Experimental Building Programs in Germany: Focusing Culture Through Policy

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Abstract

This paper examines Germany's federally funded experimental building programs as cultural determiners and transformers. An analysis of studies and reports to sponsors of the past twenty years brings to light that from the urban environment to the architectural object, both tangible spatial objects and the process of their creation have become part of a culture of building that can successfully be guided through direct intervention. The paper concludes with suggesting further policy areas where this process can be implemented.

The process of focusing culture

Germany has a long tradition of experimental building programs. Starting in the 1920s with social questions of providing housing for the masses and technical ones of how to get there, the focus in recent decades has turned to urban and suburban settlement patterns, sustainable building practices and ecologically sound living concepts – paradigms that have become critical in other European countries and the United States as well. Recent research programs have continued to examine building at both the social and technical level: community planning goals and sustainable community design linked with energy efficiency and the use of experimental construction techniques.

Much of this research has been publically funded, with calls for proposals and reports to the sponsors providing a record of research aims and outcomes. From the 1957 *Interbau* housing projects planned for Berlin to the multitude of projects sponsored today, the German government has financed a series of systematic programs for experimental housing and urban design with a focus on user comfort and cost efficiency, with extensive efforts being made to tailor urban patterns and building practices to accommodate specific demographic patters. Current research funded by the Federal Ministry of Transport, Building and Urban Affairs (BMVBS) under the auspices of the new program *Zukunft Bau* (Future Building) includes energy efficiency in buildings, new concepts and prototypes for zero- and plus-energy houses, new materials and techniques, building quality, technical standards, and building code legislation. The sum of these investigations points to Germany's quest not only for a betterment of construction and building types, but also for a new attentiveness to the built environment in a quest to enhance Germany's identity as a culturally and technically advanced nation. While the idea of using sponsored research and publically funded building programs to shape cultural perceptions has usually not been expressed as such by the initiators of these research agendas, the mounting body of programs points to possibilities beyond just providing housing or urban facilities for the population. For the sponsors, the question of *how* cities should be structured, *how* transportation should be arranged, and *what forms* of housing should be built for the population has become a question of socio-cultural management as much as a charge of practical implementation.

Whereas earlier projects sought answers to specific spatial and architectonic questions, by 2001 the German government had recognized the potential connection between individual building programs and their larger social implications. The result was a systematic program to research the question of *Baukultur in Deutschland*, a term that may loosely be translated as an examination of culture and building practices, both with regards to housing and urban design.[1] In 2004 the term was made part of the federal building code, with *Baukultur* becoming a mandatory point of consideration when developing any sort of master plan.[2] Part of the ensuing policy assessments encompassed results from the program *Experimenteller Wohnungs- und Städtebau* (Experimental Housing and Urban Design), abbreviated ExWoSt, which as early as 1988 had begun to consider innovative solutions to housing and urban design questions through their potential as socio-political forces. With the newly established focus on *Baukultur*, research projects began to consciously

regard housing and urban design as a cultural translator and determiner.

Specific projects within ExWoSt show how policy has been used to fund and thus fuel cultural change. From 2001-4, for example, five model projects in the research area *3Stadt2* (3City2) attempted to link community groups with public-private partnerships. The projects were as much a search for new process tools and forums as they were a quest for specific design and planning results. The research area *Stadtumbau West* (Urban Rebuilding in West Germany), funded from 2002-7 and encompassing 16 city projects, examined what planning instruments – such as design competitions, workshops, media projects, and citizen-group involvement – were integrated into various planning measures and with what results. A study found that the examined means created or strengthened city identities, enhanced communication on a local level, and linked research questions to financial investments.[3] Broader in its focus was the research area *Städte der Zukunft* (Cities of the Future), which took place from 1996-2003 with four projects. Proposing a strategic plan for new urban patterns, the program provided guidelines and definitions for sustainable living and created a network of goals and criteria for measuring the success of their implementation.[4] The research area *Öffentlicher Raum* (Public Spaces), begun in 2003, presented a typology of public spaces that examined traditional and newer functions of public urban space such as public spaces in contrast to privately-owned "public" spaces such as shopping malls. This research area has also looked at the use of unintended public spaces, such as parking lots, and the question of how virtual spaces such as the internet are taking on some of the functions once found in physical spaces.

The authors of a study examining projects that focused on *Baukultur* noted that the government's own internet portals, containing extensive information and documentation of all projects and results, were part of the information package that was altering how citizens perceived changes in the built environment.[5] In regarding *Baukultur*, process became an important factor in measuring success. The government was greatly concerned not only with *what* was produced, but more importantly *how* it was produced, and in addition to examining the results of case studies, commissioned at least two surveys that analyzed the effectiveness of methods used to develop paradigms for architecture and urban design.[6] The importance of steering both the means and the end is reflected in the terminology used, as studies refer to "instruments" that are to be applied to shape both process and product. A document commissioned by the federal government and published in 2005 analyzes these "instruments" as program, procedure and process, communication and mediation, and funding programs, with further methods required for evaluating the built quality of the objects.[7]

With its focus on *Baukultur,* Germany has attempted to make an invisible concept visible. Although the idea of using "tools" and "instruments" to "steer" culture may seem overly technocratic, the recognition that the built environment does not merely happen through a reliance on market forces already indicates the sense of responsibility the government feels towards helping to shape landscapes, urban forms, and even the type of housing available to its citizens. Examining and understanding the forces that operate to shape the built environment is the first step in recognizing the potential for directing the process and the built result. The question of *Baukultur* has gone beyond German policy inquiries to include international comparisons. With many projects in Germany tapping into a combination of funding sources that include European Union, national, state, regional and municipal funds for both planning and implementation, the interplay of what these actors hope to achieve has become a question worth asking. As one publication resulting from a state-sponsored workshop addressing the question of *Baukultur* in the context of urban design put it, "Building culture begins at the level of the design brief [....] Who is responsible for formulating urban design assignments for today's world?"[8]

An example of how this question has been answered can be found in the proposals for Halle-Neustadt, a vast new town adjacent to the older city of Halle in the former East Germany characterized by cheaply-built and faceless Soviet-style prefabricated housing blocks and now challenged by a population exodus that has left much of the housing stock vacant. The problem of "shrinking cities" is common in the former GDR to the point that the government has sought solutions through a program called *Stadtumbau Ost* (City Conversions in Eastern Germany), begun in 2002 and jointly sponsored by the federal and state govern-

ments. The winning solution proposed for Halle, a project named *Kolorado*, proposed linking the Neustadt area to the older city of Halle and diversifying the large and faceless Neustadt quarter by dividing it into several districts, each with its own identifiable identity or theme.

Halle-Neustadt's original plan, developed in the early 1960s, followed typical Soviet-style urban ideas of a spatial and infrastructure system based on allotments. Halle-Neustadt was to be an independent community next to the existing city of Halle. The urban structure offered was a carpet of administrative units, a field of so-called cells of which each provided housing and daily infrastructure such as kindergartens and schools for 10,000 – 20,000 people. Most of the housing was in the form of mid-rise and high-rise slabs with five, six or eleven stories. Although central infrastructure, such as a town hall, was part of the original plan, funding problems led to a situation where such infrastructure was built only years after the housing was completed, if at all.[9]

After the unification of East and West Germany in 1990, Halle-Neustadt was made a part of Halle, and much of the housing stock was sold off to private investors. The city retained ownership of parks and other open spaces and infrastructure such as schools, libraries, and public transportation. Poor economic prospects and opportunities for other housing types, including single-family homes, led many residents to move from the area, however, so that Halle-Neustadt's population shrank from a high of 95,000 before 1990 to 50,000 by 2006. Adding to the population change was a demographic shift, as East Germans had less children and those with children sought alternatives to the high-rise slab apartments. Halle-Neustadt found itself with a population whose average age was considerably higher than when the city had been planned, leading to predictions that when the now large number of elderly residents began dying off, there would be a further increase in vacant apartments, leading to a further downward spiral in the ability to finance and thus provide essential infrastructure services.

The new capitalist economy introduced in 1990 encouraged developers to place shopping and commercial centers in and near Halle-Neustadt, thus providing retail infrastructure missing in the socialist-style city.

Commercially driven, these complexes were developed as car-dependent centers, and their suburban-mall type offerings have eclipsed Halle-Neustadt's traditional pedestrian shopping zones – a problem typical of, although not limited to, the former GDR. A first decision was thus made to better connect Halle-Neustadt with the older town of Halle through a new streetcar line, to provide access to the older town center.

In 2001 the city passed a new urban development plan for Halle-Neustadt, which divided the city into several districts. The areas around the center were to be retained for housing, while the peripheral areas were to be either restructured or dismantled, leading to a contraction of the physical city itself. Because of the variety of property owners and thus financial stakeholders in Halle-Neustadt, lawsuits soon followed, which put implementation of the master plan on indefinite hold, while individual developers continued to determine the building agenda of the city. The city turned to the Stadtumbau Ost program to find a solution.

The *Kolorado* plan developed by the offices of Raumlabor-Berlin in 2001 thus began with a procedural problem. The project's first aim was to get things moving again, with a second aim quickly put forth: find processes by which the affected community could identify and express their positions and concerns. *Kolorado*'s answer was a series of activities designed to highlight Halle-Neustadt's "open future". Citizens were invited to activities that allowed them to provide input into the concrete planning process. The framework for this process was designed to be flexible enough to react to changes proposed through citizen input, with the population able to inform both planning goals and the process of seeking them.[10]

Kolorado foresaw dividing the city into much smaller units in order to facilitate planning. Twenty-four large-scale owners had stock in Halle-Neustadt's housing, and the smaller planning areas meant that there would be less owners in each individual parcel and thus less parties that had to reach consensus. The parcels were created through analyzing and layering various matrixes, such as street and park networks, infrastructure, and important points and ensembles, overlaid by a newly established pathway that was to provide a continuous recreational area. The smaller units also

meant that planning mechanisms, such as competitions, workshops, or charrettes with community groups could be implemented as needed without individual measures becoming unwieldy. The new focus on perceived connections between urban ensembles and structures and their potential as spaces for actions and activities made it easier to engage lay people in the planning process.

Diversifying Halle-Neustadt called for creating new, local identities, a process that very much depended on working with residents. The division of the city into small, sometimes overlapping units allowed work to progress in one area independently of any other areas – a type of "master plan" that relied on a process manager and a patchwork of planning ideas ultimately coming together as a whole. For example, if a housing block were slated for demolition, the residents of that division would be called together to create a communication forum. The following types of questions would then be addressed: Are further demolitions planned in the same area? Could the space be used in a different way (is there a need)? How does the standard of living in the quarter improve with the demolition? Who can use the empty space created by the demolition? What overall concept does the demolition address? Who is affected, and who should be involved? Throughout this process, the process manager moderated the flow of communication. Initiatives such as art, theater or sports festivals and temporary "planning academies" become part of the program and influenced the surrounding urban fabric. The charrette-type of forum was designed to strengthen local characteristics, test new identities and further acceptance of the planning results, as local stakeholders took on responsibility and involvement.

The *Kolorado* project for Halle-Neustadt has been lauded as an example of planning for the people with the people, and marks an instance of facilitating the involvement of local residents in what threatened to be an otherwise politically fraught and tedious planning and design process. The exact planning results were not predictable, which was not surprising as the focus was on the process, and the series of mechanisms used to gather information, allow citizen participation, and disseminate information about the results. Through participating in the decisions, the populace not only changed the culture of design and building, but also quickly became accepting of that changing

culture. In the case of Halle-Neustadt, it was the citizen-participants themselves who were largely responsible for formulating the urban design assignments before them.

The questions tackled in Halle-Neustadt reflect to a large extent what Germany's federal government is asking in its broader urban mission, and express the country's concerns for its future. Among such concerns are how to make cities more attractive for families, how to better tie public transit into urban structures, how to provide for an aging population, and above all, how to integrate it all. Added to these cultural questions are a slew of more technical issues such as building for climate change, with increased energy efficiency, or with more sustainable materials and methods, all of which become part of the question of *Baukultur* once we realize that the social questions can only be addressed through the physical means at our disposal.

A strong research focus in Germany, and one related to the question of urban planning and design, continues to be the question of how to house the population. Related to the question of building to better accommodate families in a nation that is plagued by a low birth rate – women in both West and East Germany now have 1.3 children on average, with only half of all college-educated women having more than one child[11] – much of the research has centered around the single-family home as part of an effort to offer more attractive and affordable housing options for traditional families. Such concerns are not new, but reflect federal policy priorities that that stretch back to at least the Second Housing Law of 1956, a piece of federal legislation that favored owner-occupied, single-family housing over multi-family homes to encourage nuclear family households and to "root the populace to the soil".[12]

Currently funded research has continued these policies in a new way, as it combines the social program of single-family housing with the technical one of reducing Germany's energy consumption and carbon footprint through making the new generation of homes extremely energy efficient. The technical research has been augmented with studies examining the marketability of different types of housing. One federally-funded study by Weeber and Weeber[13] examined twenty-five model projects that have made urban

forms of the owner-occupied single-family home more available to broader segments of the population, in an attempt to persuade families to chose urban settings over a move to the suburbs. Part of an overall push to make cities more attractive to families, the projects covered are designed to appeal to better-situated households who have typically sought more spacious quarters and access to nature in the suburbs or in rural areas. Touting ideals such as "individually determined urban living," and "urban living with the quality of life of the detached, single-family home," the study lists house types as "urban villa", "house-in-a-house", "loft" and "penthouse". Process is a major focus of this study, as the authors determine what methods are most efficient for bringing about the desired result. Organized client-groups and advisory boards form the basis for a more professionalized relationship between client and architect, one in which the client has a strongly organized voice within the building progression. The study lists life close to the central city as very desirable, but cites a parking spot on the property as close to the home as possible as an important criteria for house buyers. Further reflecting on the question of urban life and transportation, the study cites that a short commute to work increases the quality of life as it allows more time for family and recreation, but points out the economic effect is negligible in Germany, as generous mileage allowances for the commute by car remain tax deductible.

Car-free communities

In its search for a family and elder-oriented, high-tech, ecologically conscious society, the German federal government has been remarkably silent on an important question that deals both with long-term urban design and planning and lifestyle decisions, namely, the continued prevalence of the individually owned car. To be sure, mass transit is a major concern in Germany and other European countries, with the German government having sponsored major studies on exemplary transit practices that increase the willingness of the population to use public transit – both for the commute to work or school, and for running errands on a daily basis.[14] There is common consensus that most cars spend a great deal of time parked, and that parking, especially in an urban context, takes up space that could be used otherwise. Yet the leap to restructuring the cultural question of mobility and transportation seems to be elusive.

Germany boasts several high-profile car-free communities, yet sponsors have been special-interest groups and housing enterprises in conjunction with local governments. The federal government's lack of leadership is perhaps not surprising when one considers Germany's strong auto industry. The Volkswagen group, including Volkswagen, Audi, Skoda, Seat, Bentley, Bugatti, Lamborghini, and Scania, has made Wolfsburg a company town, while Daimler-Benz is a major employer in Stuttgart, as is BMW in Munich. German automobile manufacturers produced over 5.5. million cars in 2008,[15] to a tune of €330.881 million (approx $450 billion).[16] The industries are an important part of the German economy, and despite an increased commitment to more ecologically sound transportation through investments in developing more energy efficient vehicles and motors that use alternative fuel sources, the industry remains dependent on selling vehicles geared towards an individualized form of transportation. One's own car is marketed as a major factor in individual expression and quality of life. Added to this is Germany's strong infrastructure for a car culture. *Autobahns* are modern and equipped with a network of pleasant rest stops, while train service, though comfortable and efficient, has become more and more expensive over the years, making even Germany's relatively high gasoline prices seem reasonable by comparison. Commutes to work remain tax deductible, with mileage rates covering gasoline, insurance, and depreciation of the car itself. There is thus little incentive to forego the car for either long-distance travel, or in many cases the trip to work.

Within urban communities, higher population and building densities, and the question of parking begin to paint a different picture. Here, public transportation is a necessity, and its enhancement as a way of improving urban quarters has been part of a widely strewn research area covered through the program *Vernetzung im Verkehr zu Verbesserung von städtischen Quartieren* (Creating Transportation Networks in Order to Improve the Quality of Urban Quarters). The program has examined how to improve problems associated with a car culture such as air pollution and a lack of adequate parking, yet does not go so far as to question the view that individual transportation is a given policy direction. Only eight of the thirty projects examine the problems associated with an inadequate public transportation system.[17]

When looking at the broader picture, the contradictions between the economic interests of the auto industry and the ecological and quality-of-life interests of the population remain in the shadows, with Germany's strong car culture continuing to play into the equation. That the federal government has funded research on zero or plus-energy houses without linking such research to a strong program to examine how the inhabitants can move beyond the walls of those houses in a more ecologically responsible manner is a matter of exploration for future policy direction.

Despite the lack of federal involvement, the idea of car-free housing developments in Germany has a long history that began with the first wave of ecological thinking in the 1970s, as cities built expansions to increase their housing stock. One of the first such communities was Langwasser, an area to the south of Nuremberg that began development in the 1950s as a conventional housing estate, with the car-free segment Langwasser P constructed between 1978-87 to house a population of 3,300. The 14-hectare site eliminated cars from its core area and provided facilities for them on the edge of the estate, an approach that was seen as revolutionary for a time when car ownership implied status, and conventional planning paradigms foresaw private cars to be parked very near individual dwellings. Urban planners in Nuremberg made use of a special amendment to the legal regulations of the Bavarian traffic law (*Straßen- und Wegegesetz, Sondernutzungssatzung*), rescinded in 1987, which allowed the building of pedestrian precincts in residential areas. Previously, such areas had only been allowed as pedestrian shopping zones.[18]

Langwasser P did not require residents to forgo owning a car – the community was simply configured to provide an innovative solution for their parking. Parking lots were located 150-200 meters from the apartment blocks, and paths between the two were roofed over. Carts and dollies were provided to transport heavy loads. Daily shopping facilities were located within the community, and public transit stops were located nearby. Green spaces were carefully planned to provide a variety of spaces for the residents, locating children's play areas close to homes but not in areas where playground noise would be a problem. Overall, studies report that the residents continue to view the increased quality of life as compensation for longer walking distances to their cars.[19]

Car-free housing projects have become a European phenomenon, but are often the initiative of private groups, such as private housing associations. Support at a government level comes in various forms – in the case of Bremen-Hollerland, another early car-free project that was initiated in 1992, the municipality received support through the European Union, which partially took over the costs of a "moderator" who coordinated the project, met with interested parties, took over publicity efforts, and documented the process. Bremen-Hollerland was the result of a political compromise that allowed a large meadow of outside Bremen to be divided into a nature preserve and an area for a new housing estate providing 210 apartments and row houses. Because of the proximity to the nature preserve, the concept called for a strong ecological identity, including watershed management and traffic reduction. With the help of a project manager who found interested parties, a grass-roots community organization was formed to explore the modalities and advantages of a car-free neighborhood. Bremen-Hollerland has one parking lot at the edge of the estate, used for cars held by a local car-sharing service, handicapped-access vehicles, and visitors. The reduced dependence on cars has been described as an "integrated energy-saving system," as it considered housing and transportation in the greater context of how people living in the estate would organize their daily lives.

Despite a well-thought through approach, the builders of Bremen-Hollerand had trouble selling the homes. The area, which was only 5 km from the town center, was perceived as too isolated, and a planned rail connection never materialized. Added to this, a local economic downturn prevented many families from purchasing a new home. Nevertheless, Bremen-Hollerland continued to serve as an impetus for other projects that aimed to reduce the dependence on cars.[20]

Many more car-free housing projects have sprung up in Germany and other countries of Europe since the early 1990s. Recent German projects include: Bremen-Grünenstrasse, Freiburg-Vauban, Hamburg-Saarlandstrasse, Kassel-Unterneustadt, Munich-Kolumbusplatz, Munich-Riem, Münster-Gartensiedlung Weissenburg, and Tübingen-Französisches Viertel / Loretto Areal, with further projects planned in Berlin and Cologne. A project in Halle was realized through restructuring an existing area. Initiators of

these projects have in almost all cases been munici-palities in conjunction with one or more citizen groups. The projects in Bremen and Berlin were initiated by citizen groups, while the project in Tübingen was initi-ated by the city alone. A small project in Karlsruhe – 13 detached single-family homes – has been funded in part through federal funds provided by the ExWoSt project *Kostengünstiger Qualitätsbewusster Neuba*u (Cost-Efficient, Quality New Construction). The pro-gram itself was not aimed at producing car-free hous-ing areas, but rather satisfying the desire for families who wished to live in a detached single-family house at an affordable price.[21] In addition to the decision to produce a car-free complex – which was limited to planning no individual parking on the properties – the potential to integrate offices into the homes was de-signed to allow a flexible work-life balance for the owners.

In the broader quest for *Baukultur*, questions remain: *how* should cities be structured, *how* should transpor-tation be arranged, and *what forms* of housing should be built for the population? There is no doubt that the mechanisms the federal government has designed to establish programs, procedures and processes, com-munications and mediation, and funding programs, have done much to change the culture of building in Germany. The country has established itself as a fore-runner in the area of energy research and environ-mentally conscious lifestyles, and it has explored new ways of achieving citizen involvement in the planning process. Yet much potential remains for exploring the integration of these questions in order to incorporate social and technical factors with the political and eco-nomic dynamics that are so much a part of urban and building design today. Writing from an American con-text, James Kushner argues that if cities were to cease imposing an obligation on housing developers to finance the automobile infrastructure, developers could market both car-based and car-free housing, and consumers would be able to understand the true costs of automobile ownership, the improved site envi-ronment, the lower housing costs, and the benefits of adopting a pedestrian lifestyle.[22] This is the type of big-picture thinking that is required for permanent and sustainable change.

The multitude of federally-funded projects in Germany – and the areas where such projects are lacking – have pointed a way to use experimental building pro-grams to influence not only what is built, but also to generate creative means of finding the way in a proc-ess that results in society's investment in writing its own cultural codes. Far from a centrally-determined planning process, the paradigm used involves setting long-term planning goals while allowing flexibility for expansion, improvement, and implementation. The result, transferrable to other cultural contexts, is an integration of legislative, spatial and technical factors that in their interplay shape the society we choose to build.

Note: All quotes from German source texts have been translated into English by the author.

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