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Railway Station Mega-Projects and The Re-Making of Inner Cities in Europe

GUEST EDITORS: DEIKE PETERS AND JOHANNES NOVY

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RAILWAY STATION MEGA-PROJECTS AND
THE RE-MAKING OF INNER CITIES IN EUROPE
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Railway Station Mega-Projects as Public Controversies: The Case of Stuttgart 21

JOHANNES NOVY and DEIKE PETERS

This contribution traces the ongoing political controversy surrounding ‘Stuttgart 21’ – one of the largest and most ambitious railway and urban redevelopment projects currently planned in all of Europe. The article provides an up-to-date review of Stuttgart 21’s development history and of the mass protests the project has sparked, linking them to key theoretical debates of mega-projects and the context within which they are realized. Particular attention is devoted to 1. understanding Stuttgart 21 as a key exemplar of contemporary mega-project development; 2. analyzing dynamics of participation, politics and power in mega-project planning and implementation; and 3. assessing the wider implications of the mass protests against S21 for planning and policy-making in Germany.

Stuttgart 21 is a project of superlatives. It represents one of the largest and most ambitious railway and urban redevelopment projects currently planned in all of Europe. It is also already one of the most contested mega-projects in recent history. Rarely has a comparable project generated more conflicts and controversies than Stuttgart 21, and rarely, if ever, did conflicts surrounding a mega-project result in broader and more powerful political repercussions than in the case of Stuttgart 21. Not only has the struggle surrounding the multi-billion euro project given rise to a heated national public debate about mega-projects and issues of accountability, transparency and participation in urban and infrastructure development more generally, but commentators also contend that it is responsible for seismic shifts in Germany’s political landscape. The storm of protest against Stuttgart 21 is widely considered one of the key factors behind the historic victory of Germany’s Green party Bündnis90/Die Grünen in the 2011 elections

in Baden-Württemberg, the state of which Stuttgart is the capital, making the Greens’ leading candidate Winfried Kretschmann Germany’s first-ever Green state premier.¹

The purpose of this article is twofold. It seeks to provide a timely, up-to-date review of Stuttgart 21’s development history, focusing on both the project itself and the protests it has sparked. Further, it will link the fascinating story unravelling in Stuttgart to key theoretical debates regarding mega-projects and the context within which they are realized. Particular attention will be devoted to three areas: 1. Stuttgart 21 as an exemplar of contemporary mega-project development; 2. issues of participation, politics and power in mega-project planning and implementation; and 3. the wider implications of the contestations which the project faces.

The Making of a Mega-Project – Stuttgart 21’s Planning History

Hailed as a ‘once in a century project’ by

Table 1. Stuttgart 21: facts and figures.

Total line length	c. 57 km
Number of tunnels and cuttings	16
Stations	Stuttgart Main Station with eight tracks; Filderbahnhof Flughafen with two station sections; S-Bahn station 'Mittnachtstrasse' in Stuttgart
Urban redevelopment component	c. 100 ha of railway land next to the city's current central station
Construction time	c. 9 years
Official cost estimate (as of 2009)	c. €4.088 billion

project protagonists, Stuttgart 21 has faced fierce opposition ever since the plans for it were first announced in the early 1990s. The key idea was to overhaul the rail infrastructure and station and redevelop approximately 100 ha of railway land in the heart of Baden-Württemberg's state capital. Stuttgart 21 is part of a whole set of visionary '21 projects' which German Railways started to promote soon after it was privatized in 1994 and which were typically based on a core concept of transforming an above-ground terminal station into an underground through-station while at the same time better maximizing the real estate potential of the station area.²

By the scheduled start time of autumn 2010, mass rallies, with as many as 100,000 demonstrators, were taking place against the project. On the day the demolition work for the project began there was a massive police crackdown against non-violent demonstrators. This sent shockwaves throughout the country, and officials – who had previously insisted that they would not back down to the protests – had little choice but to reverse their course of action and look for a way to resolve the growing tensions over the project. Demolition work was put on hold and public mediation talks were held to hammer out an agreement with the protestors. Aired live on national TV and followed closely across the country, the mediation talks were led by one of Germany's most charismatic and widely respected politicians, Christian Democrat and Attac³ member Heiner Geißler. In his arbitral

verdict, Geißler concluded that the project was – formally speaking – democratically legitimized and too advanced to be stopped, thus allowing it to move forward. Yet, he was also careful to make clear that the political consequences of the struggle surrounding the project should not be underestimated. 'The world is different after Stuttgart 21', Geißler told the German weekly *Die Zeit* (2010), adding that 'no future government will be able to push through a project the way Stuttgart 21 was pushed through' and that 'politics will be forced to consider not only technological and economic advantages but also the impact on people'. Whether that prediction will come true remains to be seen, but there is no question that the struggle surrounding Stuttgart 21 marks a watershed for German politics – a watershed that could still derail the approved project as parts of the Green party, which now leads the governing coalition in Baden-Württemberg, remain committed to stopping it and cost overruns could still kill the project.

The Initial Planning Stage

According to the plans prepared when the project was launched more than 15 years ago, it should have been completed by now. Few, if any, of the officials who were involved at the outset could have failed to anticipate the size, scope and intensity of the protests that Stuttgart 21 would spark. A multi-level public-private partnership (PPP) project of the (legally privatized but still publicly

owned) German railway company, Deutsche Bahn AG (hereinafter referred to as 'DB'), the federal government, the state (*Land*) of Baden Württemberg, the city as well as the association representing the greater Stuttgart region (Verband Region Stuttgart – VRS), Stuttgart 21 was first presented to the public on 18 April 1994 by then-Chairman of DB, Heinz Dürr.

Several factors led to the project's conception, the primary one being the need to find a way to extend the high-speed (HST) track between Mannheim and Stuttgart to Ulm, a city about 90 kilometres southeast of Stuttgart, and Munich. Because Stuttgart is located in a narrow valley and because its existing station is a terminus, trains arriving must turn and leave in the same direction as they arrived. DB had initially favoured a new HST track along the Neckar valley that would have bypassed Stuttgart's city centre in favour of a through-station on the city's outskirts (Rosenstein). Officials at state, regional and particular municipal levels deemed this unacceptable and after several

other alternatives had been discussed, a proposal by *Stuttgart-based* transportation expert Gerhard Heimerl – the so-called 'Heimerl-route' – emerged as the favoured alternative. This maintained the role of the existing terminus as the region's main transportation node and suggested that the HST should pass through the sides of Stuttgart's valley by means of newly built tunnels, stop in a through-station under the central terminus and continue towards Ulm parallel to the A8 motorway (Wolfram, 2003, p. 153). Subsequently the idea to move *all* rail operations underground emerged and five additional underground tracks were added: the idea of Stuttgart 21 was born. This scheme, it was argued, not only resolved the existing bottleneck situation but also connected Stuttgart's centre to the HST. It would also make it possible to link the city's airport and its newly built trade fair to the HST network and use large swathes of surplus rail land above-ground for urban and economic development.

This prospect was enticing to local and

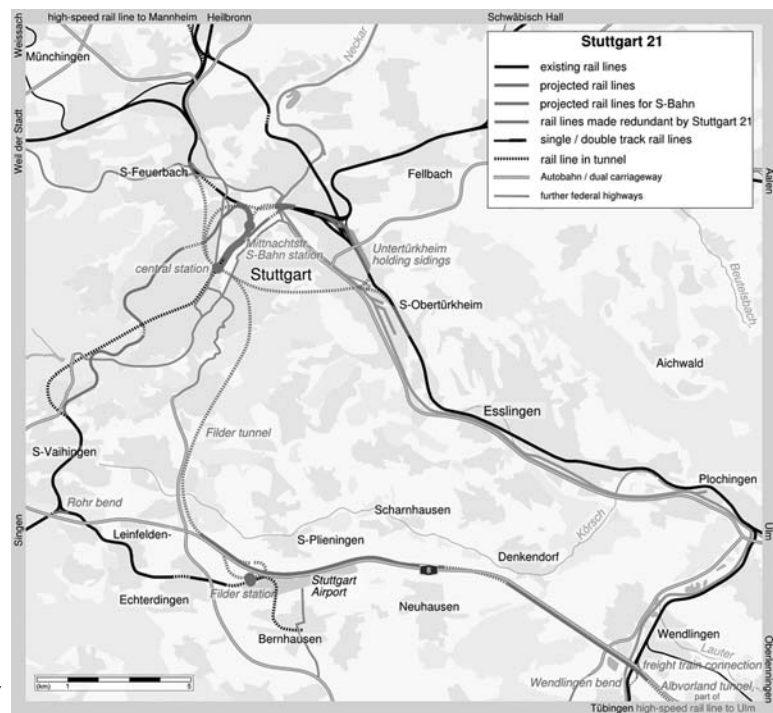


Figure 1. Stuttgart 21's infrastructure components. (Photo: K. Jähne [Public domain], via Wikimedia Commons)

regional leaders and to the railway company as the main landowner. Freshly transformed into a (quasi-)private, profit-oriented business, DB, under the leadership of chairman Heinz Dürr, had begun to intensify its efforts to make better use of its extensive property holdings. It considered the upgrading of its larger, centrally located railway stations and their environs a key activity to generate revenue and profit (Juchelka, 2002; Engartner, 2008). Local officials, meanwhile, were excited about the urban and economic development potential that the proposal provided. The extensive railway lands in its midst had divided Stuttgart's urban core for more than a century. Moving rail operations underground would not only make it possible to overcome this division but also make about 100 ha of centrally-located land available for redevelopment – land that could be used to expand, green and revitalize the city's dense central core. In doing so, the project was deemed instrumental in helping the city and its surrounding region to enhance their competitiveness and respond to the multiple challenges of ongoing urban and economic restructuring processes (Jessen, 2008, p. 229). Home to a number of international companies, including Daimler AG, Porsche, Hewlett-Packard and IBM, Stuttgart also belongs to Germany's most affluent and economically vibrant regions, boasting above-average GDP per capita, household income and spending power. Like every other part of the country, Stuttgart, too had been affected by the consequences of structural change, economic globalization and tertiarization in the 1970s and 1980s, but policy-makers responded by intensifying their efforts to promote growth and favourably position the region in the new era of competition and global change.

Some experts articulated concerns about the proposal early on, pointing out, the risks involved in building tunnels through Stuttgart's difficult geological terrain and the scheme's economic viability. But a large majority of policy-makers and planners at

local, regional, and state levels considered Stuttgart 21 a godsend as it was seen as addressing all of the challenges the city was facing – especially the perceived need to maintain and expand the city's position as an economic hub and strengthen its appeal as a location 'not only for investment but also as a place to live and work' (Jessen 2008, p. 229; see also Heeg 2003).

*'The Synergy Concept' –
Stuttgart 21 Gets Under Way*

Compelled by the positive results of a preliminary feasibility study, stakeholders agreed to develop the proposal further. In late 1995, DB went public and presented a document entitled 'The Synergy Concept' according to which the project was both technically feasible and economically profitable, with revenues from real estate development, rail transport increases, and reduced operation costs covering a substantial share of the projected investments (see Wolfram, 2003, p. 156). Soon after, a first framework agreement was signed in which DB, the city, the state of Baden-Württemberg, the federal government and the newly established VRS as the representative of the region all pledged their support for the project and the simultaneous realization of the new HSR route between Wendlingen and Ulm. Most significantly, this agreement fixed the linkage between the project's financing and its urban development elements, which by then had become a crucial component of the overall plan. Building on the calculations of the 'synergy concept', the municipality (as the main planning authority) guaranteed to authorize land uses on freed up railway land that would allow DB as the main property owner to generate at least DM2.175 billion (about €1 billion) in real estate transactions which would pay for the majority of its share of the overall construction costs which – at the time – were expected to total DM4.893 billion, i.e. about €2.5 billion (Reuter, 2001, p. 34).

Subsequently, the municipality invited ten

architecture firms to a cooperative design procedure (*Kooperatives Gutachterverfahren*) to develop planning and design ideas for the railway land available for Stuttgart 21's redevelopment. Based on the winning concept by Trojan, Trojan and Neu, a first draft for an overall master plan (*Rahmenplan*) was presented during a public forum in 1996 and a final, still valid, version approved by Stuttgart's city council in July 1997. The plan structured the redevelopment around two new neighbourhoods, one, named Rosensteinviertel, primarily devoted to housing and the second, dubbed Europaviertel, zoned for a mix of uses including housing, retail, and offices. The plan also foresees an extension of the Schloßgarten, Stuttgart's most important public park (*Ibid.*, p. 33). Simultaneously, an architecture competition was held for the design of the new underground through station in the inner city. It was won by the Düsseldorf-based team Ingenhoven, Overdiek und Partner (now Ingenhoven Architekten). Their competition entry proposed to demolish large parts of Stuttgart's historic

central station, a famed building designed by Paul Bonatz between 1914 and 1928, to make room for the construction of a minimalist, 400 m concrete shell structure covering the tracks with a new urban square, soon to be referred to as 'Straßburger Platz', on its top.

The Project's Near Demise and Subsequent Resurrection

This period of intensive plan making concluded with the completion of the so-called *Raumordnungsverfahren* (ROV), in 1997. The ROV is a mandatory procedure in German national planning law designed to assess the spatial implications of large-scale development projects and their incorporation into the wider regional and national spatial and transportation development plans. After that, however, the planning and implementation process came to a halt. Miscalculations concerning other large-scale projects combined with sluggish real estate sales cast doubt on previous cost-benefit calculations, and DB's new executive board, spearheaded



Figure 2. The new underground station by Ingenhoven and Partner. (Source: Visualization by Aldinger & Wolf)

by the new CEO Johannes Ludewig, made little secret of their dislike for a project that was increasingly deemed uneconomic and, from a transportation point of view, dispensable (Wolfram, 2003). In addition, the difficult financial situation of the freshly restructured DB had become more evident and rumours spread that even the new high-speed route between Stuttgart and Ulm – to which the construction of Stuttgart 21 was officially tied – would not be realized (Anders and Ahrens, 2007, p. 99). The state, the regional government, and the city insisted on the importance of Stuttgart 21 and took decisive action. In 2001 the city bought roughly 90 ha of station-adjacent real estate – which DB had been unable to sell until then – at an above-market price of €459 million. At the same time, the state – in a deal which according to critics violated EU competition rules – offered DB a lucrative long-term concession for regional rail operation.

The state also pre-purchased additional rolling stock from DB in order to encourage the railway company to remain committed to the scheme (Anders and Ahrens, 2007, p. 99; Stocker, 2008, pp. 34ff). Through these ‘incentives’, public officials helped to prevent the project from following the fate of most other ‘21 projects’ which had been scrapped by then. A long and complicated bargaining

process ensued. When Baden-Württemberg’s then state Prime Minister Günther Oettinger (now the European Union’s Commissioner for Energy) offered to share the cost of the new high-speed line (a first in Germany’s history), a consensus was reached and Stuttgart 21 resurrected. The renewed commitment to the project was formalized in July 2007 in a memorandum of understanding between DB, the federal and state governments, Stuttgart’s city council and the Stuttgart Regional Council. On the legal front, the Federal Railway Office gave planning permission for the project in February 2005, and the ensuing legal protests were rejected in April 2006. In 2007, opponents collected as many as 67,000 signatures to demand a public referendum on the project, but Stuttgart City Council rejected the request. Since then, developments have accelerated. Assuming total costs of €4.1 billion, a revised financing agreement was ratified in April 2009. In February 2010, almost 10 years later than originally planned, an official groundbreaking ceremony for Stuttgart 21 was held. Federal Transport Minister Peter Ramsauer, DB’s new chairman Rüdiger Grube, Baden-Württemberg Ministerpräsident Günther Oettinger, the Mayor of Stuttgart Wolfgang Schuster and other dignitaries ceremonially dismantled a buffer stop in the existing station to mark the start

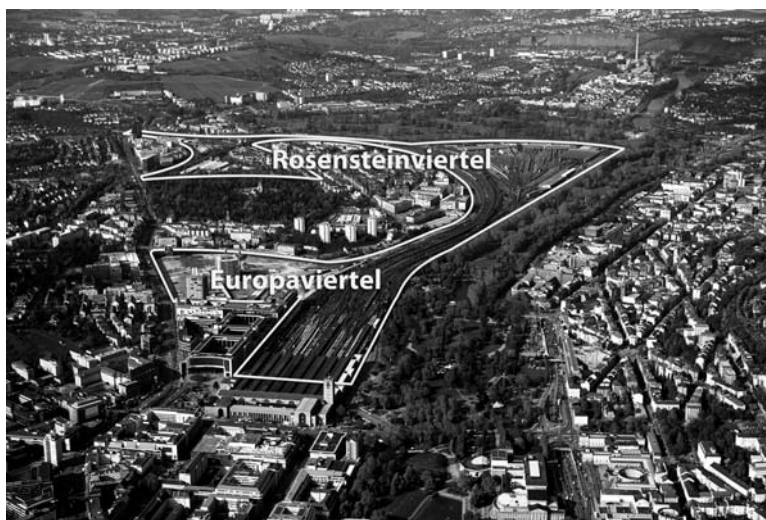


Figure 3. Stuttgart 21. Aerial view of the station area to be redeveloped. (Photo: Oliver Braitmaier)

of construction.

A few months later, in August 2010, preparatory construction works began in earnest with the demolition of the north wing of Stuttgart's current main station. This time public officials had little reason to celebrate, however, as the razing of the historic structure was accompanied by massive protests. On the day demolition work began, about 20,000 demonstrators formed a human chain around the building before marching on to Stuttgart's city hall. This was but one prominent public indication of the considerable scepticism and outright opposition confronting the project.

Project Opponents and Alternative Plans

At first, the nature of the project and its possible consequences remained too abstract to cause broad-based discussion, let alone protest among Stuttgart's citizenry (Schlager, 2010). Several civic and environmental associations, politicians and experts, however, spoke out against the scheme early on. Before the first framework agreement was signed, a critical book-length study by Winfried Wolf – the first of many – was published (*'Stuttgart 21' – Hauptbahnhof im Untergrund?*). The main points of criticism can be divided into five broad, interwoven categories.

The Main Issues of Contestation

Cost and Economic Viability Issues. Opponents argue that S21 will have horrendous costs with hardly any appreciable benefits. Estimates of the project's costs have repeatedly hit new heights over the years and independent experts including, most notably, Germany's Federal Court of Auditors (*Bundesrechnungshof*) all anticipate that the costs, which now stand at €4.1 billion, may rise again significantly before the project's completion which is currently expected in 2019 (Guratzsch, 2009). In addition, critics argue that the costs and risks of what they describe as a likely 'billion-euro hole' are disproportionately underwritten by the public sector and that

German Railways significantly reduced its financial commitment and exposure over the years. Lastly, the project's 'monopolization of public resources' (Monheim, 2008) is criticized as blocking more important transportation projects elsewhere, negatively affecting the much needed maintenance and enhancement of existing routes and services.

Transportation Benefits and Impacts. Critics emphasize that the actual transportation benefits of S21 are significantly smaller than proponents claim. Stuttgart 21, they argue, will not result in an expansion of the railway junction's capacity but rather threatens to reduce it; it will not reduce any bottlenecks but instead create new ones, and it will at best bring negligible travel time reductions for long-distance travel to the detriment of regional rail services. Opponents maintain that the same time savings could also be achieved with less expensive upgrades of the existing rail infrastructure. In addition, critics contend that Stuttgart 21 is likely to threaten the viability of freight rail transport in the region as many of the envisioned new routes are likely to be unsuitable for larger freight trains.

Environmental Costs/Ecological Risks. Critics also object to the environmental ramifications of the project. While project proponents describe Stuttgart 21 as the epitome of an environment-friendly, sustainable transportation and urban development project, critics claim that the opposite is true. They point to a number of particularly detrimental effects and environmental risks. These include the chopping down of nearly 300 trees, some over 100 years old, in the historic castle grounds (Schlossgarten) just behind the existing station; concerns over adverse effects on the city's groundwater and its mineral water springs, the second largest in Europe; as well as concerns about increased air pollution and the reduction of natural airflows through the city as a result of the envisioned densification of the city's centre. This is expected to lead to

a further aggravation of problems associated with the build-up of summer heat in the Stuttgart basin.

Historic Preservation/Urban Development. The partial demolition of Stuttgart's old central station represents one of the most controversial elements of the scheme. Widely considered an icon of 1920s architecture, the historic station with its massive clock tower of rough-hewn stone is cherished as one of the city's most recognizable landmarks. Architecture experts worldwide criticize the projected destruction of its northern and southern wings as 'a callous disregard for architectural history' (Ouroussoff, 2009) and a continuation of destructive, modernist urban renewal (Ostertag, 2008). In addition, critics challenge the design of the new underground station as displaying limited architectural ambition and practicality, and they question the decision to have real estate transactions (re-)finance Stuttgart 21's construction, arguing that the official urban development plans prioritize growth and profit maximization over environmentally and socially responsible development and design.

Decision-Making/Process/Participation. Lastly, issues of contestation not only encompass components of the planned scheme but also the process through which it was advanced. Opponents criticize that decision-making happened mostly behind closed doors, with minimal public input or oversight by the city's or state's legislatures. Only after major decisions had been worked out, they contend, was the process opened up for public participation. Related to this, the formal participation procedures have been criticized as primarily serving legitimizing purposes, and the overall decision-making process has been described as non-transparent, circumventing traditional democratic channels of accountability, and at times even violating democratic principles (Wolfram, 2003, p. 185). Part of this problem is inherently built into German planning law, which does recognize that so-called 'affected

parties' (*Betroffene*) – i.e. those who hold a stake in the project – should be brought into the decision-making process, and which does *not* encourage the wider citizenry to engage in public deliberation on projects. Another troubling issue in the complex decision-making construct is the fact that throughout the process, DB consistently 'hid' behind the claim that it is obligated to fight the threat of construction delays or even a permanent halt in order to prevent any financial harm to its shareholders. Yet although it is legally privatized, DB is still 100 per cent owned by the federal government. For the most part, both parties refused to acknowledge that fact publicly, with the Federal government pretending that DB was somehow an independent actor when really the Federal Government might very well have decided to step in as the ultimate decision-maker, especially as ultimately it will have to vouch for the funds invested and/or lost by DB.⁴

Over the years, as the project advanced and more details were revealed, more and more residents in Stuttgart became concerned about the project. At the same time, the project's opponents, most notably *Umkehr Stuttgart* (Turnaround Stuttgart), an alliance of regional environmental and transport groups, and a newly established citizen group called *Leben in Stuttgart* (Living in Stuttgart) became increasingly organized and vocal.

A Strong Opposition Movement with a Strong Alternative Proposal

In 1998, *Umkehr Stuttgart* introduced a first alternative plan, called 'Stuttgart 21 with terminus' (*Stuttgart 21 mit Kopfbahnhof*) to the public. Developed with the help of the Verkehrsclub Deutschland (VCD), a major German transport and environmental organization committed to sustainable mobility, and subsequently renamed 'Terminal 21' (*Kopfbahnhof 21*, or *K21* for short), the plan proposed a thorough overhaul of the exist-

ing rail network which would keep and extensively modernize the existing terminus station. By pursuing this alternative plan, its protagonists argue, a tunnelling of the city's environmentally sensitive basin could be avoided and costs would be reduced, which would make it possible to invest in public transport elsewhere while still providing necessary infrastructure upgrades to link Stuttgart's rail junction to the planned HSR route. Crucially, it would still allow for the redevelopment of dispensable railway land near the existing station – without the same profitability pressures that characterize the official scheme.

In parallel with developing alternative proposals, project opponents mounted a multifaceted campaign against Stuttgart 21, involving legal action, the collection of signatures, the presentation of counter-assessments to challenge information offered by the project's stakeholders, the organization of workshops and other community events, as well as, particularly more recently, the use of social media and other online communication tools.

A first climax was reached in 2007 when 67,000 people supported the petition to hold a referendum about the project, more than three times the votes necessary, but Stuttgart's

city council rejected the application on legal grounds. This decision greatly fuelled the support for the protest movement, as many previously uninvolved residents perceived the city council's decision as illegitimate and undemocratic (Rucht *et al.*, 2010). Stuttgart's residents now began to rally against the project in their thousands. The growing unease among Stuttgart's electorate was further demonstrated when the local Green party – the only major party opposing the scheme – received the most votes in the 2009 municipal elections. It marked the first time the Greens won a majority of votes in a German city with more than 500,000 inhabitants. By November 2009, protest rallies were taking place every week, drawing in more and more people as the project neared the start of construction. Many public persons, civil society organizations and even celebrities joined the opposition, and new groups and formations emerged: the *Parkschützer* (Park Protectors), a media-savvy alliance of environmentalists mobilized tens of thousands of people online to protest against the felling of trees in the Schloßgarten, and the *Schwabenstreich* (Swabian act of folly) was launched – a one-minute protest held every day throughout the country at 7 pm during which participants



Figure 4. 25 August 2010. Demolition works begin in earnest at Stuttgart's Central Station. (Photo: Dirk Haun)

use whistles, drums, and anything else to make as much noise as possible to articulate their protests; and an online-TV station, *Flügel TV*, established in response to the widespread dismay about the coverage of Stuttgart 21 as well as the protests by Stuttgart's mainstream media.

Thriving Protests, Contested Mediation Negotiations and an Historic Election

By autumn 2010, when construction and demolition work had begun, the protest rallies drew up to 100,000 people, making national and international headlines because of their size and because of their rather unusual composition. Retirees and middle-age professionals were seen standing alongside college students and leftist radicals to protest against the project and the perceived arrogance of the public authorities handling it.

As the news magazine *Der Spiegel* put it, protesters included 'doctors, lawyers and engineers ... men in dark suits and frameless glasses ... and women with expensive handbags and pearl necklaces' as well as many other people that did not fit the

stereotype of a street protester (Kaiser and Windmann, 2010). All the greater was the outrage about the violent scenes on 30 September 2010 when the police used force against demonstrators who had tried to stop construction workers from felling the first trees for the project in the Schlossgarten and several hundred demonstrators, including school children and elderly citizens, were injured. Labelled 'Black Thursday', the incident led to a nationwide public outcry and only helped 'to drive even more people onto the barricades' (Fischer *et al.*, 2010). As a result, officials – who had previously insisted that they would not back down to the protests – were forced to reverse course. They invited project opponents to hold a series of public mediation talks in order to resolve the escalating tensions over the project. Tree felling and demolition work were put on hold and a pledge was made to engage in open and fair discussions on the issues, to put all facts on the table, and to consider all the resulting proposals short of terminating of the project.

Described by the appointed lead mediator, Christian Democrat Heiner Geißler, as a 'unique experiment in democracy', the en-



Figure 5. Protest pamphlets, poems, pictures etc. on the fence that surrounds Stuttgart 21's construction site. (Photo: Timo Kozlowski)

suing mediation process involved nine day-long meetings during which project supporters and opponents discussed a long list of topics, including: the pros and cons of an above ground railway terminal vs. an underground transit station, the project's financing, environmental costs and risks, as well as the viability of K21, the proposal favoured by Stuttgart 21's opponents. Hailed by some as opening a new way of citizen participation and public debates over large-scale projects and criticized by others as a tactical means of appeasement, the talks concluded after five weeks of deliberations with an arbitration announcement by chief Geißler. It included the decision to hold a 'stress test' – a computer simulation to determine whether the planned underground station could actually handle the expected traffic – as well as several (non-binding) recommendations for improvements, such as better fire safety measures, additional platforms, and, perhaps most significantly, a proposal to put the redevelopment sites into a public land trust to prevent real estate speculation. Essentially it called for the continued construction of the project.

Geißler concluded that the project itself was legally and legitimately launched and 'too advanced to be stopped' and that the opponents' demand of a referendum to decide on its future could not be met for legal reasons. The opposition's reaction to the verdict was mixed. Representatives of the opposition who had participated in the negotiations called them 'a huge success' and argued that they gave them the opportunity to present their positions to a nation-wide audience, disclose many of the weaknesses and disadvantages of the existing scheme and demonstrate that K21 – contrary to the claims of DB and other proponents of Stuttgart 21 – was feasible, fundable and able to obtain the necessary planning consent.

Others held that the verdict essentially confirmed earlier worries that the talks were launched primarily to curb the project's opposition and to divide it and that an

honest, open-ended discussion of the future of the project had been out of the question from the start. For a while it seemed that the sceptics' concern that the negotiation process would bring few results except to appease Stuttgart's citizenry and make it difficult to keep up the mobilization against the scheme seemed to come true. The number of protesters at the regularly held rallies dwindled and construction activities resumed almost as if nothing had happened. This situation dramatically reversed itself in spring 2011, when statewide elections, overshadowed by Japan's Fukushima disaster, catapulted the Greens to a landslide victory and gave a coalition between the Greens and the Social Democratic Party (SPD) a majority. On 20 April 2011, the two coalition partners announced that they had agreed to hold a referendum on Stuttgart 21 by autumn 2011 and that the state under no circumstances would spend more money on Stuttgart 21 than what had been agreed by the previous administration even if the project's costs, as opponents anticipate, increased further.

In July 2011 the long-awaited results of the stress test that came out of the arbitration process were presented. Performed by Swiss consultants SMA, the computer simulation of the current plans supported Deutsche Bahn's claim that the project could result in at least 30 per cent increased capacity 'with economically optimal quality of operation', but the coalition of groups opposing the project argued that the parameters of the tests were skewed and that the probe did not properly examine whether the new underground station could actually function properly in adverse circumstances. 'A stress test without any stress does not deserve the label stress test', said coalition spokesman Hannes Rockenbauch who called for fresh probes to analyze the project's performance in the case of problems or emergencies (*The Local*, 2011). The majority of the public, on the other hand, seemed content with the outcome. A poll conducted after the stress test's presentation (*Stuttgarter Zeitung*, 2011)

found that more people (43 per cent) were now in favour of the new station than not (34 per cent). Public opinion had thus shifted markedly. This became even more evident a few months later when the referendum was held and nearly 60 per cent of voters were in favour of the project. The decisive defeat of the project's opponents means that the Green Party, which was voted into power to stop the project, will be forced to implement the project they set out to block. While they stated that they would supervise progress both 'critically and constructively' (Allen, 2011), other project opponents vowed to continue their resistance. They hope that the project's costs will increase beyond stated limits and that this will ultimately lead to its demise.

Lessons From Stuttgart

Spanning a time period of more than 20 years, the history of Stuttgart 21 makes an incredibly rich and complicated case study for the analysis of mega-project developments as well as the conflicts such developments can spark; a case that for numerous reasons can be described as unusual, if not exceptional, but that nonetheless holds important lessons for several key theoretical debates regarding mega-projects, the context within which they are realized and the contestations they face.

Stuttgart 21 as an Exemplar of Contemporary Mega-Project Development

The heated struggle surrounding Stuttgart 21 is also one about the power to dominate the public debate. There has been significant debate, for instance, as to whether Stuttgart 21 should be conceived as a transport project or whether it represents a real estate project that is merely disguised as an infrastructure undertaking. What is clear, however, is that Stuttgart 21 is an example of a new paradigm of mega-project development within the framework of the competitive city, i.e. the project, irrespective actual details, generally

illustrates many of the characteristics of present-day mega-project development.

Comprehensive large-scale projects have experienced a significant revival in recent years and many scholars contend that their development today constitutes a defining feature of contemporary urban development patterns in cities worldwide (Díaz Orueta and Fainstein, 2008). They frequently take the form of vast complexes characterized by a mix of uses, a variety of financing techniques, and a combination of public- and private-sector initiators and are typically undertaken primarily in the pursuit of generating economic development while simultaneously re-inscribing and reinforcing socioeconomic divisions (Lehrer and Laidley, 2008, p. 799; Moulaert *et al.*, 2003). In this context, the development of new or the extension of existing transport infrastructure is – together with the regeneration of waterfronts, the recovery of old manufacturing and warehouse zones, and the renovation of historic city districts – described as one critical subset of the recent generation of mega-projects (Díaz Orueta and Fainstein, 2008, p. 761). Typically cost-intensive and entailing massive land-use transformations, their construction not only constitutes a 'sink' of investment capital in itself, but at the same time is also considered of utmost importance in facilitating further investments and capital flows by enhancing their city's or city region's access to – and position within – national and international urban networks (see esp. Brenner 2004, pp. 243–253; Graham and Marvin, 2001).

In this context, driven by the heightened relevance of railway travel in the advanced capitalist world and the introduction and expansion of high speed train (HST) networks, investments in rail infrastructures and the (re)development of inner-city rail stations have assumed an important position in policy agendas. These new mega-projects are typically associated with – and legitimized by – a host of *policy tenets*, including *the promotion of integrated land-use and transport development and the promotion of more environ-*

mentally friendly modes of transport. Ultimately, however, these projects remain overwhelmingly driven by local agendas for urban growth and competitiveness, which are in turn linked to general trends of post-Fordist restructuring and globalization. These trends include the reorientation *towards neoliberal forms of governance at all levels* (Hubbard and Hall, 1998; Leitner *et al.*, 2006), emerging new patterns of 'splintered' and 'unbundled' infrastructure provision (Graham and Marvin, 2001), and a growing fragmentation within urban areas. Ultimately, the role mega-projects play in these developments is ambiguous (see Fainstein, 2008; Salet, 2008; Swyngedouw *et al.*, 2002).

Because of this, we have suggested elsewhere in this issue that the rise of large-scale rail station (area) redevelopment is perhaps best described as a Janus-faced phenomenon indicative of – 'actually existing neoliberalism' (Brenner and Theodore, 2002) as well as the emergence of 'new' normative policy tenets whose precise outcomes cannot be determined across the board but must be examined on a case-by-case basis through solid meso- and micro-level analyses of particular projects and places *within* particular cities.

In the case of Stuttgart 21, the project is said to have a combination of economic, environmental, transportation and urban development benefits. Yet from the start, the design and planning of Stuttgart 21 was shaped by a number of priorities that trumped other policy considerations. When the main stakeholder, the privatized German Railway company DB, assessed the project from a business perspective, they concluded that the variant now known as Stuttgart 21 best served DB's economic and financial interests. Along with general arguments such as travel time reductions, the large size of the redevelopment area and positive modal shifts from road to rail, one important element in the company's reasoning was the possibility of a self-financing project that directly linked the infrastructure investment with

the subsequent redevelopment of the land (Wolfram, 2003; Reuter, 2001).

Local and state officials, meanwhile, prioritized economic development as a policy issue throughout the planning process. Sustainability and environmental protection, as well as other quality of life concerns also mattered, yet what led to local elites' overwhelming support of Stuttgart 21 in its current formulation was its perceived potential to channel public and private capital into their jurisdictions and enhance their competitiveness (Wolfram, 2003). Given that concerns about economic competitiveness and growth top every city's list of policy objectives this is hardly surprising (Fainstein, 2008). Indeed, in light of the multi-scalar restructuring processes to which they are a response, it would be surprising if this were not the case.

Participation, Power, Politics

Mega-project development and democratic decision-making, the literature tells us, do not sit together easily. Project protagonists are said often to avoid and violate established practices of transparency and accountability – either out of ignorance or because they see such practices as counterproductive to getting projects started. And citizens are typically found to be kept at a distance in the political and administrative decision-making surrounding mega-project planning and approval (Flyvbjerg *et al.*, 2003, p. 5). Stuttgart 21 is no exception to this. Indeed, much of the planning and approval process of Stuttgart 21 reads like a textbook example of the combination of top-down and technocratic policy-making and growth machine politics frequently associated with mega-project development.

This is not to say that provision for citizen input was altogether absent. Instead, citizens were given all the opportunities for participating in the planning process required by the German planning system and even for participation beyond what is required by law,

such as workshops and other opportunities for exchange. Significantly, most of them were taking place not at the outset but in the midst of the planning process when Stuttgart 21's key characteristics had long been decided and were consequently criticized as primarily serving legitimizing purposes and foreclosing meaningful discussions about the project as well as possible alternatives to it. However, the lack of meaningful forms of citizen involvement was not the only reason why the decision-making surrounding Stuttgart 21 has been controversial. Rather Stuttgart 21 illustrates the widespread tendency in mega-project development to circumvent public processes of legitimization and decision-making. Most of the negotiations took place behind closed doors and left the city and state legislatures' elected officials with little to decide upon other than sanction – and thus legitimize – decisions that had already been made. As a result, critics have raised concerns about accountability, transparency, as well as the overall democratic legitimacy of the project. They argue that the legislatures, as well as the general public, had repeatedly been misled and even lied to about the scheme's pros and cons during the decision-making process.

Similarly controversial has been DB's role in the planning and implementation process. Not only was the DB attacked for ruthlessly taking advantage of its privileged role in the planning and decision-making process, they were also criticized for prioritizing growth and profit-oriented concerns at the expense of others. DB was also criticized for repeatedly restricting the dissemination of *information that they considered* harmful to their interest through 'commercial-in-confidence' clauses and similarly cloaking devices. In doing so, DB further contributed to the alleged 'de-democratization' of the planning process (see Conradi, 2008). DB's peculiar status, effectively acting as a private, but still state-owned and quasi-monopolistic, railway operator is a key source of conflict and controversy that adds another layer of

complexity to the otherwise familiar story of public-private partnership arrangements and the challenges they pose (Engartner, 2008).

On top of this, machinations between elite players akin to arrangements described in the (Anglo-)American growth-machine and urban regime literatures also represent a subject of contention (see Schlager, 2010, p. 134). Referred to as the 'spätzle connection' (*spätzle* being a regional culinary specialty, a pasta-like dish) or 'Stuttgart 21 cartel' and fusing together actors and institutions on multiple scales, such 'behind the scenes' arrangements are seen as further undermining formal decision-making procedures and mechanisms of democratic control and prefiguring particular outcomes, characterized less by democratic than by elite-driven priorities. This is also recognized in Germany's national media. Criticizing the planning and implementation of Stuttgart 21 for undermining the institutions of parliamentary democracy and bypassing democratic participation mechanisms, the *Frankfurter Rundschau* described Stuttgart 21 as a 'metaphor for a callous clique economy, the epitome of a detached, arrogant class [made up of] the respective state prime ministers, state legislators, mayors, bankers and entrepreneurs, eleven of which, quite by chance, can be found in the group of supporters of Stuttgart 21' (Freudenreich, 2010). Stuttgart 21's planning history is certainly too complex to be explained merely with reference to machinations between elite players. Yet there is rich evidence that networks and coalitions, some relatively formal, others less so, between politicians and business elites as well as bureaucrats, experts and the media, including the city's two largest newspapers, the *Stuttgarter Zeitung* and the *Stuttgarter Nachrichten*, decisively shaped the project's trajectory. Much of Stuttgart 21's formulation, planning, and approval thus evokes previous researchers' portrayal of large-scale urban development projects as 'elite playing fields' (Swyngedouw *et al.*, 2002) as well as scholars' emphasis on issues of profits, politics

and 'rationality in the context of power' (Flyvbjerg 2003). What distinguishes the story of Stuttgart 21 from other mega-project developments is the intensity and breadth of the protests against it.

Stuttgart 21 and the Significance and Prospects of New 'Urban Social Movements'

Project supporters have derided the movement against S21 as an example of NIMBY-ism writ large, essentially arguing that the protesters were 'wealth-spoiled' citizens, as one politician put it, whose rejection of the project was primarily driven by selfish concerns and/or misinformation. In a similar vein, some commentators have described the protesters as *Wutbürger* – angry citizens – turning Germany into an alleged *Dagegen-Republik* (opposition republic) due to their fear of change and a desire to protect special interests (old trees, historic buildings) at the public's expense (Kurbjeweit, 2010).

Those organizing the protests, meanwhile, claim that the movement against Stuttgart 21 is a sign of a newly awakened civil society, which demands greater participation in the politics of urban and transport development. They argue their rejection of the project is neither motivated by narrow self-interests nor is it a result of misinformation or communication failures. A recent study of protesters' backgrounds and motivations (Rucht *et al.*, 2010) lends support to the latter interpretation, as it found that members of all strata of the city's population participate in the protests, and that they do so overwhelmingly not because of NIMBY-esque concerns, but because of fundamental objections relating to the project's cost benefit ratio; the process of decision making; as well as the uneven distribution of costs and benefits it is expected to result in (*Ibid.*). Furthermore, the study indicates that the struggle over Stuttgart 21 also bundles up a more general discontent with politics in general and local politics in particular. A recent book by several key figures from

the protest movement (Loesch *et al.*, 2010), which provides insight into their struggle, is indicative of this. Entitled *Stuttgart 21 – Wem gehört die Stadt* (Stuttgart 21 – Who owns the city?), the volume makes clear that the struggle surrounding Stuttgart 21 is not only about the project as such but rather a larger, more fundamental dispute about what constitutes a city and how (and for whom) it should be developed and run.

While the protests brought together a range of stakeholders from different, sometimes opposite, social groups, parts of the movement's core indeed resembled other contemporary urban movements which contest neoliberal urban development by invoking Henri Lefèbvre's demand for a 'Right to the City' (Marcuse 2009; Mayer, 1994; Leitner *et al.*, 2006). At the same time, the involvement of professional associations and, most significantly, the Green party (which has become more and more centrist in its political leanings), to a certain extent clashes with the prevalent ideal of urban social movements which emerge from the grassroots (Castells, 1983). There are voices which contend that the opposition against Stuttgart 21 lacks a radical commitment and is too diffused and bourgeois to be relevant in the struggle for progressive, urban social change. There is certainly a lot to be said about the bewildering variety of positions and contradictions within the movement against Stuttgart 21. However, simply to discount the protests on that basis, misses the point. The struggle surrounding Stuttgart 21 represents one of the most powerful and attention-grabbing protests against any urban project or large-scale urban development scheme in recent memory. It seems that the movement's heterogeneous and broad-based composition has been a major prerequisite for much of its resonance and potency. S21 is a powerful reminder that urban social movements can and will influence public discourse and policy, implying a need to understand the organizational patterns, strategies and tactics that were employed

as well as the contributing factors that have allowed the protest movement to grow the way it did.

Conclusion

The ongoing struggle surrounding Stuttgart 21 has several lessons for railway station redevelopment research and the investigation of current-era development dynamics. The project illustrates renewed relevance attached to large-scale development projects in urban and regional policy. Rationalized by 'actors of power' as serving the public interest, and dismissed by critics for *undermining* important policy objectives, S21 illustrates the intent to monopolize resources that would *benefit* already affluent individuals and groups. Stuttgart 21 fits the characterization of current-era mega-project development: developed as a public-private partnership that tends to be oriented more towards growth and competition, rather than socially progressive ends.

Beyond this, Stuttgart 21 is a fascinating example of twenty-first century revalorization of railway stations (areas). The project also reveals many of the issues characterizing rail station redevelopment. Rail stations are not ordinary places. They are highly symbolic in the twenty-first century 'network city', and this has consequences for governance and decision-making processes (Peters 2010; Altröck, 2010). Rail stations have a distinct character and identity serving a multitude of important functions in urban environments, not only as transport nodes but also as reference places in citizens' life. Their redevelopment requires sensitivity – a sensitivity that critics have long argued was lacking in the case of Stuttgart 21. According to them, developments amounted to a 'deliberate act of self-destruction' (Ostertag *et al.*, 2008). And it is precisely this fierce opposition that makes Stuttgart a particularly relevant case for research. After the decisive defeat of the opposing groups at the referendum, their chances to stop Stuttgart

21 from being built appear slim. Significantly, this does not mean that Stuttgart 21 or the way large-scale infrastructures are built will no longer be a subject of discussion. The likelihood of cost overruns means the project is by no means 'home and dry', and the fundamental debate the project's opposition sparked about mega-projects and the way they are implemented will not go away anytime soon.

NOTES

1. Some contend, however, that this historic Green Party victory would not have been possible without Fukushima. The German Greens have a solid record of opposing the use of nuclear energy, and the fact that Chancellor Merkel had just renewed her commitment to nuclear energy prior to the catastrophe in Japan cost her party, the CDU, a lot of votes in Baden-Württemberg, a particularly 'nuclear-sceptic' German state.
2. Cost and other considerations prevented the concept from coming into fruition in the larger metropolises of Munich and Frankfurt (see Speck's article in this issue) but German Railways successfully completed its '21' projects in Neu-Ulm and Saarbrücken.
3. See <http://www.attac.org/en/what-attac>.
4. We would like to thank one of our anonymous reviewers for asking us to clarify for our international audiences these two crucial particularities in the decision-making on S21.

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