2nd International Conference on Path Dependence
Freie Universität Berlin | March 3-4, 2011

Enacting a Long Constricted Path: The Case of a Bridge Construction

Abstract. This article reports on the conflicting construction of a bridge in an environmentally sensitive area. Triggered anew in 1994, the project had already been planed and aborted for over 100 years in the city. Since its early days, the project has been subject of critics from various institutional constituents, from local to international levels. The city, however, managed to resist the pressures and to secure its effort. In the light of the institutional theory, I asked why an organization would resist such pressures for compliance. I approached this case as an issue of organizational path dependence. Historical case analysis is used to cover 15 years of project duration and shows how the city, locked in the suggestive power of a path of constricted efforts, worked to give both physical life and meaning to its project (i.e. *enacted* it) and how it hereby actively reduced its scope for action.

This article reports on the conflicting construction of a bridge in the city of Dresden, Germany. The project was born in the early 90's, as the child of a polarized debate within the City Administration (CA). The debate on the bridge, however, expanded prominently to become, in 2009, an international issue involving all 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.

The conflict culminated in 2006, as journalists reported that the city of Dresden, a World Heritage Site of the UNESCO, had entered the list of World Heritage (WH) sites in danger, due to the imminent construction of the *Waldschlösschenbrücke* (WSB), a four-lane bridge above the Elbe River. Dresden, together with the surrounding Elbe river banks, had been listed WH since 2004, after a self-initiated application process, supported by the State of Saxony and the Federal Republic of Germany. Dresden, once dubbed the 'Florence of the Elbe', was considered a place of critical importance in terms of arts and culture. Indeed the vestiges of its baroque architecture remain as prominent as the memory of its almost total destruction in 1945. In the summer of 2005, informed by local environmentalists, the WH Center (acting as the executive body for the 1972 Convention) sent letters via the diplomatic channels to Germany and Dresden, asking for more information on the bridge project. The city did not react immediately. Eventually, the WH

Center had the project evaluated by independent experts from the University of Aachen, Germany. Based on their results, the WH Committee communicated its concerns with the impact of the bridge and put the site on its so-called 'red list'.

In most cases, such a penalty is sufficient to make change happen. Yet in Dresden, things did not move; instead, the conflict caved in. The city defended the historic character of the project, which had been in preparation for no less than 100 years, and the wide approbation of the population in the local community (67,9% of the citizens approved the project in a referendum in 2004). Meanwhile, options for compromises began to reach the press: tunnel, other locations, etc. Protests, for and against the bridge project, increased and implied the mobilization of national actors, such as famous intellectuals, politicians, and architects. Scrutinized by local jurisdictions and local regulatory bodies, the city claimed its incapacity to step off a project that was all set up and ready to build. In 2007, the construction works started and 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. This was a premiere in Europe, and the second time ever that the UNESCO-WH Committee had to go that far in sanctioning. The bridge is being built and should reach completion in 2011, after almost 20 years of debates.

This situation depicts an extreme case of organizational resistance to repeated disruptive pressures from its social environment. 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 contestations, opposing supporters and opponents to the project. The bridge project has been evolving from an intern dispute to an international issue for 15 years, involving various voices of contestation, from local to global. During those 15 years, the city has been resisting this disruptive pressure, and managed to secure its effort. This challenges old conjectures in organization theory in stressing that organizations do not blindly comply with institutions or work toward inclusive compromise-making. In the light of this, this research asked two questions: *what drove resistance to institutional pressure*, and *how did the city conduct this resistance*.

The findings document the influence of History and of former constricted efforts on the city's decisions to enact the project anew. The results further show how the city gave both meaning and physical life to the bridge, and how this process rigidified organizational decisions.

Theoretical Frame

Institutional theory departs from technical and economic rationality and sees organizational forms and strategies as determined by requirements of institutional nature. Institutional requirements may be manifested by laws, norms of appropriate behavior, cultural specificities, or specific industrial recipes or practices. Sticking to institutionalized requirements and their manifestations allows organizations to gain or maintain a legitimate face and hereby optimize their access to the resources necessary for their survival (Meyer, Rowan 1977; DiMaggio, Powell 1983; DiMaggio, Powell 1991). Phenomena of resistance to institutional pressure are, therefore, challenging.

The Dresden case contributes to question the classical conception of institutions as coherent systems of objectified structures. Institutional theory already provides models that determine organizational resistance to conflicting institutional pressure. Those models depart in two directions. One stream sees a structural influence (e.g. the existence of local 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 asks "how do organizations experience and respond to conflicting demands" (Santos and Pache 2010: 456). 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 et al. 2010: 1).

I approached the Dresden case as a problem of organizational path dependence instead. This perspective accounts for historic conditions and events and observes the development, intern to the organization, of positive feedback loops, or self-reinforcing mechanisms, that reduces the perceived scope of options and alternative developments over time, to explain phenomena of resistance and rigidity. Such mechanisms concern, for example: learn effects, adaptive expectations, or coordination effects and are the results of initial conditions that lie beyond the organizations (Sydow, Schreyögg and Koch 2009). In this view, the explanation for the case lies in a process and thus binds both the structural influence on the organization and what the organization did with it. 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, why it ended as it did, and where all the dust come from.

Recent advances in the research of path dependence concentrate on organizational and strategic decisions (Karim and Mitchell 2000; Garud, Kumaraswamy and Karnoe 2010; Carney and Gedajlovic 2002; Schreyögg and Sydow 2010; Sydow et al. 2009). Several authors already considered issues of path dependence in the emergence and self-reinforcing attractiveness of specific industry locations (e.g. Powell et al. forthcoming), in the development of organizational forms in the Norwegian fishing industry (Holm 1995), or in the development of patterns in contexts of organizational co-operations and technology transfer (Colyvas and Powell 2006). In such cases "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).

For scholars of organizations, paths are internally created and replicated along the organization's history of decisions and actions. Eventually, the decision pattern roots in the surrounding structures, making the process of change even less attractive to trigger. Analytically, Sydow and his colleagues (2009) summarized those dynamics into three consecutive phases with specific regimes and implications.

(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 positive feedback that iteratively enjoin the actors to stick to the path of actions thus constituted. Such mechanisms are of self-reinforcing nature. As for an analytical basis, Sydow and his colleagues identify the following: *learn effects* (makes a chosen solution increasingly attractive, for example because related skills increase or 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 *complementary 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. 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) [1].

(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 process has become path-dependent. Actors locked-in are trapped in the mechanisms of positive feedback they have walked down. The process as a whole becomes the rationale to resist change when adaptation is needed and overrun rational cost/use comparisons, focusing more on the increasingly growing perceived switching costs and on preferences.

Large-scale projects, like the construction of the WSB, present two particularities that make their analysis particularly sensitive to organizational path dependence. First, mega-projects represent technical processes that are largely unpredictable and time dependent (Flyvbjerg et al. 2003). Initial decisions trigger large amounts of technical development and of efforts in optimization. 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 producing 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. Second, mega-projects are as much a matter of analytical work as of storytelling and collective mobilization 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. Such storytelling activities may become the source for blind spots in organizations (Geiger and Antonacopoulou 2009), since stories shape mental models (Bower and Morrow 1990) and support dominant explanations in their rise above

[1] With this framework path dependence should be sharply differentiated from a similar process constitutive of inertia in organizations: escalating commitment (as defined by Staw, 1976). 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 decisions 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 feedback and increasing returns. This is this successful past experience that makes a change so difficult.

subversive alternatives (Ewick and Silbey 1995). For example in giving an inevitable character to the project and dooming future decisions to collective failures (Brown and Jones 1998).

Methodology

Data Collection

The research for this study relies on a historical case analysis. It unpacks 150 years of project history, and 15 years of project implementation that culminated with 4 years of conflict. Multiple data sources were used. 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 collected all related official documents (e.g. press releases, public statements, content from the websites of the administrations involved and of social movements, feasibility studies, evaluative reports on various aspects of the project, legal documents, minutes of proceedings, intern communications, and working drafts of the project) that I could track down. This exhaustive data base encompasses over 6500 pages of documents, enriched with numerous press articles. I further collected visual data such as maps, pictures, 3D visualizations and documentary videos from press reports, and led 17 face-to-face interviews with local politicians, former decision-holders and members of the administration, environmentalists, program specialists of the UNESCO and professionals from diverse fields, all involved with the construction project. The collection phase further included material on local political issues and the traffic situation in Dresden, as well as repeated visits on the construction site.

Analytical Procedures

First I immersed into the data material to write a detailed account of the case, focusing on facts, as usual in historical analysis, i.e. what happened, who took decisions, how were they defended, and the implications for future developments. During this first step, it was necessary to keep asking questions to the field and to oneself, so as to trigger discussions between the material gathered, the theoretical frame, and the case comprehension in its infancy. This was the occasion to triangulate the information, between archives and interviews, to improve the internal validity of the case analysis. Upon completion of this first account, I started sorting out the data and the

assertions made in the interviews. While I did this, I identified the main events and important decisions in the project. It became clear to me at this point in time that the project had been less promoted by funded cost/use comparisons than by preferences and refusals to let go. This confirmed by initial feeling about path-dependent developments. I had those findings eventually validated by interview-partners.

I updated and printed regularly the text-file thus compiled, and carried it with me while proceeding with the empirical research. I kept on writing down some memos and notes about new information, directly with a pen on the paper, and digitally updated the file continually. At some point in time, based on the text-account of the case, I started developing more abstract considerations during the process, and started writing down some models and figures, summarizing some first patterns of positive feedback, all mixed up with theories and empirical data. To accompany this process I started processing the data with the software Altlas Ti, a package that was initially developed for grounded theory applications. I found it most suitable to explore the raw data inductively. This software further allows to process pdf.files instead of doc.files only. It means that documents can be analyzed in their original layout. My initial coding rounds relied on the two main governance activities in mega-projects management as categories: *technical implementation*, and *persuasive communication*. I further related these two activities to the mechanisms of path dependence theory: learn effects, coordination effects, complementarities, and adaptive expectations, using them as devices to make sense of my data. The numerous coding rounds throughout the material evolved at the interplay of the raw-data and of this matrix of theoretical sensitizing devices. This allowed for the development of explanatory mechanisms and processes that are translated into the case's reality. At the same time, the mechanisms are robust and abstract enough to be discussed and implemented into the theoretical discussion.

A City Locked in a Constricted Path

The city of Dresden is located on both sides of the Elbe River. WSB is the name of a traverse over the Elbe (indicated with the black line in figure 1) still under construction, in the Waldschlösschen area, not far from the ancient city center (indicated with a A-mark in figure 1).

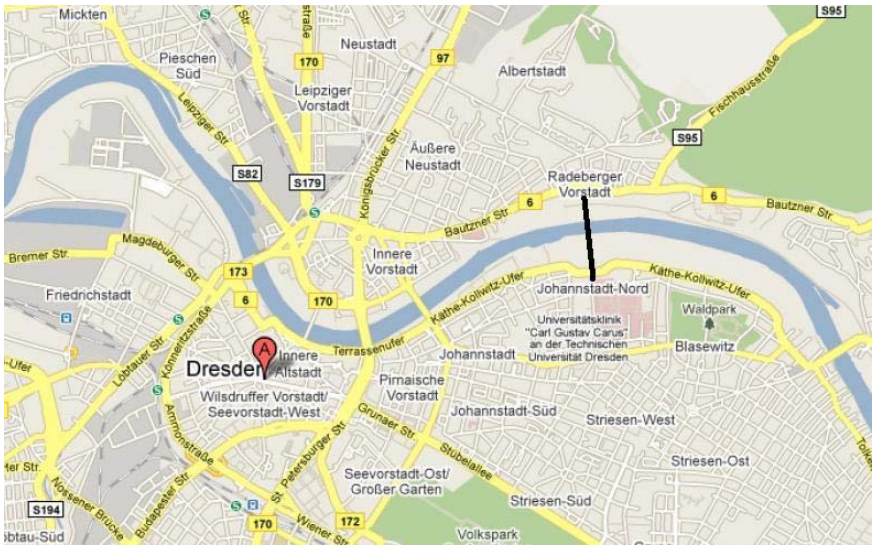


Figure 1 – Map of Dresden (Source: Google Maps and own additions)

A Record of Project Abortions

The current project was started in 1994. However, projects to cross the Elbe at WS had been in discussion for decades. The following empirical elements show how a traverse at WS became more than one more technical problem to solve.

Following former expert studies and informative material from the CA, a bridge at WS first appeared in the 'general construction plan' of 1862 (see figure 2 – bridge marked by a circle). This plan projected the urban evolution of the city, focusing less on traffic issues than on surfaces and construction matters. It foresaw a first ring around the city center, still existent, and, in a near future, a second one, crossing the Elbe at 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 is traceable as early as in 1876. The Elbe cuts the city in the middle of its urban concentration and was gradually enlarged during the XIXth century. The meadows, however, remained large and unexploited, most probably due to the frequent risks of flooding. Several bridges were eventually built, forming a first ring around the, today old (left banks) and new (right banks), city centers. Eventually, the idea of a ring as WS stayed in the argumentation and has been one of the rationales for the project of 1994.

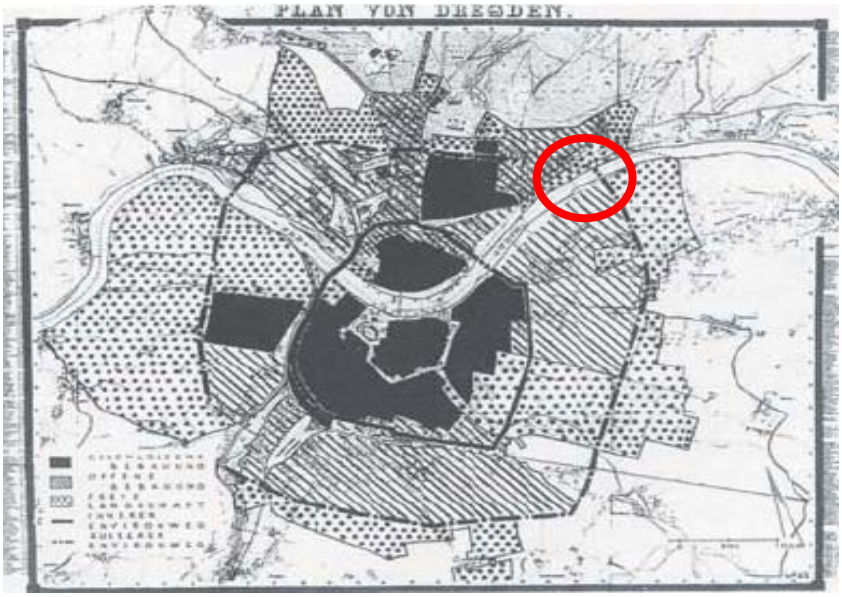


Figure 2 – General construction plan of 1862

(Source: CA and own additions)

In 1900 and 1911, citizens of the districts south-east of the city center first plead for a traverse at WS. The city refused this on aesthetic grounds, based on a motion passed on September 17, 1908. In the 30's, the preliminary work on a larger bridge started again. Between 1926 and 1935 a new traverse in this area received the attention of the Department for City Development. Analyses of building-soils and related pilot studies on structural engineering were performed until 1937. This bridge was to be built at WS to connect the main roads to the motorway passing by, north-west from the city center. However, World War II and the related military efforts in Dresden stopped all projects of this kind. In February 1945, the city of Dresden was taken as a target for military raids, with allied planes dropping tons of explosive over the city until its almost complete destruction.

Reconstruction efforts began after the war. Germany was parted in 1948. Dresden became one of the major cities in the communist German Democratic Republic. Between 1960 and 1970, various studies were conducted in this area. A traverse at WS was to complement the planned construction of residential districts in the North and the East of the city. As a 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. Between 1976 and 1979, the city started projecting an eight-lane bridge at WS with oversized intersections. Analytical work a bridge at WS resumed in 1984. It continued until 1986, and ended with solutions for four- and six-lane concrete bridges. This project was eventually

decided officially in a motion by the ministry for traffic issues of the German Democratic Republic; construction was to start in 1990. An architectural competition took place in 1988 and in 1989 a four-lane cable-stayed bridge was picked as the winning draft and further developed.

Meanwhile, on October 3d, 1990, Germany reunified. In Dresden, as in any other city of the former GDR, individual motorized traffic had remained limited due to a centralized system of distribution with years of waiting-lists for consumers willing to buy a car of their own. A boom in traffic was thus expected and roads and traffic infrastructures received focused attention. In 1992, 44% of the road network suffered serious damages (*schwere Schäden*) and 42% suffered small damages (p.15). Of the (circa) 400 bridges, 27% were suitable, 51% showed small damages, 15% showed limited load capacity and safety, and 7% were still partly destroyed. Between 1990 and 1994, various studies have been performed on tunnels and bridges at WS and at other locations. However, the plans of 1989 for a bridge at WS were considered outdated. The developing of a new plan for a bridge at WS became part of a broader traffic policy, voted on January 28, 1994, by the City Council[2], with 81 votes for the policy, 4 against it, and 6 blanks.

At this point of the study, we see the important role of the first phase in the model of organizational path constitution. Initial conditions here were not the mere influence of institutional configurations or of isolated historical events. In this case, we observe the development of a long constricted path over the years. The bridge became a matter of socialization. Clearly, the idea of a traverse at WS was not new in the city in the early 1990s. In fact, many employees had been busy, planning the "old" WSB during the GDR time until 1988. Hence, in the early 1990s the WSB had stayed a running issue in the discussions on urbanism. Dr Ingolf Roßberg was the Deputy for City Development from 1990 to 1994, and Mayor of Dresden, from 2001 to 2008. He illustrates this situation when he says:

> "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 them, 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

[2] For an account of the city and its management and decision structures please refer to appendix 1.

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" (Data: Interview, 2010)

In 1994, the WSB became the object of one more and last attempt. Needless to say, the willingness to complete the bridge was high. This became a question of prestige. We will see in the next section how this situation first provided the project of 1994 with great degrees of stability and how this allowed the supporters of the project to put their solution to the fore and over other alternatives.

Enacting the Path Anew

An expected rise in traffic volumes was the basic postulate for the traffic policy of 1994. Since 1989, motorized traffic had been increasing continually as a side-effect of the German reunification. It was assumed by the city that this accretion in personal motorization would continue to develop progressively. Those assumptions were based on forecasts compiled in 1989. The values that the city had been expecting for the year 2000 had already been reached in 1991. Similar analysis showed the important increase in individual motorized traffic (cars, motorbikes, car-sharing, etc., excluding trucks) as compared to the usage of public transportations in Dresden and in other comparable cities (see table 1).

		Means of Transportation (In % of all means)			
	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

IMT: Individual Motorized Transportation
PT: Public Transportation

Table 1 –Means of transportation in comparison (Source: CA, Dresden)

Comparable cities like Stockholm and Amsterdam had managed to reduce the usage of IMT with, respectively, the introduction of road-pricing and support for bicycle traffic. In comparison, the IMF traffic in Dresden rose within two years. The CA identified a series of related problems, among others: traffic jams, reduction in average journey time, and obstacles in public transportations. So the CA:

> "This unwanted evolution process will continue if we are not successful in designing strategies for traffic reduction, in increasing drastically the attractiveness of the public transportation, in designing strategies for influencing the choice among means of transportation, as well as strategies for the environmental- and city-friendly processing of the remaining traffic" (Data: Official Report, 1994)

In front of this presumed challenge, the CA was divided into two main strategic answers. On the one side, numerous voices saw this as the opportunity to build the long wanted WSB. For this pro-WSB side, not least supported by the Mayor, Dr Wagner and his political party, the goal was to bundle the traffic on one large bridge, the WSB. On the other side, shortly after the ratification of the traffic policy of 1994, Mayor Wagner appointed an architect as his Deputy for City Development to adjust and further develop the implementation of the traffic policy. Once in the department, the Deputy built a team dedicated to the strategic development of the city. The team searched for new ways to conceive traffic flows in the city, with a focus on public transportation, somehow inspired by the Scandinavian cities, where cars tend to be banned from the city centers via taxes and large pedestrian areas. They refused the large WSB and supported instead a multi-bridge perspective, similar to the one in Paris, with scale-like a succession of smaller bridges, connected to main roads along the river. Their goal was to regulate traffic at numerous places in the city instead of supporting it.

Advocates of the WSB were in majority in the City Council (CC) and in the CA. In the city, technical work is being performed by the CA while the subsequent decisions are ratified by the CC. The Mayor acts as boundary-spanner in chairing both administrative poles (see appendix 1 for brief information on the decision structures in the city). From 1995 on, the new traverse became a public issue, frequently debated in the local press, in favor of the multi-bridge option. In other words: the path was about to be constricted again, this time by lateral thinkers. Several events allowed the advocates of the WSB to keep their project on track and to further enact it. Again, with *enactment* I mean giving both physical life and meaning to the project. Meetings (so

called ‘Dresden Conferences’) were set up to discuss it on a regular basis. On November 8, 1995, during one of those sessions, Mr. Schommer, the late Saxony's Minister of Economics, a member of the same political family as the Mayor and the majority in the CC, intervened into the debate and loosely declared that financial helps from the State of Saxony would be made available only for the construction of a bridge at Waldschlösschen. From then on, the WSB started profiling itself as priority in the formal and informal discussions. On December 14, 1995, the CC asked the mayor to evaluate again the options and to present them 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. The discussion thus went back and forth and started polarizing the actors involved. To legitimize its project, the city organized a workshop aiming at determining the solution to prioritize.

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 bridge Blue Wonder, located east from the city center. The team for strategic development provided a perspective on traffic where the new infrastructures would contribute to redefine the relation between citizens and their choice in means of transportation, by promoting a modal split between individual motorized and public transportations of 20 to 80. The then Mayor, Dr Wagner, on the other side, doubted the realization of two bridges instead of one. Discussions went on, stating that any bridge anywhere would impact on the traffic figures. The local State’s representative, however, stressed that it would help financing the most promising option in terms of traffic distribution. In opposition to the WSB, the bridges proposed were described as harder to connect to the main network. The team wondered:

> “It is absolutely justified to challenge, critically, decades-old conceptions on new bridges. An adherence to this decades-old conception without critics would be damaging”
> (Workshop Protocols, 1996)

The costs-argument was in favour of the multi-bridge concept, and participants started wondering why the state would not finance it. Interestingly, discussions about actual goals and target-values in traffic resolution were missing in this evaluation of the best option. The main arguments for the WSB became: an easier access to financial help from the State; the willingness to face any kind of worst-case scenario in case of traffic boom; an easier linkage to main roads; and especially: a greater probability for the WSB to be accepted by the population, since the

project had been debated for decades and over many generations. Retrospectively, it was admitted that this workshop was just a venue to legitimize the WSB as premium choice, rather than an occasion to evaluate the best option. In other words: the choice was already made. This judgment over the workshop was confirmed to me by interviewees from both sides, deeply involved in the project. 52 participants were invited. 28 of them were allowed to vote in a contested constellation, determined by the Mayor. This contributed to contestations in the community, alleging that the end-result was a scam. The Mayor, however, submitted the WSB-project as top priority to the CC. The project was now first priority and ready for implementation.

Enacting Stability, Triggering Rigidity

This historical account has shown how the history of the project and the numerous aborted efforts shaped a constricted path boiling within the city's administrative structures. This presence in the community's mind played a significant role in the current enactment of the project. Issues of costs and traffic figures were less considered than issues of expectations of citizens as well as of the financing body. The first official decisions we just saw illustrate what happened next: the enactment of stability, between technical implementation and collective mobilization for support. Shortly after ratification, the CA started adjusting the project. Between 1996 and 2004, numerous decisions have been made in terms of technical priorities, engaging the project into stages of incremental development both in technique and in meaning. In this respect, two processes supported by two main mechanisms of positive feedback, *learn effects* and *adaptive expectations*, were levered by the city to congeal the project's trajectory and to prevent it from further constrictions. Those two processes are summarized in figure 3.

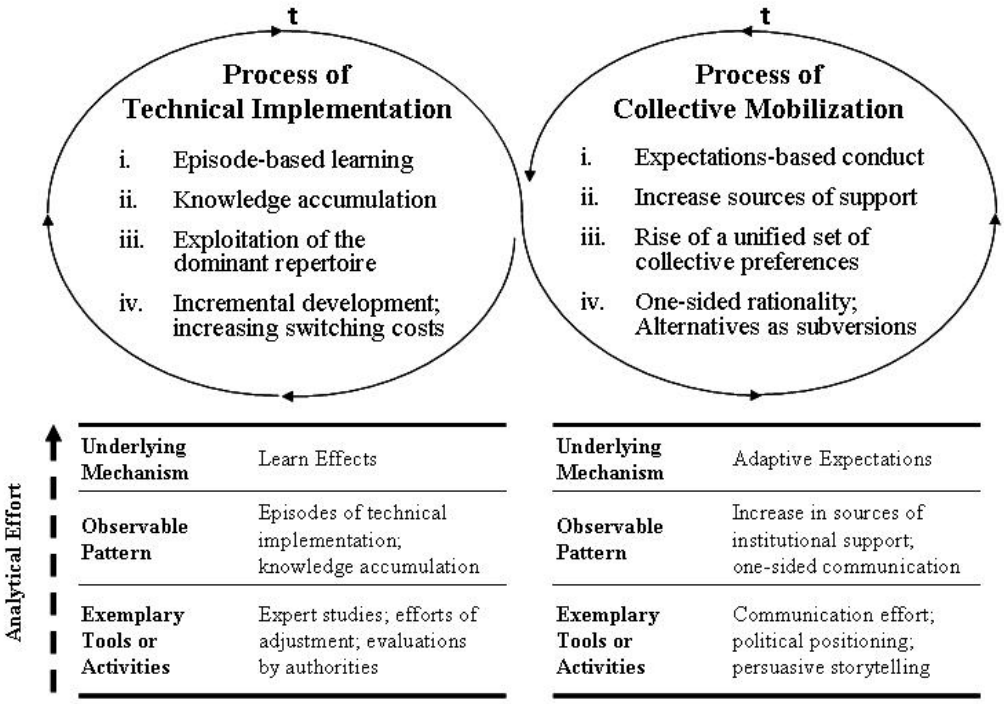


Figure 3 – The enactment loop

Those two processes feed each other. To put it simply: one technical step, like the modeling of the bridge in an architectural competition, is further accompanied by a campaign of collective mobilization to see most complains answered in the technical design and thus increase its social support, allowing further legitimization and implementation of new technical steps, and so on. This loop, however, is a double-edged sword. While the city enacts stability and order, it also triggers rigidity by reducing its scope of action.

Fed with learn effects, the process of technical implementation as such implies that specific arrangements taken at time period T1 serve as the basis at time period T2 and henceforth narrow the span of action. Upon successive phases of implementation, this loop leads to a phenomenon of accumulation of knowledge (see Argote and Todorova 2007) that counter-balances the classical "exploitation-exploration" duality. The organizations and their members exploit and further enrich one repertoire of knowledge. It traces a steady incremental development that both circumvent alternative developments increase potential switching costs. Similar to Miller's architecture of simplicity (1993), where organizations tend to refine and revise what they are better at, the project we consider here inevitably developed a repertoire of knowledge that grew far superior to the knowledge on any other option.

The construction of a bridge being largely a matter of alignment (Suchman 2000), a strong and committed basis of supporters is necessary for the project to remain on track (Miller, Hobbs 2005). Related practices imply the management of collective expectations and their alignment to support the implementation we detailed before. Observable elements in this respect correspond here to a steady increase of institutional support from various stakeholders: citizens, legal jurisdictions, or regulatory agencies. I root this phenomenon into the idea of 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). While the apparent support increases and diversifies its sources overtime, the conduct of the organizations supporting the project evolve along a rising set of unified expectations. This feeds the idea that stepping back would counteract the collective preferences that have been built. This process fosters the incremental development of a one-sided rationality around the project.

Technical Implementation and Collective Mobilization: The Bright Side

Between 1994 and 1996 the city worked on different technical solutions, looking at four other locations for traverses by means of traffic and feasibility studies. As we just saw, the debates turned in favor of a WSB A pilot survey for traffic plan was conducted in 1996, as well as a first feasibility study for a bridge in the chosen area. Based on those results the WSB was eventually voted in the CC in august 1996. The project was then modeled in an architectural competition in 1997. This necessitated establishing indexes of all constraints and challenges to answer (water and shipping authority, landscape protection, environment, etc.). Plans and questions were debated before evaluations took place. From then on, the winning project served as a basis for the successive rounds of implementation and the official plan was then projected. This process has been a painful one, as reported by the architect of the bridge:

> "the first preliminary plans so to speak, for such a big project, I should check up, normally such a thing would take us one and a half year, two years maximum. It was the case here, and then there was… I don't know, we had to revise 30 additions for this project or something, it means there were always new parameters from the politics that we had to take into account. I don't know how often we redesigned the project, this is... 30 additions, it means we had to deviate 30 times from the original plans we had produced, and redesigned them, sometimes small things, sometimes the whole thing." (Data: Interview, 2010)

This process implied numerous studies and evaluations, including for example: work on the implementation of a tramway and its subsequent removal, ground analyses, sound-based analyses, preparation of impact on landscape preservation, water-based analyses and impact on the River flow, and numerous other works. 1998 to 1999 were years dedicated to the development of a complete plan. The bridge changed on many occasions, dropping its tramway line, shifting from steel-bridge to concrete and steel mix, the development of plans for the tunnels and all the installations needed in the connecting areas. Four main sections of work were settled: bridge and bridge heads, tunnels, street works, further traffic installations, establishing cost-use calculations, plans of executions, and estimates in time and money. Many adjustments were made in the last weeks, from green plantations to gradients in the curve bridge-tunnel, or public transportations and access for walkers. The appraisal was eventually rejected for lack of preparation in July of 2000. For a second round, one took the former submission and enriched it with additional work on sound impact and protection, and new expert studies ordered on one of the head of the bridge (with the preparation of a tunnel as entry gate on one of the bridge's ramp).

The knowledge thus accumulated was summarized in a repertoire with official character (similar to Brown 2004 and his study of authoritative reports). The plans represent 11 to 14 large lever-arch files (depending on the versions) 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 the project, from the engineering and history of the project, to figures on traffic and costs. Upon examinations, the Regional Directorate of Dresden held public hearings to take most complains into account, and asked for new specifications on traffic issues, on the risks of harmful substances rejection. The implementation of the bridge eventually implied numerous adjustments and corrections, always based on the plan officially appraised by the RD in 2004, thus enriching the repertoire.

To make this technical work possible, the city had to build collective commitment at repeated critical junctures. As the traverse-project started in 1994, two center-right political parties made the WSB their project. They benefited from the support of the Land's government, also represented by the same party. The other political parties welcomed the project with more distance, acknowledging today that a clear contra-position was already difficult to take. In this

respect, the statement made by the State minister on financing was influential. It was clear for the city that it would indeed never obtain as much money from the State and the Federal government. Money and immediacy drove the decision. Sticking to the expectations of the citizens and of the local regulator appeared to be easier than projecting a new strategy. The two political forces in the CC then dragooned more support from the different parties to gain a strong basis in the intern decisions. For example, the opposition party asked for the construction of a tramway line on the bridge as a compromise to align its decision. This was automatically accepted and eventually withdrawn once the project was secured. Yet this granted an official majority for the bridge, leaving a weakened opposition camp aside. The RD, largely under the realm of the same party as the city, further granted its support with repeated decisions blocking the nascent social movements against the bridge. Using this majority, the project was eventually secured with numerous official motions from the CC. Those motions often served as discussion basis in legal argumentations. The RD Dresden communicated the official plan appraisal in 2004. In August of the same year the Free State of Saxony granted EUR 96 Mio for the construction of the bridge

In 2004, the composition of the CC changed and the new majority left and center-left tried to stop the project by cutting out its financial support, arguing about the priority of other poles of investments like the renovation of the roads, of schools, and the creation of kindergartens. To answer this escalation in local dispute, the two supporting parties, together with Germany's and Europe's largest automobile club, organized a public referendum to dragoon, this time, the citizens into the decision process, thus broadening the institutional sources of support. On February 27, 2005 50, 8% of the electoral register (n= 398247) participated in the referendum. 67, 9% of them (137152 citizens) voted in favor of the construction of a bridge at Waldschlösschen. For the CA, this result was binding until February 27, 2008. After this date, the only way to break out of this legal situation was for the CC to pass a motion with a two-third majority. Needless to say, the two supporting political parties blocked this decision. They used this enacted order to argue that:

> “Changing the design would have required launching a completely new planning process with considerable delays and economic losses, thus in practice undermining the substance of the decision of the Referendum” (Data: Mission Report WH Center, 2008)

Technical Implementation and Collective Mobilization: The Dark Side

As the repertoire of knowledge grew and reached official completion, the willingness to deviate from it, not to mention to abandon it, decreased substantially. As stated in the introduction, Dresden had become WH Site in 2004. In 2005, the WH Center started questioning the project. The construction was taking place where the Elbe is at its largest, in the area under protection (at this very place, the river forms an elbow with large meadows). This triggered massive movements of contestation, including pressures from the federal level. The issue grew from local to national and the city saw itself obliged to defend the project, or to plan it anew, to find a solution that would satisfy the UNESCO. The WH Center mentioned other alternatives, like a tunnel or a bridge somewhere else. The city put studies and previous works to the fore to counteract this development, considered largely negative. In 2008, after the WH Center and the ICOMOS had sent a special monitoring mission to Dresden, the city answered the report with an extensive letter to the WH Center in Paris. Here is how the CA answered the proposition to shift to an alternative, in this case a tunnel:

> "The objective obstacles against a tunnel have already been indicated in a letter from the city of Dresden to the World Heritage Center: 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." (Data: Official letter to the WH Center of the UNESCO, 2008)

Technical flexibility had been abandoned step by step. Concentrating on the bridge solution further impacted issues of costs and provoked sunk-costs effects, urging the decision-holders to complete the effort. In 1994, the project was estimated at EUR 114 Mio (prices of 2009- inflation corrected). In comparison, the multi-bridge solution was supposed to be EUR 49, 5 Mio cheaper (2009 prices). Today the project costs are estimated at EUR 182 Mio (2009 prices). This 60% increase was the result of the inclusion of specific solutions to achieve collective support and of the conflict around the project. The construction of tunnels, for example, was necessary to calm down the worries issued by environmentalists and heritage conservators. This solution, however, dramatically increased the costs. Further escalation was due to the contestations in the city. Animated by the feeling that the proponents of the bridge were maneuvering their will with little respect for democracy, social movements filled several legal

actions against the project. This disruptive dynamic triggered additional work and impacted costs directly. EUR 19, 2 Mio were necessary after the construction was stopped for negotiations. EUR 0, 6 Mio were spent, in an attempt to make the bridge WH-conform. Further EUR 8 Mio (2009) was necessary due to waiting times. At the time of writing, the expenses for the project are being monitored by independent experts to prevent from further escalations.

This dynamic of contestation was the occasion for the city to reinforce the rising collective mobilization. As we just saw, in 2004 the CC was ruled by a new majority against the project. This position was sharpened by the first critics from the WH Center in 2005. In sharp contrast, the project got pushed by the RD, and the then Mayor, at the head of the CA, in charge of the WSB for over 10 years. The CC, the Mayor, and the RD entered a legal battle, going from local jurisdictions to federal courts. During December 2006 and January 2007, a mediation was ordered by the Higher Administrative Court and took place without success. On March 9, 2007 the Higher Administrative Court finally ruled in favor of the RD and of the Mayor: the CC of Dresden was to follow the democratic decision to which it had been bound by way of referendum. This was a non-appealable decision. On November 19, 2007, the construction started physically. Today, when asked about what would have been the consequences of a radical change in the project's design, as required by the UNESCO for example, the two supporting parties refuse the debate and consider it as one more opportunity for the remaining opponents to disrupt the project permanently. For, so they say, there is no trust left for compromises. So the spokesman of the main opposition party:

> "Also the discussion about a multi-bridge concept has contributed to this weariness in discussion, and actually made this clear, fat, solid, fancy solution -that had already been conceived during the GDR time- socially acceptable. (…) This has been polarizing until today. It created a climate of reciprocal suspicion, the culture-destroyers on one side, the growth-preventers on the other." (Data: Interview, 2010)

The communication efforts rose during this period. It increasingly implemented the history of past altercations, as well as local frames of meaning like the logic of democracy (Thornton and Ocasio 2008) and its relation to the communist experience in the GDR, or the historical reputation of Dresden as cultural city, to clarify their position in the conflict. Those arguments tackled different perspectives. A technical rationality was involved, for the city was not prepared

to implement anything but a bridge. Years of plan-development had gone by. During this process the CA provided concrete arguments to counter other abstract alternatives. It therefore built on the knowledge accumulated to position the bridge as a local concept for local problems, evoking the work performed, the certainty that the best solution had been picked and was being implemented:

> "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 floodplains." (Data: Municipal communication, 2007)

The public communication further addressed legal and normative (i.e. what is socially expected) components. Considering the history of the city, playing on the implementation of legal decisions and on the respect due to democratic devices can become quite an issue. Dresden went from one dictatorial regime to another during most of the twentieth century. After the National Socialist regime, 1933 to 1945, the city drifted toward the communist regime imposed by the Russian occupant until 1949, to become part of the German Democratic Republic, in place from 1949 to 1990. This experience was translated into a strong link between democracy and construction in the communication of the administrations. Constructing became democracy, since the decision to build had been made using the referendum as a tool. With such an argument, the plea of the WH Center became an undemocratic affront. This is for example particularly strong when Mrs. Orosz, Mayor since 2008, announces to the UNESCO:

> "Only metres 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." (Data: Official letter to the WH Center, 2008)

After the referendum, the public opinion in the city remained in favor of the WSB as projected. Several studies were conducted by the local university. As the conflict with the UNESCO started, 55% of the citizens said they would vote again for a bridge in case of a second referendum, 58% said they would do so in June 2008, and 60% in August 2008. Individuals, however, are knowledgeable agents (Giddens 1984) and their opinion, accordingly, is not frozen in time. In the studies mentioned, the researchers performed a second round of questions. This time, they informed their informants about other alternatives, stressing especially a tunnel option.

The scores changed, with 47% of the informants for a tunnel and 45% for the bridge. Informed about the financial solution offered by the federal government, 54% picked the tunnel option.

Conclusive Remarks

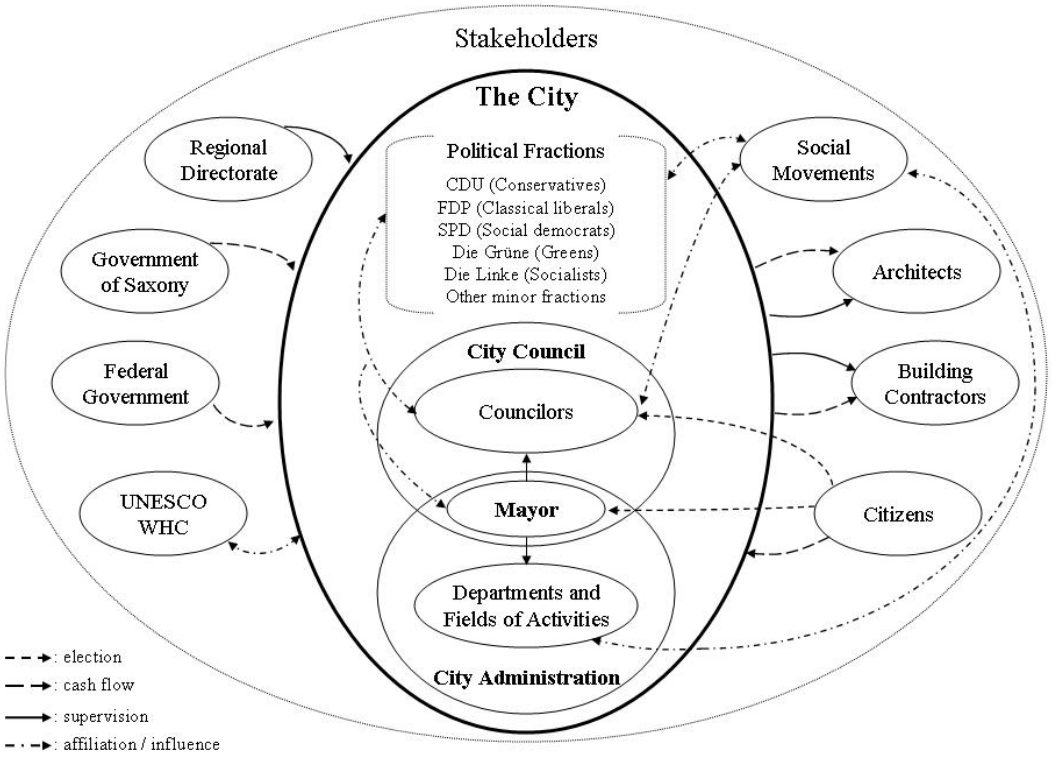
This article reports on the collision of various sources of institutional pressure at the community, national, and field levels and illustrates how a city enacted this collision and conducted its way through it by rigidifying its own scope of action. Building on the notion of organizational path-dependent development, the findings give an overview on how local administrations mobilize local history, culture, and their legal environment to infuse current problems with meaning and how this process is coupled with technical work. In the Dresden case, this pattern repeated itself over 14 years. Two main processes played a significant role in the constitution of the dependencies behind the construction project. Those dynamics have been illustrated separately for the sake of clarity. In practice, the two processes we identified ran simultaneously and fed each other. The suggestive power they developed, (i.e. sustained by a perceived accumulation of knowledge, and the set of expectations developed) made any abstract switch in design and projection highly unattractive for the supporting organizations, if not unattainable in practice. The dynamics constitutive of these processes fed the rise and dominance of a one-sided rationality over other potential solutions. As a result, it reduced significantly any chance to successfully disrupt the project, and herewith to think about developing alternative solutions towards conflict resolution. Locked in a recursive play between past actions, current understandings, and possible options for future actions, the public administrations and political organizations involved took the path of a suggestive power that grew stronger with every step. Those findings enrich the literature on organizational resistance to institutional pressure in showing how conflicting demands are not the results of institutional pressure or organizational strategy only. Instead, such conflicts in institutional demands are the results of the organization's instantiation of broader frames of meaning, in our case the long history of a constricted construction effort, and the self-reinforcing dynamics it eventually triggers to lock itself into stability.

By its empirical focus, this article makes a contribution for researchers interested in multi-

level analysis, global/local confrontations, institutional pluralism, and the dynamics behind highly persisting arrangements, a point that is key to social and cultural constructionist research (Hacking 2000). While there was a need to move institutional analysis from a sole macro perspective a couple of years ago, the recent evolution tends to move far in the agency and interest-based politics (Thornton and Ocasio 2008). In this case of incompliance a bridge between both perspectives was needed to understand what happened. This can be reached by using more dynamic and process-based theories, path dependence theory but not at all exclusively, to bridge cultural categories in organizational life, organizational conducts, and the rise and magnificence of their mutual structuration over long periods of time (for a similar plea see Barley and Tolbert 1997). In this respect the path dependence theory has a strong potential for theoretical development. Not only does this theory pace the development of structures that are both enabling and constraining, it also sheds light on what actors actually do in this respect, and how they contribute to lock themselves in structures. Empirical applications in this direction could contribute to broaden our understanding of actors' relations to the institutional landscape in which they evolve, how resources are coupled to certain constituents, and how certain practices enact related institutionalized expectations.

APPENDIX 1 – The City of Dresden: Boundaries and Stakeholders

The figure below describes what I refer to as the "city" in Dresden. The Mayor is elected by the citizens for a term of seven years. She/he chairs the CC and acts as the Head of the CA. The CC is made of 70 members, elected by the citizens of Dresden. Meeting every three weeks, the CC is mandated to set the policies and decides on all municipal affairs in the name of the citizens. The Mayor and the Administration are in charge of implementing the resolutions thus voted. The CA is divided into eight departments: general administration, finances, order and security, culture, social services, city development, and economic affairs. Those departments, led by seven deputies and one departmental manager, further control sub-fields, special domains, and municipal businesses. Above that level, the RD acts as regulatory agency to coordinate the functioning of the administrative apparatus in the local State of Saxony. One of those directorates is in charge of the Dresden area. It controls for the legitimate functioning of the city and checks for the legality of its work and decisions. *Please note that the figure below does not take the relations among stakeholders into account.*



Bibliography

Anderson, P., Blatt, R., Christianson, M., Grant, A., Marquis, C., Neuman, E., Sonenschein, S., Sutcliffe, K. 2006. 'Understanding mechanisms in organizational research: Reflections from a collective journey'. *Journal of Management Inquiry*, 15: 102.

Argote, L. and G. Todorova. 2007. 'Organizational learning'. *International Review of Industrial and Organizational Psychology*, 22: 193-234.

Barley, S., and P. Tolbert. 1997. 'Institutionalization and structuration: Studying the links between action and institution'. *Organization Studies* 18: 93-117.

Bower, G., and D. Morrow. 1990. 'Mental models in narrative comprehension'. *Science*, 247: 44-48.

Brown, A. 2004. 'Authoritative sensemaking in a public inquiry report'. *Organization Studies*, 25(1): 95-112.

Brown, A., and M. Jones. 1998. 'Doomed to failure: Narratives of inevitability and conspiracy in a failed IS project'. *Organization Studies*, 19(1): 73-88.

Carney, M., and E. Gedajlovic. 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.

Colyvas, J., and W. Powell. 2006. 'Roads to institutionalization: The remaking of boundaries between public and private science'. *Research in Organizational Behavior*, 27: 305-353.

David, P. 1985. 'Clio and the economics of QWERTY'. *American Economic Review*, 75: 332-337.

DiMaggio, P., and W. Powell. 1983. 'The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields'. *American Sociological Review* 48: 147-160.

DiMaggio, P., and W. Powell. 1991. 'Introduction' in *The New Institutionalism In Organizational Analysis.* Powell, Walter, and Paul DiMaggio (eds), 1-38, Chicago, IL: University of Chicago Press.

Ewick, P., and S. Silbey. 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.

Flybjerg, B., N. Bruzelius, and W. Rothengatter. 2003. *Megaprojects and risk - An anatomy of ambition*. Cambridge University Press: Cambridge, UK.

Garud, R., A. Kumaraswamy, and P. Karnoe. 2010. 'Path dependence or path creation?'. *Journal of Management Studies*; Accepted Article, forthcoming.

Geiger, D., and E. Antonacopoulou. 2009. 'Narratives and organizational dynamics: Exploring blind spots and organizational inertia'. *The Journal of Applied Behavioral Science*; 45(3): 411-436.

Giddens, A. 1984. *The Constitution of Society: Outline of the Theory Structuration*. Berkeley, CA: University of California Press.

Hacking, I. 2000. *The Social Construction of What?*, Cambridge, MA: Harvard University Press.

Holm, P. 1995. 'The dynamics of institutionalization: Transformation processes in norwegian fisheries'. *Administrative Science Quarterly* 40: 398-422.

Karim, S., and W. Mitchell. 2000. 'Path-dependent and path-breaking change: Reconfiguring business resources following acquisitions in the U.S. medical sector, 1978-1995'. *Strategic Management Journal*, 21(10-11): 1061-1081.

Marquis, C., and M. Lounsbury. 2007. 'Vive la résistance: Competing logics and the consolidation of U.S. community banking'. *Academy of Management Journal*, 50(4): 799-820.

Meyer, J., and B. Rowan. 1977. 'Institutionalized organizations: Formal structure as myth and ceremony'. *The American Journal of Sociology* 83: 340-363.

Miller, D. 1993. 'The architecture of simplicity'. *Academy of Management Review*, 18: 116-138.

Miller, R., and B. Hobbs. 2005. 'Governance regimes for large complex projects'. *Project Management Journal*, 36(3): 42-50.

Powell, W., K. Packalen, and K. Whittington. (2010). 'Organizational and institutional genesis: The emergence of high-tech clusters in the life sciences' in: Padgett, J., and W. Powell (Eds.) *The Emergence of Organizations and Markets*, Chapter 14. Forthcoming.

Pache, A.-C., and F. Santos. 2010. 'When worlds collide: The internal dynamics of organizational responses to conflicting institutional demands'. *Academy of Management Review*, 35(3): 455-476.

Schreyögg, G., and J. Sydow. 2010. 'Organizing for fluidity? Dilemmas of new organizational forms'. *Organization Science*, articles in advance: 1-12.

Staw, B. 1976. 'Knee-deep in the big muddy: A study of escalating commitment to a chosen course of action'. *Organizational Behavior & Human Performance*, 16: 27-44.

Suchman, L. 2000. 'Organizing alignment: A case of bridge-building'. *Organization*, 7(2): 311-327.

Sydow, J., G. Schreyoegg, and J. Koch. 2009. 'Organizational path dependence: Opening the black box.' *Academy of Management Review* 34: 689–709.

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.

Thornton, P., and W. Ocasio. 2008. 'Institutional logics' in *The Sage Handbook of Organizational Institutionalism*. Greenwood, , R., C. Oliver, K. Sahlin, and R. Suddaby (eds), 99-129, Thousand Oaks, CA: Sage Pub. Ltd.

Weber, K. 2006. 'From nuts and bolts to toolkits: Theorizing with mechanisms'. *Journal of Management Inquiry*, 15: 119.