and time only), and the addressing of important traffic problems from the 1990's to 2000 (in comparison to immediate failure). A focus on initial decisions only would have spoiled the analysis, for the decision to proceed with the WSB in 1996 was not an isolated one. This was bound to decades of a bridging "philosophy" in the City. Looking at such time-brackets (e.g. from 1996 on) would have compromised our understanding of the project's particular importance in the community, would have shifted the analytical focus on individual members in the City (e.g. the Mayors), and blinded our unpacking of historical factors and of this influence on actors while making decisions. In fact, to understand the dynamics underlying the WSB project, we needed to understand why and how decisions had been taken, and on what path of action they were drawing, independent from individual prestige. As a result, commitment to the 1996 decision was little involved, for the process spanned over numerous generations of decision-holders, most of them not even involved with the original decisions. Moreover, the project, contrary to the classical case of commitment written by Ross and Staw (1993), remained an effective solution to traffic issues during a substantial part of the history of its implementation, and was matched with little cost escalation at first. The idea of sunk cost, obviously, must have come to the decision-holders' minds, but was here nothing more than an externality to the learning effects, as it is always the case in face of self-reinforcing mechanisms (Page 2006). Consequently, while the project had been criticised since its early days, its acceptance, generally speaking, increased and remained increasingly stable, and still is, due to the historical familiarity of the project and the dragooned public support. As such, the process described in this case study was not a sinking and sticky one, with decision-holders ending "knee deep in the big muddy" (Staw 1976: 27);

instead we told the story of a local emulation of expectations, ending in a situation difficult to understand for outsiders, and yet crystal clear for members of the local community. This underlying idea of collective construction of rationality is absent to, though not incompatible with, commitment arguments.

Translating these Findings into Theoretical Discussions

Generalizing the *validity* of these results for other cases is here out of question. The case was selected because of its rare degree of persistence of organizational conduct in spite of a great variety of institutional pressures, and for the interest it represented for institutional and path dependence-based analyses of organizations. For this reason, however, it is possible to discuss its *relevance* for the theoretical debate. The main argument of the theoretical discussion was to claim that 'path dependence enriches institutional debates enrich path dependence theory'. As a matter of fact, we saw in the theoretical discussion the potential for both theories to learn from each other. Institutionalists and so-called path-researchers have been developing tools and analytical sensitivities that can make a joint analysis particularly significant. In the remaining of this concluding discussion I will first discuss the implication of this study for the institutional analysis of organizations and then for path dependence theory.

Persistence in Organizational Conduct under Institutional Pluralism

Studying the instantiation of a path has an impact on the debate on organizational persistence in the face of conflicting institutional pressures. As we already saw, two main streams of neo-institutional research attempt to explain the reactions of organizations engaged into resistance against conflicting institutional demands. We saw that the first one looks for the sources of this conduct in the institutional realm in which the organization is embedded. These applications, however, by their focus on fields and populations of organizations, fail at catching the interplay of organizational action and institutional frames and still conceive of actors mainly as followers. The second stream sees the sources of this conduct in the *organization* as such, stressing conflicts among units for example (Pache and Santos 2010). This

explanation, however, remains discrete about the constitution of preferences and interests. We will now see how this work participated in this particular debate.

Looking at processes and organizational history

In line with the shortcoming mentioned above, Kraatz and Block comment: "neo-institutional accounts often do an excellent job of situating the organization within its broader cultural context, but they typically extract it from its unique history of actions and transactions in so doing" (2008: 248). Taking up this challenge, this dissertation showed what happens when institutional pressure is exerted on an organization locked in. As expected, it was shown that breaking out of self-reinforcing mechanisms can prove particularly difficult. Path dependence really acted as a source of blind spot for the City. Institutional pressure collided with the expectations of a critical mass of support and the technical domination of one solution over any other developments. Even worst: attempting at disrupting the constellation seems to reinforce it and to embed the problem even more. However, to understand such phenomena, we need to think anew the research on persistence in organizational conduct under institutional pressure. For example, to understand the conduct of the City as organization, we needed to understand its history of action and the process that would explain how the project became a collective effort. This insight should not remain linked to path dependence only. In my opinion, any sort of persistence in spite of contradictory institutional pressures necessitates a similar analytical effort in order to unpack the dynamics underlying the persistence, and, in some radical cases, the active resistance. What is important in this respect is the usage of historical and/or longitudinal analyses, instead of the mere identification of pluralist institutional contexts. We need to ask questions like: how have these institutional contexts been enacted? Who contributed to do it and why? To what extent did this enactment process feed the eventual collision? For example, Pache and Santos (2010) suggest identifying the representation of the institutional requirements within the organization. This is definitely going in the right direction. However, the analyst needs to look as the longitudinal process that underlies this representation. Path dependence theory, via its processual model, suggests looking at triggering events, self-reinforcing mechanisms, and organizational rigidities. This allows the unpacking of new insights about

arrangements and preferences in organizations that have the potential to become locked in (in the sense of Pache and Santos 2010). For example, in Dresden, the optimized fit with local norms and expectations nourished the organization's reluctance to think anew the project. In this respect, the challenging "how and why" questions, often missing in institutional theory (Greenwood et al., 2008, Powell, Packallen and Whittington, forthcoming) could be more adequately answered thanks to the focus on historical analysis that feeds path dependence. This, as we saw earlier, was already one element of what Powell called an "expanded institutionalism" (1991: 186), arguing that institutional theory would fail to look at issues of reproduction adequately. In Dresden, we looked at the history behind the project, at the organizational history with respect to its development, and the repercussions of these decisions on its institutional environment. The knowledge gathered showed how dramatically agents can impact on their own span of action, and thus define what they perceive as being rational and opportune. Self-reinforcing mechanisms, the resulting forces at play in the organization, accounted for continuous increases in the shared cultural understanding of the project and explained persuasively how these continue to structure behavior and cognition; a perspective that was originally a key to institutional explanations. Instead of focusing on active strategies that reinforce institutionalization, or on the way a professional association was set up, institutional explanations informed by path dependence theory are equipped with tools to focus additionally on the potential self-reinforcing logic behind those often still, and in face of the (re)discovery of institutional entrepreneurship 'heroic' stories. This would bring new insights into the persistence and weight of institutionalized arrangements.

Enacting Institutions, Undergoing Institutions

Still motivated by mutual theoretical learning, we saw here how using structuration theory as a paradigm for socio-economic analyses can help in overcoming issues of incommensurability and broaden the institutional analysis. As Thornton and Ocasio (2008: 121) regret, "much of what is called institutional theory these days is not very institutional at all. Instead it is about resource dependencies, political struggles, social movements, and other mechanisms which, while important, are really about non-institutional forces driving institutional change". Structuration theory allowed us to look

at a more encompassing diversity of agentic processes without neglecting the steady reproduction of the structures that are being drawn upon. Applying this frame and its sensitizing devices on the Dresden case, we could observe the political struggles and social movements acting on the project's trajectory, while at the same time shedding light on the structures that were used in this respect. In fact, if we reflect on this bridging capacity, it seems like numerous debates running in institutional theory could be tackled effectively if structuration theory was used with more depth. Barley and Tolbert (1997) already discussed this with respect to institutionalization. Whittington (1992) argued in a similar direction before, and, more recently, Lawrence and Suddaby (2006) and Scott (2008). Yet actual inclusion is scarce in this respect. Using Giddens' approach allowed taking agentic processes into account without losing the institutional touch while doing it. With this analytical strategy, it was made possible to bridge both streams of explanation to organizational persistence in case of contradictory institutional pressure: an institutional explanation (e.g. the binding character of the referendum on the organization) and an organizational one (e.g. the mutual adjustment of technical work and addressing of external expectations in forms of norms and public scrutiny). In this respect, the empirical results allow shedding light on the thin interplay between organizational drivers of inertia and institutional forces impeding change. An other strength of a more rigorous structurationist view of institutionalism is the variety of agentic processes, relating as much to symbolic issues (e.g. the notion of democracy in Dresden), as to more regulative and normative factors of institutional life (e.g. the submitting of the plans to regulatory agencies). Hence institutional analysis could be fully deployed along its three main pillars (Scott 2008) and must not be restrictive in its application.

Path Dependence and Path Instantiation: Implication

The concept at the heart of this work was the one of path-instantiation. This now deserves specific attention. I suggested relying on this concept as a new sensitizing device (Giddens 1984) to think about paths and their development in and among organizations for various reasons: (1) to address issues of agency in path-dependent developments bound, or not, to the path; and (2) to address issues of context in path-dependent developments. These two issues are crucial in the current debate on path

development versus path creation (Garud et al. 2010), and I believe that path instantiation, in addition to bringing one more concept to the theory; can help in overcoming this polemic.

At this point, let us consider the Dresden case one last time. Figure 25 depicts this process of path instantiation more formally and shows how the solution, overtime, starts dominating the actual problem, thus receiving a "life of its own".

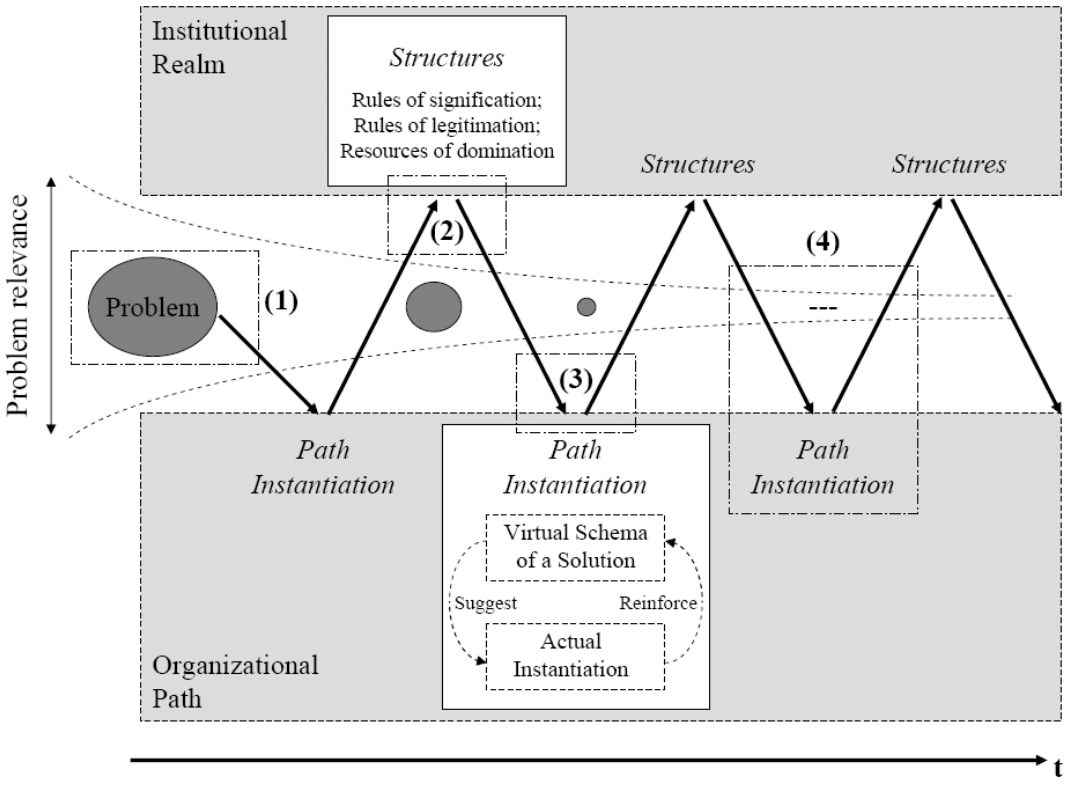


Figure 25 – A formal model of path instantiation as a process

The emergence of a problem was attended collectively and recognized as such by the members of the community. To address this problem, the decision-holders in the City favored a schema of solution that was already familiar to most of the members of the community. The rationale behind this strategy was the hope for a broader acceptance of the proposition. The schema was not new and therefore carried the impression of being a good option. In other words, for a problem attended collectively, the organization tends to favor a solution that is familiar (see (1) in figure 25). Instantiating such a schema implied nesting the effort into the institutional realm in vigor in the community. The instantiation of path evolves along repeated reflexive structuring efforts (see (2) in figure 25). In the reality of the Dresden case, this meant drawing on two

institutional orders, the one of State-Bureaucracy, and the one of Democracy. The decision-holders used related commodities to structure the instantiation reflexively, i.e. via strategies of power-retention, of myth-development, and of legal-binding. This structuring process enabled progresses and subsequent decisions in favor of the instantiation of the traverse as solution, thus provoking self-reinforcement in the form of technical problem-solving and of collective mobilization. These increasing returns contributed to reinforce the schema of solution and its rational legitimacy in the community as it attended the process (see (3) in figure 25). Upon successive rounds of decisions and implementations, the instantiation ran decoupled from the actual problem that had been identified in the early stage. In this respect, the shrinking nature of the problem to be solved allows speaking of a sub-optimal path, as the whole process proves questionable in its effect and herewith questions the efficiency of the public expenditure (see (4) in figure 25).

Agency in Path Dependence

Looking at path instantiation implies, logically, the identification of a proper path first. This was done here as defined by proponents of the "hard" theory of path dependence (Sydow et al. 2009). Congruent with the theory, we saw in the Dresden case how adaptive expectations and learning effects were at play and how a solution emerged over the decades, gaining great degrees of acceptance among the citizens and decision-holders of the city. According to Garud et al. such a perspective implies an 'outsider' ontology, in which phenomena are decontextualized and blind to the "the generative forces required to initiate and then sustain an initiative" (2010: 761). Garud and his co-authors plea for more agency in the analysis of paths and suggest a perspective in which agency is "being distributed and emergent through the interactions of actors and artefacts" (2010: 761). In their opinion, those dynamics are missing in a traditional path analysis, since it focuses on more systematic levels, tracing the contours of collective movements toward homogeneity. Such a critic is, however, not applicable if a path diagnosis is linked to the study of its very *instantiation*. As we saw, this focus on instantiation is derived from structuration theory, in which "structure exists only as memory traces, (…) and as instantiated in practice" (Giddens 1984: 377). In the model presented above, agency is central indeed. Garud et al. (2010) further claim that such an

approach would imply the mixing of ontologies; i.e. an internal (looking at agency) and an external (looking at structural evolution). I bypassed this problem by applying the structuration theory of Giddens, a perspective that pays equal attention to both structure (i.e. paths also) and agency. The theory of organizational path dependence does not exclude agentic influences that fall outside the scope of self-reinforcing mechanisms. For example, Sydow et al. recognize that "self-reinforcing patterns in organizations have been shown to result from other factors as well, such as emotional reactions (uncertainty avoidance, intergroup revenge, etc.), cognitive biases (selective perception, blind spots, implicit theories, etc.), and even political processes (gaining and maintaining power, reciprocal negotiation). These aspects have to be included in a theory of organizational paths" (2009: 694). By including the idea of instantiation, analysts of paths go beyond the mere identification of contingencies and collective emulations. Applying a structurationist perspective implies viewing the existence of paths as the steady reproduction of virtual ideas (or traces) via their actual instantiation. What is the difference? Well, 'to instantiate' a path is a verb of *action*. As such, asking '*how* a path was *instantiated*' differs fundamentally from asking 'whether something *is* path-dependent and *why*'. Looking at instantiation necessitates the identification of what is being instantiated, and how it is instantiated, i.e. it necessitates a diachronic perspective in which agentic processes structure future action and vice versa. If we consider the Dresden case, a traditional analysis of path dependence would have stopped with the knowledge that adaptive expectations and learning effects had been built over the last decades, making a bridge at this location a familiar urban project, coupled with the expectation of growing traffic problems. From then on, the city was bound to collective dynamics and enjoined to act accordingly. But by doing this, we miss the active work that was done by supporters to have the path instantiated. Looking at the instantiation necessitated opening the analysis to all those factors that use, or allow for, or even enhance self-reinforcing mechanisms. We saw how the supporters mobilized rules and resources to unfold their project. In this respect, the building of a myth, the binding to norms, and the usage of resources of domination, in forms of political mandates for example, were crucial elements to keep the project progress. These agentic strategies were coupled with self-reinforcing mechanisms that, on the other hand, contributed to lock the organizational trajectory, together with structural nesting activities. This gives us a picture of the process that is way more accurate and

complete. Constructing a bridge, as I said before, is a heavy and painful effort for an organization. For that reason, unpacking the WSB allowed observing the constitution of organizational decisions, internal debates and structuring work, and many other details, performed by the members of the organization in their instantiation of an urban solution that had been present in the community since the late 19th century. If we compare research on such a project with research on other organizational path-dependent instances, like a routine for example, the observation of a bridge construction appears much more convenient and formal. From this perspective, we can account on the active role taken by actors in the organization as they call the path back to life. I argue, however, that the instantiation of a routine (even if its temporal realization does not take more than a few minutes) may well present similar strategies in terms of power-retention, myth-building, and normative-binding. The construction of a bridge offers an extreme illustration of this process, and the manifestations of such agentic strategies are blatant. But consider a fictive routine in an organization of your choice. The members who are the most able at instantiating the routine will most likely benefit from a certain symbolic power over the others, even if this is not immediately translated into rules and elected dominance as in a City Council. For example, the members the most capable of instantiating the routine will probably receive more responsibilities and informal importance, taking over the role of models for the others. If one observes such processes ethnographically, strategies of power to sustain the routine and its instantiation are most likely to appear, as well as discussions among members of the organization revealing the how and why of this instantiation, thus reinforcing the rationality of the routine (as proposed by Feldman and Pentland 2003), and the enactment of the routine's embeddedness into other formalized normative contexts, such as accounting procedures for example, or employment contracts and job descriptions. The idea of path instantiation thus contributes to the path dependence theory by deepening its analytical scope by showing how the manifestation of path dependence in an organization drives the constitution of path dependence, but also why instantiating a path should be considered as contributing to the momentum of structuration of collective action in the organization.

Putting the Enhancing Context Back in

A second issue was the one of context. I argued in the literature review that the analytical positions favored in neo-institutional theory could help researchers of organizational path dependence to deal with questions such as how do actors draw on their institutional context to instantiate paths in action, how does the institutional context thus enacted impact the organizational path, how do other actors try and constrain them, and how do actors locked-in defend instantiations of paths. Such questions are not new for path dependence theory. For example, Sydow et al. (2010) recently wrote about the work performed by actors to create, maintain, and disrupt organizational paths. I argued that this analytical perspective could further contribute to shed light on the role of the yet unelaborated notion of "enhancing context" surrounding path-dependent trajectories (Pierson 2000; Sydow et al. 2009). I proposed earlier in this volume that looking at processes of path instantiation would imply the identification of a path, as defined by the path dependence theory, but also the study of agentic processes and mechanisms towards enactment, maintenance and disruption of paths. In this respect, persistence would share its sources in both dependencies *and* institutional factors in the context of the organization. In line with this argument, Pierson (2000) conceives of murky, ambiguous and/or complex contexts as enhancing ones, provoking phenomena of path dependence more frequently than other contexts. He takes however an exogenous perspective. Sydow et al. (2009), in return, stress the necessity to distinguish between the necessary influences of the organizational context on the one hand, and the endogenous self-reinforcing mechanisms that drive path dependence on the other. "Pierson's insights should encourage further research to explore the contextual conditions enhancing (or hindering) the unfolding of self-reinforcing mechanisms and subsequent constitutions of organizational paths" (Sydow et al. 2009: 701). The concept of path instantiation provides an integrative and agentic perspective on these questions. In Dresden, we saw that the institutional realm, in forms of structures of signification, domination, and legitimation, needed to be enacted by the agents to produce an enhancing effect. For example, the organizing of a referendum in 2004 was a strongly symbolic act of democratic will. For both camps, it implied the domination of the winner side, an increase in communication as part of the campaign, and a diversity of interpretive schemes were used to support or discredit the project.

Studying path dependent developments in public administrations, and especially at their interplay with society, makes such contextual work necessary. In point of fact, with this data set, we saw that the context was not enhancing *per se*. Rather, it was actively used by the members of the organization so as to support the instantiation, intertwining the structuring effects and the resulting self-reinforcing mechanisms, until the project became an end as such, independent from the problem it was to solve initially, ending into an institutionalized organizational path, strongly embedded into its institutional environment, and benefiting from a taken-for-granted existence of its own. Interestingly enough, while the actors eager to maintain the path and its instantiation nested their actions into structures and the institutional realm, the actors who worked to disrupt it did the same. Hence, a second teaching rises from this case: how context serves as enabling factor for disruptive agency also. The distribution of power generates a dialectic of control as necessary corollary for mutual supervision (Giddens 1984). In this respect, we saw that instantiating a path necessitated the dragooning of a critical mass of support. This development centralized the distribution of power on the 'side of the winners'. Looking into the period 2006-2009, we saw how contestation grew heavily. This was linked to the usage of power as distributed via political mandates and to more informal influences such as in the workshop of 1996 for example. The reactions among the opponents were clearly resilient, and sometimes even influenced by conspiracy theory. Each new structuring momentum led by the supporters of the project was a new source of motivation for the opponents to counteract the supporters' work, thus running a closed loop. If we apply a structurationist perspective on path dependence and thus start looking at their instantiation, we must recognize the freedom, even in abstraction, for agents to act with and upon their context. A lock in is by far not as deterministic as some authors may like to see it (Vergne and Durand 2010). Again, we must remember Whittington's words when he says that, be it in suicide, agents can always refuse the status quo (1992: 696). In this line of thought, the impact of "instantiation" as sensitizing device lies in the taking into account of numerous frames of reference out there. Mixing such frames, and seeing things with different glasses are powerful enablers of variation that lead actors, indeed, to new ways of combining past and present in order for them to shape the future (Garud et al. 2010). At this interplay, the coming together of agency and context should not be separated anymore.

Path Instantiation as Encompassing Perspective?

The idea of path instantiation contributes to the recent discussion on hard versus soft versions of path research. It is said (Garud et al. 2010) that some (e.g. Vergne and Durand 2010) favor an 'outsider's ontology', that others would tend toward an 'insider's one' (i.e. exploring how actors shape their own trajectories), and that a third category is allegedly mixing ontologies (e.g. Sydow et al. 2009). In my opinion, this discussion is a false polemic. In fact, as Garud et al. suggest (2010), the answer to such debates is often a balance. But in shifting the whole attention on actors, we run the risk of losing structural accuracy and, in the worst case, to conflate action with structures. Mixing paradigmatic perspectives, i.e. structural and agentic studies, *is* necessary. This work is rooted in a structurationist interpretation of institutions, paths and other elements of the social order, and is therefore very well able to mix ontologies. In fact, the necessity to mix ontologies is often the main motivation for using structurationist concepts (Weaver and Gioia 1994). Studying path instantiation implies taking both path dependence and agency seriously, and relating them with the help of the duality of structure. Such an effort necessitates, logically, the researching of an organizational path first, as the core formulations of organizational path dependence theory would want it to be: spurs of rigidified patterns of action, self-reinforcing mechanisms driving a critical mass of support on the course of action under scrutiny, and a reluctance to let go in this respect. The path must be formulated and demonstrated accordingly. Otherwise, there is no point of talking about paths. In a second phase, path instantiation goes one step further and opens the constellation of dependence formation in order to see how the actors instantiate "emergent ideas into action" (Garud et al. 2010: 762) and how they work to sustain them and prevent their effort from disruptions, thus stabilizing it even more, for example by binding it to the normative context. Methodologically, such an approach comes indeed into the analysis of strategic conduct and concentrates more on how actors "reflexively monitor what they do; how actors draw upon rules and resources in the constitution of interaction" than on structural determinism (Giddens 184: 373). But one can only do this with accurate knowledge of the structure(s) identified in the first place (i.e. the path). Applying such approach in the Dresden case, we evolved diachronically, observing what actors did to shape their way from past to future, and how this did change the context in which they behaved with respect to the path initially

identified. Going one step further into generalization, the dynamics we observed are not unique. Indeed while a business-organization is not compelled to the formalism of a public administration in its governance, its members are well able to exert tremendous domination over others, and mobilize rhetoric and values in line with higher logics, like the one of capitalism for example, even if this is not done with the same ceremonial as the members of a city council would do. The fact that a firm may resist innovation because some think its central interest lies somewhere else is well-known indeed (e.g. Christensen and Bower 1996).

I am sympathetic to the view defended by Garud et al. (2010) and would also defend analyses that look at both this resilience and the agentic strategies beneath. But for such analytical processes it is crucial to free one's mind from level-based thinking and paradigmatic wars. By doing so, we can account for the constitution of collective action as an active process led by the members of the organization under scrutiny. It is important to remain open to any view that gives specific attention, and explanatory power, about what people do with the institutions structuring their group or organization, for these processes are at the core of structurationist and social-constructionist perspectives on socio-economic analysis. However, it is also important to remain realistic with the contexts studied and to take social constructionism seriously. The promotion of free will to innovate for all is a good slogan for research grants. Nonetheless, agents are sometimes bound to a course of action because the law wants them, at some point, to keep silent and accept decisions. Agents cannot do what they would like to, because they fear exclusion and dismissal, or simply because they do not obtain the necessary resources to change the status quo. Why is that so and where does this resilience come from are questions at the core of paths-related analyses. This theory is not a theory of radical change, but a theory of stability. This, however, does not exclude variation and evolution.

Concluding Words

The story behind the Dresden case has been moving public opinion for a decade. It became a strongly polarizing issue in the city and is still a sensitive topic to talk about. Things will, obviously, damp themselves as time will go by. This work proposed an organizational history and analysis of the case and used the WSB-story as extreme

illustration in order to tackle a set of issues that are of interest for organization theorists. A set of societal questions, however, remains to ask: how much democratic participation can/should such a project take along? When should one ask the citizens about their opinion? Should one ask the citizens at all? Do the citizens have the necessary temporal and monetary resources to unpack such complex issues and account for their realization? Conflict about construction projects are booming in the press. This work is a study of organizations and of its members, and looked at those actors who had, at some points, power to decide about the becoming of one specific project. The Dresden case represents an exemplary illustration of today's bureaucracies and of the way people interact with the surrounding social order.

Appendixes

1. Interview Guidelines

These questions represent a standard frame that was eventually adapted to the different partners in interview. Respondents met at the WHC or the German Commission at the UNESCO were not asked about the project development and more about the actual implications of Heritage management.

Interviewee's Background

A – Position, role at organization visited

B – Domain of expertise

C – Entry date / Role in the conflict

The Project

A – Please detail the process from the traffic concept until the accepted proposal

B - What were the main challenges at the very beginning of the project development?

C – What are the main activities involved?

D- Whit whom did you interact and how often?

E – What have been retrospectively the main problems on the way and how did you solve them?

F – Please detail the process of proposal development from architect models to the plan approval from the Regional Council

G – What were the main challenges in this process?

H – What were the main activities and tasks in the part of the process?

I – With whom did you interact and how often?

J – What have been retrospectively the main problems on the way and how did you solve them?

World Heritage / Conflict

A – What was your reception of the conflict with the WH Convention?

B – What are the implications for your organization? Why?

C – What would have been the consequences of an abandonment of the project? Why?

D – Did you play an active role in the conflict resolution? How?

E – How would you explain the conflict and the lack of compromise? What are the barriers for change?

2. Timeline of Main Events

Date	Event
1862	General construction plan: first appearance of a crossing close to WS
1876	First appearance of a WSB in the general plans
1900	Citizens plea for a traverse to join the forest in the north (refused for economic reasons).
1908	A motion is passed by the CC to buy and protect the WS area.
1911	New plea for a traverse at WS – refused for economic reasons.
1926-1935	First pilot analyses for a traverse at WS
1939	Beginning of World War 2
February 1945	Allied raids bomb Dresden.
1960-1970	Traffic surveys
1967	A traverse at WS taken into the general traffic plan of Dresden.
1976	Traverse at WS maintained in the general traffic plan of Dresden.
1978-1979	Planning for an eight-lane bridge at WS.
1984-1986	New analyses for a solution at WS: four and six-lane traverses are planned.
1988	Motion from the Ministry for Traffic Affairs of the GDR for the construction of a bridge after 1990
1989	Architectural competition
1990	German reunification Planning of the 1980's considered outdated. Traffic volume increases in Dresden.
1992-1994	Analyses for new bridges and tunnels
January 1994	The CC votes the new traffic concept, including a new traverse at WS.
1995-1996	Analyses for four other locations
November 1995	The Minister for Economics of Saxony says that only a bridge at WS can be funded by the State.
May 1996	Bridge workshop
August 1996	CC votes a motion for construction of the WSB and the first technical specifications (including a tramway line as compromise). A short study for a tunnel at WS is delivered and dismisses the option.
November 1996	A petition for a referendum against the WSB is submitted.
1996-1997	Traffic analyses for the WSB
March-April 1997	CC and Mayor disagree upon legitimacy of the referendum.
April 1997	Regional Directorate rules against the referendum.
May 1997	An architectural competition takes place.
February 1998	CC votes the design of the WSB.
January 1999	The CA presents the preliminary planning based on the winning design to the CC.
July 1999	The CC votes the withdrawal of a tramway line on the WSB.
1999-2000	Traffic volumes start a decreasing trend.
January 2000	The City applies for plan appraisal from the Regional Directorate.
July 2000	The Regional Directorate refuses the plans.
March 2001	The CC votes changes in the connecting heads at the right river side.
Summer 2002	Historic flood throughout the valley
December 2002	The City decides to submit an application for the WH status.
January 2003	The City submits its application.
February 2003	The City submits the plans for appraisal a second time.
2003-2004	The City adapts its plans to the requirements and corrections issued by

	the Regional Directorate.
February 2004	The Regional Directorate grants plan appraisal.
March 2004	Environmentalists start legal procedures against the project.
June 2004	The CC is newly elected: the majority shifts against the WSB.
July 2004	Dresden and the Elbe Valley enter the list of WH sites.
August 2004	The State of Saxony certifies an allowance of EUR 96 Mio for the WSB.
February 2005	Referendum on the WSB: 67,9% of the voters want the construction.
September-December 2005	The WHC expresses its concerns about the construction of the WSB.
December 2005	The local jurisdiction rejects the legal actions.
January 2006	New complains from the WHC The City postpones the construction work. The Ministry for Economics and Trade of Saxony opens the subsidies to other alternatives.
April 2006	The RWTH Aachen sends a team to evaluate the impact of the WSB. Their results rule against the bridge.
July 2006	The WH Committee put Dresden on the list of sites in danger.
2006-2007	CC and Mayor enter a legal war. CC votes the stop of constructing work. Mayor vetoing the decisions. Regional Directorate moderates the conflict by giving priority to the referendum of 2005.
January 2007	Mediation fails.
March 2007	The Higher Administrative Court rules in favor of the referendum.
May 2007	Perspective Workshop to try and find a design-based solution that would satisfy the WH Committee.
June 2007	The WH Committee maintains Dresden on the list of sites in danger. A tunnel is suggested as alternative, if any.
November 2007	Environmentalists lodge complain to protect a specific sort of bat. The court rule against their argument. Construction of the WSB starts officially.
March 2008	A petition for a new referendum is submitted to the City.
April 2008	CC supports the legitimacy of the referendum. Mayor appeals and wins.
July 2008	WH Committee maintains Dresden on the list of sites in danger and threatens with deleting procedures.
2008-2009	Construction proceeds straightforwardly.
June 2009	WH Committee deletes the site from the list of WH sites.

3. The WH Convention

Collective concerns for the protection of natural and cultural assets are ancient. Their translation into laws and conventions became prominent after the military actions of World War I and were strengthened by the ravages of World War II on a great part of Europe's cities and natural landscapes. Protecting *mankind's* heritage as a concept eventually came into the spotlight in 1959 as the Egyptian temples south of Aswan (e.g. the Abu Simbel and Philae temples) got threatened by the construction of Nasser's High Dam across the Nile River. The UNESCO triggered an international campaign to fundraise financial support for rebuilding the temples up the cliffs where they had been built initially, safe from any risk of flood: "the idea of a shared responsibility of nations for the conservation of outstanding monuments of the past was thus born in practice" (Batisse 1992: 14). Eventually a multitude of similar projects was initiated and the *Convention concerning the protection of the World Cultural and Natural Heritage* was ratified in 1972.[279] Against this background, an acceptable definition of cultural heritage is yet to be agreed upon in the academic debate (Rizzo and Thorsby 2006). However there is today no doubt that "the quest for WH site [...] status appears to be growing" (Smith 2002: 137). The Convention of 1972 roots the need for sustainable management of the sites listed in a plea for universality and long-term transmission. In fact: "What makes the concept of World Heritage exceptional is its universal application. World Heritage sites belong to all the peoples of the world, irrespective of the territory on which they are located" (website of the WHC).

The WH Center (WHC) is the international secretariat affiliated with the WH Committee (itself a committee of the state members of the Convention of 1972). The Center undertakes the implementation of the convention worldwide. Since its founding, the WHC has been structuring its mission through practices of preservation, monitoring, and site management. It develops operational guidelines as well as criteria for the interpretation and implementation of these, and specifies the implications of the WH status for spatial and material issues.[280] The functioning of the WH Convention is thus

[279] 19721116 WH-Co OD "Convention Concerning the Protection of the World Cultural and Natural Heritage"

[280] 20050202 WHC OD "Operational Guidelines for the Implementation of the World Heritage Convention"

thought to be supranational and to cross diverse levels. In practical terms, the WHC accompanies both the application process and the actual implementation of the guidelines within the sites. The sites, however, do not directly communicate with the WH Center on official matters. The direct partner is the foreign office or another similar State-level institution. WH remains a diplomatic issue, between a State and an international secretariat. Management imperatives are addressed in numerous sections of the guidelines of the WHC. Managing Heritage represents great management challenges. Heritage sites are no 'normal' sites of cultural interest since societies are to deliver them to posterity (Poulot 2007). Hence, site administrators are to address adequately the tension between economic development in and around the sites, and preservation of the sites. In this sector the WH status and prestige impacts on a diversity of levels and instances (Smith 2002). WH status means the "sharing of sovereignty over a particular site, which then becomes ostensibly subject to an international framework of policies and regulations" (Bianchi, Boniface 2002: 80). There are numerous advantages to complying with the dictate of the WHC. First of all, even though the WH label seldom appears in travel guides, it is commonly noted that listed WH sites observe a marked increase in visitors (Beck 2006). Even though visitors are seldom aware of the WH status of a site (Marcotte and Bourdeau 2006), a WH status "elevates [the sites] to the status of global icon and national treasure, with all the political and financial support that this entails" (Smith 2002: 142). WH status promotes a site on a long-term basis. Secondly, in line with institutional theory, the WH status helps for an easier access to State and private resources and funding as a consequence of the WH label. Most importantly, a WH label is the assurance that sustained attention will be paid to secure sustainable evolution of the site.

In this respect, non-compliance is sanctioned. The so-called 'red-list' procedure lists all endangered sites. Danger has to be "serious and specific" (WHC operational guidelines of 2005: 46) and may be 'ascertained' in the form of deterioration and loss of significance, or 'potential' in form of modifications of policies or juridical status, or any other potential threat in and around the site (e.g. constructions, war efforts, geological or climate change, etc.). This procedure sheds a negative light on sites listed and on the country's cultural policies as a whole. It seeks to motivate local communities, states and managing organizations to develop greater efforts to protect the properties of the site. If these efforts prove futile or absent, the ultimate decision is to withdraw the site from the

WH list. Most sites concerned manage to find a way to be removed from the red list. Prior to Dresden, in 37 years of functioning, the WHC had only withdrawn one single site from its seminal list, the Arabian Oryx Sanctuary. This site, once listed as endangered, had seen its area reduced by 90% by local authorities, making its appearance on the list a physical impossibility. Against this background, Dresden is the first site ever to lose the title because of a refusal to cooperate in spite of potential alternatives. Table 21 summarizes the selection criteria as defined by the operational guidelines and their translation for the selection of Dresden and the Elbe Valley by the WH Committee.[281]

	Selection Criteria	Dresden
Ii	To exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;	The Dresden Elbe Valley has been the crossroads in Europe, in culture, science and technology. Its art collections, architecture, gardens, and landscape features have been an important reference for Central European developments in the 18th and 19th centuries.
iii	To bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;	The Dresden Elbe Valley contains exceptional testimonies of court architecture and festivities, as well as renowned examples of middle-class architecture and industrial heritage representing European urban development into the modern industrial era.
Iv	To be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;	The Dresden Elbe Valley is an outstanding cultural landscape, an ensemble that integrates the celebrated baroque setting and suburban garden city into an artistic whole within the river valley.
V	To be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;	The Dresden Elbe Valley is an outstanding example of land use, representing an exceptional development of a major Central-European city. The value of this cultural landscape has long been recognized, but it is now under new pressures for change.

Table 21 - Selection criteria for Dresden as WH site

[281] 20041029 WHC OD "Decisions adopted at the 28th Session of the World Heritage Committee - WHC-04/28.COM/26"

Zusammenfassung (gemäß Promotionsordnung – 16.07.08)

Zusammenfassung der Arbeit

Diese Dissertation befasst sich mit der Durchführung des Projekts Waldschlösschenbrücke in der Stadt Dresden anhand einer historischen Betrachtung. Die Wurzel dieses Bauprojektes können bis in das späte 19. Jahrhundert zurückverfolgt werden. Es gipfelte in einem polarisierenden Konflikt im Jahr 2009 zwischen den verschiedenen lokalen, nationalen und internationalen Institutionen. Im Kern der Debatte liegt die 1996 getroffene Entscheidung, eine vierspurige Brücke im Gebiet Waldschlösschen zu bauen, ein Gebiet, das später als das UNESCO Weltkulturerbe Dresden Elbtal bekannt wurde. Das Projekt wurde insbesondere wegen des Eingriffs in die Landschaft, des fragwürdigen Effekts auf den Verkehr, sowie der hohen Kosten kritisiert. Seinen Gipfel fand der Konflikt in der letztendlichen Streichung des Dresdner Elbtals von der Liste der Weltkulturerbestätten. Im Rahmen der vorliegenden Dissertation wird der Fall zur Untersuchung offener Fragen der Organisationsforschung herangezogen. Es wird vorgeschlagen, das Zusammenspiel von institutionellen Einflüssen und Pfadabhängigkeit in die Analyse von Organisationen und deren Entscheidungsfindungsprozess miteinzubeziehen. Darüber hinaus wird empfohlen, „Pfade“ als mentale Schemata für die Lösung kollektiver Probleme zu verstehen. Dem Begriff des Pfades wird der Begriff der „Pfadinstantiierung“ gegenübergestellt, welcher die tatsächliche Manifestation eines Pfades beschreibt. Somit zeigt die Arbeit wie Pfadforscher von der institutionellen Forschung lernen könnten, in dem sie ein stärkeres Augenmerk auf die Akteure richten. Insbesondere ist hier die gezielte Nutzung des institutionellen Umfelds von Interessen, welches genutzt werden kann, um eine solche Pfadinstantiierung voranzutreiben. Eine weitere wichtige Erkenntnis aus dem Fall ist die potentielle Möglichkeit für Akteure, den Pfadverlauf zu beeinflussen bzw. zu unterbrechen. Allerdings kann solch ein Störversuch auch gerade dazu führen, dass der Pfadverlauf verstärkt wird. Im Dresdner Fall zeigt sich beispielsweise, wie die Akteure der Stadt, unter dem Einfluss einer zum Pfad gewordenen Lösung, dazu beigetragen haben, die Idee einer Brücke am Waldschlösschen zu intantiieren und wie sie dafür die Strukturen der Demokratie und der Staatsbürokratie ausnützten. Strategien der

Machterhaltung, Entwicklung von Mythen und legale Bindung wurden benutzt, um die Entwicklung des Projekts zu stützen. Selbst-Verstärkende Mechanismen verstärkten diese Trajektorie in Form von technischen Problemlösung und kollektiver Mobilisierung. Versuche den Pfad zu beeinflussen oder gar zu brechen blieben daher erfolglos. Es wird argumentiert, dass diese disruptiven Bemühungen eher dazu führten den Pfad zu stabilisieren, in dem sie dessen Institutionalisierung unterstützten. Die Analyse schließt mit einer Diskussion zur Formalisierung der Ergebnisse.

Short Summary

This volume reports on an organizational history of the city of Dresden, with respect to the conflicting construction of a new bridge at Waldschlösschen. This project finds its origins in the late 19th century and culminated in a highly polarizing conflict in 2009, opposing various local, national and international institutional constituents. The core of the conflict was the City's decision in 1996 to proceed with the planning and construction of the four-lane bridge in the middle of what eventually became known in 2004 as the UNESCO World Heritage Cultural Landscape "Dresden and the Elbe Valley". The project was criticized due to its impact on the landscape, to its questionable effect on traffic reduction, and its expensive nature, and provoked the withdrawal of the site from list for WH sites, a premiere in Europe. I draw upon this case to make a few points in the broader field of organization research. First, I propose to consider the interplay of institutional effects and of path dependence in the analysis of an organization and its subsequent decision-making. Secondly, I suggest considering "paths" as mere virtual schemas of solutions to collective problems, and to label their actual manifestations "path instantiations". In this respect, I claim that path-researchers could learn from institutional accounts by observing how actors in organizations draw on their institutional context to nest these instantiations. A last point is made by stressing the potential for actors to disrupt path-dependent developments, and how such disruptions may actually reinforce the path under scrutiny. Drawing on the Dresden case, we see how members of the City, under the path-like influence of a technical solution, contributed to instantiate the idea of a bridge at Waldschlösschen by drawing on the institutional logics of democracy and of state-bureaucracy. Strategies of power retention, myth development, and legal binding were employed to support the

development of the project. This institutional effort was rewarded by self-reinforcements, in the form of technical problem solving and of collective mobilization. As a result, attempts at disrupting the path instantiation proved unsuccessful. It is argued that these disruptive efforts actually contributed to stabilize the path by supporting its institutionalization, granting domination to the solution over the problem it was thought to solve. The analysis concludes with a discussion about the results against the background of institutional and path dependence theories.

References

Abbott, A. 1991a. An old institutionalist reads the new institutionalism. *Contemporary Sociology*, 21(6): 754-756.

Abbott, A. 1991b. History and sociology: The lost synthesis. *Social Science History*, 15(2): 201-238.

Abbott, A. 1995. A primer on sequence methods. *Organization Science*, 1(4): 375-392.

Abbott, A. 2001. *Time Matters*. University of Chicago Press: Chicago.

Abbott, A., Tsay, A. 2000. Sequence analysis and optimal matching methods in sociology: Review and prospect. *Sociological Methods & Research*, 29(3): 3-33.

Abell, P. 1993. Some aspects of narrative method. *Journal of Mathematical Sociology*, 18(2&3): 93-134.

Abrahms, P. 1980. History, sociology, historical sociology. *Past & Present*, 87(1): 3-16.

Academy of Management Journal. 2007. Special research forum: Building bridges across levels. 50(6): 1385-1539.

Ahrens, G.-A. 2009. *Sonderauswertung zur Verkehrserhebung 'Mobilität in Städten – SrV 2008' – Städtevergleich*. Technische Universität Dresden: Dresden.

Alexander, V. 1996. Pictures at an exhibition: Conflicting pressures in museums and the display of art. *American Journal of Sociology*, 101(4): 797-839.

Allison, G. 1969. Conceptual models and the Cuban missile crisis. *The American Political Science Review*, 63(3): 689-718.

Aminzade, R. 1992. Historical sociology and time. *Sociological Methods & Research*, 20(4): 456-480.

Anderson, P., Blatt, R., Christianson, M., Grant A., Marquis, C., Neuman, E., Sonenshein, S., Sutcliffe, K. 2006. Understanding mechanisms in organizational research. *Journal of Management Inquiry*, 15(2): 102-113.

Antonio, R. 1979. The contradiction of domination and production in bureaucracy: The contribution of organizational efficiency to the decline of the Roman Empire. *American Sociological Review*, 44(6): 895-912.

Argote, L., Todorova, G. 2007. Organizational Learning. In: *International Review of Industrial and Organizational Pychology, Vol. 22*, Hodgkinson, G., Ford, K. (Eds.), 193-234, John Wiley and Sons.

Argyris, C. 1976. Single-loop and double-loop models in research on decision making.

Administrative Science Quarterly, 21(3): 363-375.

Arrow, K., Nerlove, M. 1958. A note on expectations and stability. *Econometrica*, 26(2): 297-305.

Arthur, W. 1989. Competing technologies, increasing returns, and lock-in by historical events. *The Economic Journal*, 99: 116-131.

Arthur, B. 1994. *Increasing Returns and Path Dependence in the Economy.* University of Michigan Press: Ann Arbor.

Arthur, B., Lane, D. 1994. Information contagion. In: *Increasing Returns and Path Dependence in the Economy*, Arthur, B. (Ed.), 69-97, University of Michigan Press: Ann Arbor.

Bakker, R. 2010. Taking stock of temporary organizational forms: A systematic review and research agenda. *International Journal of Management Reviews*, 12(4): 466-486.

Barley, S., Tolbert, P. 1997. Institutionalization and structuration: Studying the links between action and institution. *Organization Studies*, 18(1): 93-117.

Barnes, W., Gartland, M., Stack, M. 2004. Old habits die hard: Path dependency and behavioral lock-in. *Journal of Economic Issues*, 38(2): 371-377.

Baron, J., Dobbin, F., Devereaux Jennings, P. 1986. War and peace: The evolution of modern personnel administration in U.S. industry. *American Journal of Sociology*, 92(2): 350-383.

Barrett, F., Srivastva, S. 1991. History as a mode of inquiry in organizational life: A role for human cosmogony. *Human Relations*, 44(3): 231-254.

Bartel, C., Garud, R. 2009. The role of narratives in sustaining organizational innovation. *Organization Science*, 20(1): 107-117.

Bartsch, M. 2008. Dresdner Masochismus. Die Unversöhnlichkeit des Brückenstreits vor dem Hintergrund einer jungen, labilen Demokratie. In: *Dresdner Elbbrücken in acht Jahrhunderten*, Dresdner Geschichtsverein e.V. (Ed), 83-91, Dresdner Geschichtsverein: Dresden.

Batisse, M. 1992. The struggle to save our World Heritage. *Environment,* 34(10): 12-32.

Battilana, J. 2006. Agency and institutions: The enabling role of individuals' social positions. *Organization*, 13(5): 653-676.

Baum, J., Oliver, C. 1991. Institutional linkages and organizational mortality. *Administrative Science Quarterly*, 36: 187-218.

Beck, W. 2006. Narratives of World Heritage in travel guidebooks. *International Journal of Heritage Studies,* 12(6): 521-535.

Berger, P., Luckmann, T. 1966. *The Social Construction of Reality, a Treatise in the Sociology of Knowledge*. Penguin Social Sciences: New York.

Berthod, O., Sydow, J. 2010. Locked in the iron cage? When institutionalization is (not) a path-dependent process. Paper presented: *70th Annual Meetings of the Academy of Management, OMT Division*, August 6-10, Montreal, Canada.

Beyer, J., 2010. The same or not the same: On the variety of mechanisms of path dependence. *International Journal of Social Sciences*, 5(1): 1-11.

Bianchi, R., Boniface, P. 2002. Editorial – The politics of World Heritage. *International Journal of Heritage Studies,* 8(2): 79-80.

Birkinshaw, J., Ridderstråle, J. 1999. Fighting the corporate immune system: A process study of subsidiary initiatives in multinational corporations. *International Business Review*, 8: 149-180.

Blinn, M. 2009. *Dubbed or Duped? Path Dependence in the German Film Market - An Inquiry into the Origins, Persistence and Effects of the Dubbing Standard in Germany*. Doctoral Dissertation: Freie Universitaet Berlin.

Bohte, J., Meier, K. 2000. Goal displacement: Assessing the motivation for organizational cheating. *Public Administration Review*, 60(2): 173-182.

Boje, D. 2001. *Narrative Methods for Organizational and Communications Research*. Sage Publications: Thousand Oaks, CA.

Boland, R., Lyytinen, K., Yoo, Y. 2007. Wakes of innovation in project networks: The case of digital 3-D representation in architecture, engineering, and construction. *Organization Science*, 18(4): 631-647.

Bongrand, P., Laborier, P. 2005. L'entretien dans l'analyse des politiques publiques: Un impensé méthodologique ? *Revue Française de Science Politique*, 55(1): 73-111.

Booth, C. 2003. Does history matter in strategy? The possibilities and problems of counterfactual analysis. *Management Decision*, 41(1): 96-104.

Booth, C., Rowlinson, M. 2006. Management and organizational history: Prospects. *Management & Organizational History*. 1(1): 5-30.

Bourdieu, P. 1972. *Esquisse d'une Théorie de la Pratique*. Droz : Genève.

Bourdieu, P. 1979. *La Distinction – Critique Sociale du Jugement*. Éditions de Minuit : Paris.

Bourdieu, P. 2002. *La Domination Masculine*. Le Seuil. Paris.

Bower, G., Morrow, D. 1990. Mental models in narrative comprehension. *Science*, 247(1): 44-48.

Boyce, M. 1995. Collective centring and collective sense-making in the stories and

storytelling of one organization. *Organization Studies*, 16(1): 107-137.

Boyce, M. 1996. Organizational story and storytelling: A critical review. *Journal of Organizational Change Management*, 9(5): 5-26.

Braess, D. 1968. Über ein Paradoxon aus der Verkehrsplanung. *Unternehmensforschung*, 12(1): 258-268.

Braess, D., Nagurney, A., Wakolbinger, T. 2005. On a paradox of traffic planning. *Transportation Science*, 39(4): 446-450.

Brockner, J. 1992. The escalation of commitment to a failing course of action: Toward theoretical progress. *Academy of Management Review*, 17(1): 39-61.

Brown, A. 2003. Authoritative sensemaking in a public enquiry report. *Organization Studies*, 25(1): 95-112.

Brown, A., Jones, M. 1998. Doomed to failure: Narratives of inevitability and conspiracy in a failed IS project. *Organization Studies*, 19(1): 73-88.

Brown, J., Duguid, P. 2001. Knowledge and organization: A social-practice perspective. *Organization Science*, 12(2): 198-213.

Bunge, M. 1997. Mechanism and explanation. *Philosophy of the Social Sciences*, 27(4): 410-465.

Bunge, M. 2004. How does it work? The search for explanatory mechanisms. *Philosophy of the Social Sciences*, 34(2): 182-210.

Büthe, T. 2002. Taking temporality seriously: Modeling history and the use of narratives as evidence. *American Political Science Review*, 96(3): 481-493.

Camus, A. 1951. *L'Homme Révolté.* Gallimard: Paris.

Carney, M., Gedajlovic, E. 2002. The co-evolution of institutional environments and organizational strategies: The rise of family business groups in the ASEAN region. *Organization Studies*, 23(1): 1-29.

Carpenter, D. 1996. Adaptive signal processing, hierarchy, and budgetary control in federal regulation. *American Political Science Review*, 90(2): 283-302.

Carrier, M., Wimmer, R. 2004. Prozeß. In *Enzyklopädie – Philosophie und Wissenschaftstheorie – Sonderausgabe 3, Band 3*, Mittelstraß, J. (Ed.), 385-387, J.B. Metzler: Stuttgart, Weimar.

Chreim, S., Williams, B., Hinings, B. 2007. Interlevel influences on the reconstruction of professional role identity. *Academy of Management Journal*, 50(6): 1515-1539.

Christensen, C., Bower, J. 1996. Customer power, strategic investment, and the failure of leading firms. *Strategic Management Journal*, 17: 197-218.

Chu, K.-Y., Gupta, S., Clements, B., Hewitt, D., Lugaresi, S., Schiff, J., Schuknecht L., Schwartz, G. 1995. *Unproductive Public Expenditures – A Pragmatic Approach to Policy Analysis*. Pamphlet Series N°48, International Monetary Fund: Washington, D.C.

Clegg, S. 1989. *Frameworks of Power*. Sage Publications Ltd: London, UK.

Clegg, S. 2010. The state, power, and agency: Missing in action in institutional theory? *Journal of Management Inquiry*, 19(1): 4-13.

Coeurdray, M., Blanchet, T. 2010. Légitimité asymétriques et hybridations organisationnelles face à l'importation de pratiques étrangères : Le secteur de l'eau en Allemagne. *Critiques Internationales*, 48(3): 53-75.

Colyvas, J., Powell, W. 2006. Roads to institutionalization: The remaking of boundaries between public and private science. *Research in Organizational Behavior*, 27: 305-353.

Couto, R. 1988. TVA's old and new grass roots: A re-examination of cooptation. *Administration & Society*, 19(4): 453-478.

Covaleski, M., Dirsmith, M. 1988. An institutional perspective on the rise, social transformation, and fall of a university budget category. *Administrative Science Quarterly*, 33(4): 562-587.

Crossan, M., Lane, H., White, R. 1999. An organizational learning framework: From intuition to institution. *Academy of Management Review*, 24(3): 522-537.

Crozier, M. 1964. *Le Phénomène Bureaucratique*. Le Seuil: Paris.

Czarniawska, B. 1998. *A Narrative Approach to Organization Studies – Qualitative Research Methods Series 43*. Sage Publications Inc: Thousamd Oaks, CA.

Dacin, T., Goodstein, J., Scott, W. 2002. Institutional theory and institutional change: Introduction to the special research forum. *Academy of Management Journal*, 45(1): 45-57.

Dalton, M. 1959. *Men Who Manage*. Wiley: New York.

David, P. 1985. Clio and the economics of QWERTY. *American Economic Review*, 75: 332-337.

David, P. 1994. Why are institutions the 'carriers of history'? Path dependence and the evolution of conventions, organizations and institutions. *Structural Change and Economic Dynamics*, 5(2): 205-20.

Davis, G., Marquis, C. 2006. Prospects for organization theory in the early twenty-first century: Institutional fields and mechanisms. *Organization Science*, 16(4): 332-343.

Deephouse, D. 1996. Does isomorphism legitimate? *Academy of Management Journal*, 39(4): 1024-1039.

Deephouse, D. 1999. To be different, or to be the same? It's a question (and theory) of strategic balance. *Strategic Management Journal*, 20: 147-166.

Deephouse, D., Suchman, M. 2008. Legitimacy in organizational institutionalism. In: *Handbook of Organizational Institutionalism*, Greenwood, R., Oliver, C., Sahlin, K., Suddaby, R. (Eds), 49-77, Sage Publishing: Thousand Oaks, CA.

Denzau, A., North, D. 1994. Shared mental models: Ideologies and institutions. *Kyklos*, 47(1): 3-31.

Denzin, N., Lincoln, Y. 2000. *Handbook of Qualitative Research – Second Edition*. Sage Publications Inc : Thousand Oaks, CA.

Descartes, R. 1641 (1990 edition). *Les Méditations Métaphysiques*. Librairie Générale Française: Paris.

DiMaggio, P. 1979. Review essay: On Pierre Bourdieu. *American Journal of Sociology*, 84(6): 1460-1474.

DiMaggio, P. 1988. Interest and agency in institutional theory. In: *Institutional Patterns and Organizations: Culture and Environment*, Zucker, L. (ed.), 3-22, Ballinger: Cambridge, MA.

DiMaggio, P. 1991. Constructing an organizational field as a professional project: U.S. art museums, 1920-1940. In: *The New Institutionalism in Organizational Analysis*, Powell, W., DiMaggio, P. (Eds), 267-292, University of Chicago Press: Chicago, IL.

DiMaggio, P. 1995. Comments on 'what theory is not'. *Administrative Science Quarterly*, 40: 391-397.

DiMaggio, P., Powell, W. 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48: 147-160.

DiMaggio, P., Powell, W. 1991 Introduction. In: *The New Institutionalism in Organizational Analysis*, Powell, W., DiMaggio, P. (Eds), 1-38, University of Chicago Press: Chicago, IL.

Djelic, M.-L., Quack, S. 2007. Overcoming path dependency: Path generation in open systems. *Theory & Society*, 36: 161-186.

Dobusch, L. 2008. *Weg vom Windows-Pfad? Vier Städte zwischen Markt, Technologie und Organisation*. Doctoral Dissertation: Freie Universität Berlin.

Dodgson, M. 1993. Organizational learning: A review of some literatures. *Organization Studies*, 14(3): 375-394.

Dolata, U. 2009. Technological innovations and sectoral change: Transformative capacity and adaptability, patterns of change: An analytical framework. *Research Policy*, 38(6): 1066-1076.

Downs, A. 1957. An economic theory of political action in a democracy. *Journal of Political Economy*, 65(2): 135-150.

Dresdner Hefte. 2008. Die Waldschlösschenbrücke. Eine Chronik von Planung und öffentlicher Auseinandersetzung. In: *Heft 94: Elbbrücken in acht Jahrhunderten*, Dresdner Geschichtsverein e.V. (Ed), 70-82, Dresdner Geschichtsverein: Dresden.

Dyer, W., Wilkins, A. 1991. Better stories, not better constructs, to generate better theory: A rejoinder to Eisenhardt. *Academy of Management Review*, 16(3): 613-619.

Eisenhardt, K. 1989. Building theories from case study research. *Academy of Management Review*, 14(4): 532-550.

Elsbach, K., Sutton, R. 1992. Acquiring organizational legitimacy through illegitimate actions: A marriage of institutional and impression management theories. *Academy of Management Journal*, 35(4): 699-738.

Elster, J. 1989. *Nuts and Bolts for the Social Sciences*. Cambridge University Press: Cambridge UK.

Emirbayer, M., Mische, A. 1998. What is agency? *American Journal of Sociology*, 103(4): 962-1023.

Engwall, M. 2003. No project is an island: Linking projects to history and context. *Research Policy*, 32(5): 798-808.

Ewick, P., Silbey, S. 1995. Subversive stories and hegemonic tales: Toward a sociology of narrative. *Law & Society Review*, 29(2): 197-226.

Farjoun, M. 2002. The dialectics of institutional development in emerging and turbulent fields: The history of pricing conventions in the on-line database industry. *Academy of Management Journal*, 45(5): 848-874.

Federal Environmental Agency. 2005. *Determining Factors in Traffic Growth – Developments, Causes and Possible Future Directions*. Texte 32/05. Umweltbundesamt: Dessau.

Feldman, M., Pentland, B. 2003. Reconceptualizing organizational routines as a source of flexibility and change. *Administrative Science Quarterly*, 48(1): 94-118.

Feldman, M., Sköldberg, K., Borwn, R., & Horner, D. 2004. Making sense of stories: A rhetorical approach to narrative analysis. *Journal of Public Administration Research and Theory*, 14(2): 147-170.

Fiss, P., Zajac, E. 2004. The diffusion of ideas over contested terrain: The (non)adoption of a shareholder value orientation among German firms. *Administrative Science Quarterly*, 49(4): 501-534.

Fligstein, N. 1985. The spread of the multidivisional form among large firms, 1919-1979. *American Sociological Review*, 50(3): 377-391.

Flyvbjerg, B. 1998. *Rationality and Power – Democracy in Practice*. University of Chicago Press: Chicago.

Flyvbjerg, B., Bruzelius, N., Rothengatter, W. 2003. *Megaprojects and Risk – An Anatomy of Ambition*. Cambridge University Press: Cambridge, UK.

Flyvbjerg, B., Garbulo, M., Lovallo, D. 2009. Delusion and deception in large infrastructure projects. *California Management Review*, 51(2): 170-193.

Flyvbjerg, B., Skamris Holm, M., Buhl, S. 2004. What causes cost overrun in transport infrastructure projects? *Transport Reviews*, 24(1): 3-18.

Fox-Wolfgramm, S., Boal, K., Hunt, J. 1998. Organizational adaptation to institutional change: A comparative study of first-order change in prospector and defender banks. *Administrative Science Quarterly*, 43: 87-126.

Friedland, R., Alford, R. 1991. Bringing society back in: Symbols, practices, and institutional contradictions. In: *The New Institutionalism in Organizational Analysis*, Powell, W., DiMaggio, P. (Eds), 232-263, University of Chicago Press: Chicago, IL.

Gabriel, Y. 2000. *Storytelling in organizations. Facts, fictions, and fantasies*. Oxford University Press Inc: New York, USA.

Gartland, M. 2005. Interdisciplinary views of sub-optimal outcomes: Path dependence in the social and management sciences. *Journal of Socio-Economics*, 34(5): 686-702.

Garud, R., Jain, S., Kumaraswamy, A. 2002. Institutional entrepreneurship in the sponsorship of common technological standards: The case of SUN Microsystems and Java. *Academy of Management Journal*, 45(1): 196-214.

Garud, R., Karnoe, P. 2001. *Path Dependence and Creation*. LEA: Mahwah, NJ.

Garud, R., Kumaraswamy, A., Karnoe, P. 2010. Path dependence of path creation? *Journal of Management Studies*, 47(4): 760-774.

Geertz, C. 1983. *Local Knowledge: Further Essays in Anthropology*. Basic Books: New York.

Geiger, D., Antonacopoulou, E. 2009. Narratives and organizational dynamics: Exploring blind spots and organizational inertia. *Journal of Applied Behavioral Science*, 45(3): 411-436.

Gibbert, M., Ruigrok, W., Wicki, B. 2008. Research notes and commentaries: What passes as a rigorous case study? *Strategic Management Journal*, 29: 1465-1474.

Giddens, A. 1982. A reply to my critics. *Theory, Culture & Society*, 1(2): 107-113.

Giddens, A. 1984. *The Constitution of Society. Outline of the Theory of Structuration*. Berkeley University Press: Berkeley, CA.

Gilbert, C. 2005. Unbundling the structure of inertia: Resource versus routine rigidity. *Academy of Management Journal*, 48(5): 741-763.

Gilbert, C., Bower, J. 2002. Disruptive change: When trying harder is part of the problem. *Harvard Business Review*, 80(5): 94-101.

Golden, B. 1992. The past is the past – Or is it? The use of retrospective accounts as indicators of past strategy. *Academy of Management Journal*, 35(4): 848-860.

Gomez, P.-Y., Jones, B. 2000. Conventions : An interpretation of deep structure in organizations. *Organization Science*, 11(6): 696-708.

Gotham, K., Staples, W. 1996. Narrative analysis and the new historical sociology. *Sociological Quarterly*, 37(3): 481-501.

Greenwood, R., Hinings, B. 1996. Understanding radical organizational change: Bringing together the old and the new institutionalism. *Academy of Management Review*, 21: 1022-1054.

Greenwood, R., Oliver, C., Sahlin, K., Suddaby, R. 2008. Introduction. In: *Handbook of Organizational Institutionalism*, Greenwood, R., Oliver, C., Sahlin, K., Suddaby, R. (Eds), 1-46, Sage Publishing: Thousand Oaks, CA.

Greenwood, R., Suddaby, R. 2006. Institutional entrepreneurship in mature fields: The big five accounting firms. *Academy of Management Journal*, 49(1): 27-48.

Greenwood, R., Suddaby, R., Hinings, B. 2002. Theorizing change: The role of professional associations in the transformation of institutionalized fields. *Academy of Management Journal*, 45(1): 58-50.

Griffin, L. 1993. Narrative, event-structure analysis, and causal interpretation in historical sociology. *American Journal of Sociology*, 98(5): 1094-1133.

Gross, N. 2009. A pragmatist theory of social mechanisms. *American Sociological Review*, 74: 358-379.

Hacking, I. 2000. *The Social Construction of What?* Harvard University Press: Cambridge, MA.

Hannan, M., Freeman, J. 1977. The population ecology of organizations. *American Journal of Sociology*, 82(5): 929-964.

Hannan, M., Freeman. J. 1984. Structural inertia and organizational change. *American Sociological Review*, 49: 149-164.

Hannan, M., Plos, L., Carroll, G. 2004. The evolution of inertia. *Industrial and Corporate Change*, 13: 213-242.

Hargadon, A., Douglas, Y. 2001. When innovations meet institutions: Edison and the design of the electric light. *Administrative Science Quarterly*, 46: 476-501.

Hargrave, T., Ven de Ven, A. 2006. A collective action model of institutional innovation. *Academy of Management Review*, 31(4): 864-888.

Haveman, H., David, R. 2008. Ecologists and institutionalists: Friends or foes? In: *Handbook of Organizational Institutionalism*, Greenwood, R., Oliver, C., Sahlin, K., Suddaby, R. (Eds), 573-595, Sage Publishing: Thousand Oaks, CA.

Haydu, J. 1998. Making use of the past: Time periods as cases to compare and as sequences of problem solving. *American Journal of Sociology*, 104(1): 339-371.

Hedström, P., Swedberg, R. 1996. Social mechanisms. *Acta Sociologica*, 39(3): 281-308.

Hedström, P., Swedberg, R. 1998. Social mechanisms: An introductory essay. In: *Social Mechanisms: An Analytical Approach to Social Theory*, Hedström, P., Swedberg, R. (Eds.), Cambridge University Press: Cambridge, UK.

Heise, D. 1988. Computer analysis of cultural structures. *Social Science Computer Review*, 6(2): 183-196.

Heise, D. 1989. Modeling event structures. *Journal of Mathematical Sociology*, 14(2&3): 139-169.

Hensmans, M. 2003. Social movement organizations: A metaphor for strategic actors in institutional fields. *Organization Studies*, 24(3): 355-381.

Hirsch, P., Gillespie, J., 2001. Unpacking path dependence: Differential valuations accorded history across disciplines. In: *Path Dependence and Creation*, Garud, R., Karnoe, P. (Eds.), 69-90, LEA: Mahwah, NJ.

Hirsch, P., Lounsbury, M. 1997. Ending the family quarrel – Towards a reconciliation of "old" and "new" institutionalisms. *American Behavioral Scientist*, 40(4): 406-418.

Hirst, P. 1982. The social theory of Anthony Giddens: A new syncretism? *Theory, Culture & Society*, 1(2): 78-82.

Hitt, M., Beamish, P., Jackson, S., Mathieu, J. 2007. Building theoretical and empirical bridges across levels: Multilevel research in management. *Academy of Management Journal*, 50(6): 1385-1399.

Hoffman, A. 1999. Institutional evolution and change: Environmentalism and the US chemical industry. *Academy of Management Journal*, 42: 351-371.

Holm, P. 1995. The dynamics of institutionalization: Transformation processes in Norwegian fisheries. *Administrative Science Quarterly*, 40: 398-422.

Holmqwist, M. 2004. Experiential learning processes of exploitation and exploration within and between organizations: An empirical study of product development. *Organization Science*, 15(1): 70-81.

Huber, G. 1985. Temporal stability and response-order biases in participant descriptions

of organizational decisions. *Academy of Management Journal*, 28(4): 943-950.

Huber, G. 1991. Organizational learning: The contributing processes and the literatures. *Organization Science*, 2(1): 88-115.

Institute of Urban Design and Regional Planning. 2006. *Visual Impact Study (VIS) of the "Verkehrszug Waldschlösschenbrücke" on the UNESCO World Heritage Site "Dresden Elbe Valley"*. RWTH Aachen University: Aachen.

Jacques, R. 2006. History, historiography and organization studies: The challenge and the potential. *Management & Organizational History*, 1(1): 31-49.

Jarzabkowski, P. 2008. Shaping strategy as a structuration process. *Academy of Management Journal*, 51(4): 621-650.

Jepperson, R. 1991. Institutions, institutional effects, and institutionalism. In: *The New Institutionalism in Organizational Analysis*, Powell, W., DiMaggio, P. (Eds), 143-163, University of Chicago Press: Chicago, IL.

Johnson, V. 2007. What is organizational imprinting? Cultural entrepreneurship in the founding of the Paris Opera. *American Journal of Sociology*, 113(1): 97-127.

Journal of Mathematical Sociology. 1993. Special issue on narrative method. 18(2&3): 93-214.

Karim, S., Mitchell, W. 2000. Path dependent and path-breaking change: Reconfiguring business resources following acquisitions in the U.S. medical sector, 1978-1995. *Strategic Management Journal*, 21: 1061-1081.

Kieser, A. 1994. Why organization theory needs historical analyses – And how this should be performed. *Organization Science*, 5(4): 608-620.

Kim, T., Shin, D., Oh, H., Jeong, Y. 2007. Inside the iron cage: Organizational political dynamics and institutional changes in presidential selection systems in Korean universities, 1985-2002. *Administrative Science Quarterly*, 52: 286-323.

King, B., Felin, T., Whetten, D. 2010. Finding the organization in organizational theory: A meta-theory of the organization as a social actor. *Organization Science*, 21(1): 290-305.

Knapp, P. 2007. Path dependence in self-maintaining and self-reinforcing structures. Paper presented: *Annual Meeting of the American Sociological Association*, TBA, New York City, August 11.

Koch, J. 2008. Strategic paths and media management – a path dependency analysis of the German newspaper branch of high quality journalism. *Schmallenbach Business Review*, 60: 50-73.

Koch, J. 2011. Inscribed strategies: Exploring the organizational nature of strategic lock-in. *Organization Studies*, 32(3): 337-363.

Koch, J., Eisend, M., Petermann, A. 2009. Path dependence in decision-making processes: Exploring the impact of complexity under increasing returns. *Business Research*, 2(1): 67-84.

Kraatz, M., Block, E. 2008. Organization implications of institutional pluralism. In: *Handbook of Organizational Institutionalism*, Greenwood, R., Oliver, C., Sahlin, K., Suddaby, R. (Eds), 243-275, Sage Publishing: Thousand Oaks, CA.

Krugman, P. 1991. History and industry location: The case of the manufacturing belt. *American Economic Review*, 81(2): 80-83.

Kuipers, S., Boin, A. 2010. Path dependence, institutionalization and the decline of two public institutions. In: *The Hidden Dynamics of Path Dependence*, Schreyoegg, G., Sydow, J. (Eds.), 50-68, Palgrave-Macmillan: London.

Kunow, K. 2011. The world as a disc? Technology-resourcing routines and music major's path dependence. Paper presented at: *Second International Conference on Path Dependence*, Freie Universitaet Berlin, March 3-4.

Küsters, I. 2006. *Narrative Interviews – Grundlagen und Anwendungen*. VS Verlag für Sozialwissenschaften: Wiesbaden: DE.

Langer, A. 2011. Consumer path dependence in high-tech markets – An analysis of the self-reinforcing mechanisms leading to consumer lock-in. Paper presented at: *Second International Conference on Path Dependence*, Freie Universitaet Berlin, March 3-4.

Langley, A. 1999. Strategies for theorizing from process data. *Academy of Management Review*, 24(4): 691-710.

Lawrence, T. 1999. Institutional strategies. *Journal of Management*, 25(2): 161-188.

Lawrence, T., Suddaby, R. 2006. Institutions and institutional work. In: *Handbook of Organization Studies*, Clegg, S., Hardy, W., Nord, W., Lawrence, T. (Eds.), 215-254, Sage: London, UK.

Lawrence, T., Suddaby, R., Leca, B. 2009. Introduction: Theorizing and studying institutional work. In: *Institutional Work – Actors and Agency in Institutional Studies of Organizations*, Lawrence, T., Suddaby, R., Leca, B. (Eds.), 1-27, Cambridge University Press: Cambridge UK.

Lawrence, T., Winn, M., Jennings, D. 2001. The temporal dynamics of institutionalization. *Academy of Management Review*, 26(4): 624-644.

Leonard-Barton, D. 1992. Core capabilities and core rigidities: A paradox in managing new product development. *Strategic Management Journal*, 13: 111-125.

Levinthal, D., Rerup, C. 2006. Crossing an apparent chasm: Bridging mindful and less-mindful perspectives on organizational learning. *Organization Science*: 17(4): 502-513.

Liebowitz, S., Margolis, S. 1995. Path dependence, lock in, and history. *Journal of Law, Economics, & Organization*, 11: 205-226.

Liebowitz, S., Margolis, S. 2000. Path dependence (article N° 0770). In: *Encyclopedia of Law and Economics, Volume I – The History and Methodology of Law and Economics*, Boudwijn, B., De Geest, G. (Eds.), 981-998, Edward Elgar: Cheltenham.

Logan, G. 1988. Toward an instance theory of automatization. *Psychological Review*, 95(4): 492-527.

Lounsbury, M. 2007. A tale of two cities: Competing logics and practice variation in the professionalizing of mutual funds. *Academy of Management Journal*, 50(2): 289-307.

Lounsbury, M., Ventresca, M., Hirsch, P. 2003. Social movements, field frames and industry emergence: A cultural-political perspective on US recycling. *Socio-Economic Review*, 1: 71-104.

Mahoney, J. 2000. Path dependence in historical sociology. *Theory & Society*, 29: 507-548.

Mandl, U., Dierx, A., Ilskowitz, F. 2008. The effectiveness and efficiency of public spending. *European Economy - Economic Papers*, 301. European Commission: Brussels.

Manning, S., Sydow, J. 2007. Transforming creative potential in project networks: How TV movies are produced under network-based control. *Critical Sociology*, 33: 19-42.

March, J. 1991. Exploration and exploitation in organizational learning. *Organization Science*, 2(1): 71-87.

Marcotte, P., Bourdeau, L. 2006. Tourists' knowledge of the UNESCO designation of World Heritage sites: The case of visitors in Québec City. *International Journal of Arts Management,* 8(2).

Margolis, S. 2009. Path dependence and public policy: Lessons from economics. In: *The Evolution of Path Dependence*, Magnusson, L., Ottosson, J. (Eds.), 166-190, Edward Elgar: Cheltenham.

Marquis, C., Battilana, J. 2009. Acting globally but thinking locally? The enduring influence of local communities on organizations. *Research in Organizational Behavior*, 29: 283-302.

Marquis, C., Lounsbury, M. 2007. Vive la résistance: Competing logics and the consolidation of U.S. community banking. *Academy of Management Journal*, 50(4): 799-820.

Masuch, M. 1985. Vicious circles in organizations. *Administrative Science Quarterly*, 30(1): 14-33.

Maxwell, J., Lee, J., Briscoe, F., Stewart, A., Suzuki, T. 1997. Locked on course: Hydro-Quebec's commitment to mega-projects. *Environmental Impact Assessment Review*, 17: 19-38.

Mayntz, R. 2004. Mechanisms in the analysis of social macro-phenomena. *Philosophy of the Social Sciences*, 34(2): 237-259.

McIntosh, N. 1995. The ethics of profit manipulation: A dialectic of control analysis. *Critical Perspectives on Accounting*, 6: 289-315.

Mead, H. 1932. *The Philosophy of the Present*. University of Chicago Press: Chicago.

Merton, R. 1936. The unanticipated consequences of purposive social action. *American Sociological Review,* 1(6): 894-904.

Merton, R. 1940. Bureaucratic structure and personality. *Social Forces*, 18(4): 560-568.

Merton, R. 1948. The self-fulfilling prophecy. *The Antioch Review*, 8(2): 193-210.

Meyer, J., Rowan, B. 1977. Institutionalized organizations. Formal structure as myth and ceremony. *American Journal of Sociology*, 83: 340-363.

Meyer, J., Scott, W., Strang, D. 1987. Centralization, fragmentation, and school district complexity. *Administrative Science Quarterly*, 32(2): 186-201.

Miles, M. 1979. Qualitative data as an attractive nuisance. The problem of analysis. *Administrative Science Quarterly*, 24(4): 590-601.

Miles, M., Huberman, A. 1994. *An Expanded Sourcebook – Qualitative Data Analysis – 2nd Edition*. Sage Publications Inc: Thousand Oaks, CA.

Miller, D. 1993. The architecture of simplicity. *Academy of Management Review*, 18: 116-138.

Miller, R., Hobbs, B. 2005. Governance regimes for large complex projects. *Project Management Journal*, 36(3): 42-50.

Modell, S., Jacobs, K., Wiesel, F. 2007. A process (re)turn? Path dependencies, institutions and performance management in Swedish central government. *Management Accounting Research*, 18: 453-475.

Mordhorst, M. 2008. From counterfactual history to counter-narrative history. *Management & Organizational History*, 3(5): 5-26.

Morgan, G. 1997. *Images of Organizations – 2nd Edition*. Sage Publications: Thousand Oaks, CA.

Morgeson, F., Hofmann, D. 1999. The structure and function of collective constructs: Implications for multilevel research and theory development. *Academy of Management Review*, 24(2): 249-265.

Munir, K., Phillips, N. 2005. The birth of the 'Kodak moment': Institutional entrepreneurship and the adoption of new technologies. *Organization Studies*, 26: 1665-1687.

Nelson, K., Nadkarni, S., Narayanan, V., Ghods, M. 2000. Understanding software operations support expertise: A revealed causal mapping approach. *MIS Quarterly*, 24(3): 475-507.

Nelson, R., Winter, S. 1982. *An Evolutionary Theory of Economic Change*. Belknap Press of Harvard University Press: Cambridge, MA.

Nerlove, M. 1958. Adaptive expectations and cobweb phenomena. *Quarterly Journal of Economics*, 72(2): 227-240.

Nestorovic, C. 1991. The automobile industry in the East: National and international strategies. *Eastern European Economics*, 29(4): 34-85.

Nora, P. 1989. Between memory and history: *Les lieux de mémoire*. *Representations*, 26(2): 7-24.

North, D. 1990. *Institutions, Institutional Change and Economic Performance*. Cambridge University Press: Cambridge.

Oliver, C. 1991. Strategic responses to institutional processes. *Academy of Management Review*, 16: 145-179.

Olson, M. 1965. *The Logic of Collective Action*. Harvard University Press: Cambridge, MA.

Organization Studies. 2005. Special issue on the iron cage in the information age: The legacy and relevance of Max Weber for organization studies. 26(4): 493-653.

Orlikowski, W. 1992. The duality of technology: Rethinking the concept of technology in organizations. *Organization Science*, 3(3): 398-427.

Ortmann, G., Sydow, J., Windeler, A. 2000. Organisation als reflexive Strukturation. In: *Theorien der Organisation – Die Rückkehr der Gesellschaft.* Ortmann, G., Sydow, J., Türk, K. (Eds.), 315-359, VS Verlage: Wiesbaden.

Pache, A.-C., Santos, F. 2010. When worlds collide: The internal dynamics of organizational responses to conflicting institutional demands. *Academy of Management Review*, 35(3) 455-476.

Page, S. 2006. Essay: Path dependence. *Quarterly Journal of Political Science*, 1: 87-115.

Pajunen, K. 2008. The nature of organizational mechanisms. *Organization Studies*, 29(11): 1449-1468.

Pettigrew, A. 1985. *The Awakening Giant: Continuity and Change in Imperial Chemical Industries*. Blackwell: Oxford.

Pfeffer, J., Salancik, G. 1978. *The External Control of Organizations: A Resource Dependence Perspective*. Stanford University Press: Stanford, CA.

Phillips, N., Lawrence, T., Hardy, C. 2004. Discourse and institutions. *Academy of Management Review*, 29(4): 635-652.

Pierson, P. 2000. Increasing returns, path dependence, and the study of politics. *American Political Science Review*, 94: 251-267.

Poulot, D. 2007. *Patrimoine et Musées – L'Institution de la Culture*. Hachette Supérieur : Paris.

Powell, W. 1991. Expanding the scope of institutional analysis. In: *The New Institutionalism in Organizational Analysis*, Powell, W., DiMaggio, P. (Eds), 183-203, University of Chicago Press: Chicago, IL.

Powell, W., Colyvas, J. 2008. Microfoundations of institutional theory. In: *Handbook of Organizational Institutionalism*, Greenwood, R., Oliver, C., Sahlin, K., Suddaby, R. (Eds), 276-298, Sage Publishing: Thousand Oaks, CA.

Powell, W., DiMaggio, P. (Eds). *The New Institutionalism in Organizational Analysis.* University of Chicago Press: Chicago, IL.

Powell, W., Packalen, K., Whittington, K. forthcoming. Organizational and institutional genesis: The emergence of high-tech clusters in the life sciences. In: *Organization and Market Emergence*, Powell, W., Padgett, J. (Eds).

Probst, G., Büchel, B. 1997. *Organizational Learning: The Competitive Advantage of the Future*. Prentice Hall Europe: London.

Purdy, J., Gray, B. 2009. Conflicting logics, mechanisms of diffusion, and multilevel dynamics in emerging institutional fields. *Academy of Management Journal*, 52(2): 355-380.

Quadagno, J., Knapp, S. 1992. Have historical sociologists forsaken theory? Thoughts on the history/theory relationship. *Sociological Methods & Research*, 20(4): 481-507.

Ranson, S., Hinings, B., Greenwood, R. 1980. The structuring of organizational structures. *Administrative Science Quarterly*, 25(1): 1-17.

Reay, T., Hinings, B. 2005. The recomposition of an organizational field: Health care in Alberta. *Organization Studies*, 26(3): 351-384.

Rescher, N. 2000. *Process Philosophy: A Survey of Basic Issues*. University of Pittsburgh Press: Pittsburgh.

Riker, W. 1982. The two-party system and Duverger's law: An essay on the history of political science. *American Political Science Review*, 76(4): 753-766.

Ritti, R., Silver, J. 1986. Early processes of institutionalization: The dramaturgy of

exchange in interorganizational relations. *Administrative Science Quarterly*, 31(1): 25-42.

Rizzo, I, Thorsby, D. 2006. Cultural heritage : Economic analysis and public policy. In: *Handbook of the Economics of Art and Culture, Vol. 1*, Ginsburgh, V., Thorsby, D. (eds.), 985-1016, North Holland: Amsterdam, NL.

Ross, J., Staw, B. M. 1993. Organizational escalation and exit: Lessons from the Shoreham Nuclear Power Plant. *Academy of Management Journal*, 36(4): 701-732.

Rossler, M. 2000. World Heritage cultural landscapes. *The George Wright Forum*, 17(1): 27-34.

Royer, I. 2003. Why bad projects are so hard to kill. *Harvard Business Review*, 81(2): 48-56.

Runde, J., de Rond, M. 2010. Evaluating causal explanations of specific events. *Organization Studies*, 31(4): 431-450.

Sapsed, J., Salter, A. 2004. Postcards from the edge: Local communities, global programs and boundary objects. *Organization Studies*, 25(9): 1515-1534.

Scandinavian Journal of Management. 1997. Special issue on: Reflections on conducting processual research on management and organizations. 13(4): 331-503.

Schatzki, T. 2006. On organization as they happen. *Organization Studies*, 27(12): 1863-1873.

Schatzki, T. 2007. Introduction. *Human Affairs*, 17: 97-100.

Schnabel, W., Scholz, T. 2004. *Wirtschaftlichkeit und Qualität des Verkehrsablaufs auf städtischen Elbebrücken in Dresden mit und ohne Bau der Waldschlößchenbrücke*. Untersuchungsbericht, Technische Universität Dresden.

Schneiberg, M., Clemens, E. 2006. The typical tools for the job: Research strategies in institutional analysis. *Sociological Theory*, 24(3): 195-227.

Schreyögg, G., Kliesch-Eberl, M. 2007. How dynamic can capabilities be? *Strategic Management Journal*, 28(9): 913-933.

Schreyögg, G., Sydow, J. 2010a. Organizing for fluidity? Dilemmas of mew organizational forms. *Organization Science*, 21(6): 1251-1262.

Schreyögg, G., Sydow, J. 2010b. *The Hidden Dynamics of Path Dependence – Institutions and Organizations*. Palgrave and Macmillan: New York.

Schreyögg, G., Sydow, J. 2011. Organizational path dependence: A process view. *Organization Studies*, 32(3): 321-335.

Schreyögg, G., Sydow, J., Holtmann, P. 2011. How History matters in organizations: The case of path dependence. *Management & Organizational History*, 6(1): 81-100.

Schuessler, E. 2008. *Strategische Prozesse und Persistenzen – Pfadabhängige Organisation der Wertschöpfung in der Bekleidungsindustrie*. Doctoral Dissertation: Freie Universitât Berlin.

Schwartz, M., Rosenthal, N., Schwartz, L. 1981. Leader-member conflict in protest organizations: The case of the southern farmers' alliance. *Social Problems*, 29(1): 22-36.

Scott, R. 1967. The factory as a social service organization: Goal displacement in workshops for the blind. *Social Problems*, 15(2): 160-175.

Scott, W. 1987. The adolescence of institutional theory. *Administrative Science Quarterly*, 32: 493-511.

Scott, W. 1991. Unpacking institutional arguments. In: *The New Institutionalism in Organizational Analysis*, Powell, W. & DiMaggio, P. (Eds), 164-82, University of Chicago Press: Chicago, IL.

Scott, W. 2008. *Institutions and Organizations. Ideas and Interests. Third Edition*. Sage Publications Inc.: Thousand Oaks, CA.

Selznick, P. 1949. *T.V.A. and the Grass Roots*. University of California Press: Berkeley, CA.

Selznick, P. 1996. Institutionalism "old" and "new". *Administrative Science Quarterly*, 41: 270-277.

Seo, M., Creed, W. 2002. Institutional contradictions, praxis, and institutional change: A dialectical perspective. *Academy of Management Review*, 27(2): 222-247.

Sewell, W. 1992. A theory of structure: Duality, agency, and transformation. *American Journal of Sociology*, 98(1): 1-29.

Siggelkow, N. 2007. Persuasion with case studies. *Academy of Management Journal*, 50(1): 20-24.

Skamris, M., Flyvbjerg, B. 1997. Inaccuracy of traffic forecasts and cost estimates on large transport projects. *Transport Policy*, 4(3): 141-146.

Smith, A. 2002. From process data to publication – A personal sensemaking. *Journal of Management Inquiry*, 11(4): 383-406.

Smith, M. 2002. A critical evaluation of the global accolade : The significance of World Heritage site status for Maritime Greenwich. *International Journal of Heritage Studies,* 8(2): 137-151.

Sorge, A. 1991. Strategic fit and the societal effect: Interpreting cross-national comparisons of technology, organization and human resources. *Organization Studies*, 12(2): 161-190.

Star, S., Griesemer, J. 1989. Institutional ecology, 'translations' and boundary objects:

Amateurs and professionals in Berkeley's museum of vertebrate zoology, 1907-39. Social Studies of Science, 19(3): 387-420.

Staw, B. 1976. Knee-deep in the big muddy: A study of escalating commitment to a chosen course of action. *Organizational Behavior and Human Performance*, 16(1): 27-44.

Staw, B. 1981. The escalation of commitment to a course of action. *Academy of Management Journal*, 6(4): 577-587.

Steinberg, G. 1987. Large-scale national projects as political symbols: The case of Israel. *Comparative Politics*, 19(3): 331-346.

Stevenson, W., Greenberg, D. 1998. The formal analysis of narratives of organizational change. *Journal of Management*, 24(6): 741-762.

Stevenson, W., Zinzow, H., Sridharan, S. 2003. Using event structure analysis to understand planned social change. *International Journal of Qualitative Methods*, 2(2): Article 5.

Stinchcombe, A. 1965. Social structure and organization (Chapter 4). In: *Handbook of Organizations*, March, J. (Ed.), 142-193, Rand McNally: Chicago, IL.

Stinchcombe, A. 1991. The conditions of fruitfulness of theorizing about mechanisms in social science. *Philosophy of the Social Sciences*, 21: 367-388.

Stinchcombe, A. 1997. On the virtues of the old institutionalism. *Annual Review of Sociology*, 23(1): 1-18.

Streeck, W., Thelen, K. 2005. Introduction: Institutional change in advanced political economies. In: *Beyond Continuity – Institutional Change in Advanced Political Economies*, Streeck, W., Thelen, K. (Eds.), 1-39, Oxford University Press: Oxford.

Suchman, L. 2000. Organizing alignment: A case of bridge-building. *Organization*, 7(2): 311-327.

Suchman, M. 1995. Managing legitimacy: Strategic and institutional approaches. *Academy of Management Journal*, 20(3): 571-610.

Sydow, J., Lerch, F., Staber, U. 2010. Planning for path dependence? The case of a network in the Berlin-Brandenburg Optics cluster. *Economic Geography*, 86(2): 173-195.

Sydow, J., Schreyögg, G., Koch, J. 2009. Organizational path dependence: Opening the black box. *Academy of Management Review*, 34(4): 689-709.

Sydow, J., Staber, U. 2002. The institutional embeddedness of project networks: The case of content production in German television. *Regional Studies*, 36(3): 215-277.

Sydow, J., Windeler, A. 1998. Organizing and evaluating interfirm networks: A structurationist perspective on network processes and effectiveness. *Organization*

Science, 9(3): 265-284.

Teece, D., Pisano, G., Shuen, A. 1997. Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7): 509-533.

Thelen, K. 1999. Historical institutionalism in comparative politics. *Annual Review of Political Science*, 2: 369-404.

Thornton, P., Jones, C., Kury, K. 2005. Institutional logics and institutional change in organizations: Transformation in accounting, architecture, and publishing. *Research in the Sociology of Organizations*, 23: 125-170.

Thornton, P., Ocasio, W. 1999. Institutional logics and the historical contingency of power in organizations: Executive succession in the higher education publishing industry, 1958-1990. *American Journal of Sociology*, 105(3): 801-843.

Thornton, P., Ocasio, W. 2009. Institutional logics. In: *Handbook of Organizational Institutionalism*, Greenwood, R., Oliver, C., Sahlin, K., Suddaby, R. (Eds), 99-129, Sage Publishing: Thousand Oaks, CA.

Throgmorton, J. 1992. Planning as persuasive storytelling about the future: Negotiating an electric power rate settlement in Illinois. *Journal of Planning Education and Research*, 12: 17-31.

Tolbert, P. 1985. Institutional environments and resource dependence: Sources of administrative structure in institutions of higher education. *Administrative Science Quarterly*, 30(1): 1-13.

Townley, B. 2002. The role of competing rationalities in institutional change. *Academy of Management Journal*, 45(1): 163-179.

Urry, J. 1982. Duality of structure: Some critical issues. *Theory, Culture & Society*, 1(2): 100-106.

Van Maanen, J., Sørensen, J., Mitchell, T. 2007. The interplay between theory and method. *Academy of Management Review*, 32(4): 1145-1154.

Vergne, J.-P., Durand, R. 2010. The missing link between the theory and empirics of path dependence: Conceptual clarification, testability issue, and methodological implications. *Journal of Management Studies*, 47(4): 736-759.

Von Hippel, E., Tyre, M. 1995. How learning by doing is done: Problem identification in novel process equipment. *Research Policy*, 24(1): 1-12.

Von Schorlemer, S. 2009. Compliance with the UNECO World Heritage Convention: Reflections on the Elbe Valley and the Dresden Waldschlößchen bridge. *German Yearbook of International Law*, 51: 321-390.

Walgenbach, P. 2006. Die Strukturationstheorie. In: *Organisationstheorie*, Kieser, A., Ebers, M. (Eds.), 403-426, Kohlhammer: Stuttgart.

Warner, K., Havens, E. 1968. Goal displacement and the intangibility of organizational goals. *Administrative Science Quarterly*, 12(4): 539-555.

Weaver, G., Gioia, D. 1994. Paradigms lost: Incommensurability vs structurationist inquiry. *Organization Studies*, 15(4): 565-590.

Weber, K. 2006. From nuts and bolts to toolkits: Theorizing with mechanisms. Journal of Management Inquiry, 15(2): 119-123.

Weber, K., Glynn, M.-A. 2006. Making sense with institutions: Context, thought and action in Karl Weick's theory. *Organization Studies*, 27(11): 1639-1660.

Weber, M. 1995. Bürokratie. In: *Max Weber – Schriften zur Soziologie*, Sukale, M. (ed.), 238-256, Reclams Universal-Bibliothek: Stuttgart.

Weick, K. 1976. Educational organizations as loosely coupled systems. *Administrative Science Quarterly*, 21(1): 1-19.

Weick, K. 1979. *The Social Psychology of Organizing*. Random House: New York.

Weick, K. 1995. *Sensemaking in Organizations*. Sage Publications Inc: Thousand Oaks, CA.

Whitehead, A. 1929. *Process and Reality – An Essay in Cosmology (Gilford Lectures, 1927-1928)*. The Free Press: New York.

Whittington, R. 1992. Putting Giddens into action: Social systems and managerial agency. *Journal of Management Studies*, 29(6): 693-712.

Williamson, O. 1975. *Markets and Hierarchies: Analysis and Antitrust Implications: A Study in the Economics Internal Organization*. The Free Press: New York.

Wooten, M., Hoffman, A. 2008. Organizational fields: Past, present and future. In: *Handbook of Organizational Institutionalism*, Greenwood, R., Oliver, C., Sahlin, K., Suddaby, R. (Eds), 130-147, Sage Publishing: Thousand Oaks, CA.

Yin, R. 2009. *Case Study Research: Design and Methods, 4th Edition*. Sage Publishing Inc. Thousand Oaks: CA.

Youn, H., Gastner, M., Jeong, H. 2008. The price of anarchy in transportation networks: Efficiency and optimality control. *Physical Review Letters*, 101(12): 12701-1-4.

Zald, M., Ash, R. 1966. Social movement organizations: Growth, decay and change. *Social Forces*, 44(3): 327-341.

Zald, M., Denton, P. 1963. From evangelism to general service: The transformation of the YMCA. *Administrative Science Quarterly*, 8(2): 214-234.

Zatlin, J. 1997. The vehicle of desire: The Trabant, the Wartburg, and the end of the GDR. *German History*, 15(3): 358-380).

Zucker, L. 1977. The role of institutionalization in cultural persistence. *American Sociological Review*, 42(5): 726-743.

Zukowski, R. 2004. Historical path dependence, institutional persistence, and transition to market economy. *International Journal of Social Economics*, 31(10): 955-973.