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## *Crossing boundaries. New contexts for architecture in the face of exponential urbanism*

### *Den(s)city*

Nowadays there is a need for 'infinite' architecture. Buildings and structures should be in state of constant change in order to match the dynamic processes taking place in a modern city: its fragmentation and ephemeral character, vivid cultural context, mobility and interlace of infra, urban material and landscape. Furthermore, urban sprawl creates an exponential growth of continuously moving masses – housing, working and recreation are situated

far apart, so everybody is continuously on the move. With the intention to deal with horizontal density expansion, urban development seems to be a major policy and a central principle of growth management programs used by cities around the world. One way to create density is stacking programs, structures and volumes, still leaving necessary unbuilt voids. All this leads to creating more challenging and dense contexts for currently realized projects.

### *Extorted public space*



Fig. 1. The 1748 Nolli ichnographic plan of Rome  
– Giambattista Nolli

Mobility and high-car dependence are signs of modern life style. As a result car traffic takes over the city. Streets and many old squares, which in the past were part of public realm, became just necessary links to get from point A to point B. Street is no more public as it is used mostly by cars instead of people. In a well-known Nolli plan of Rome from 1748 (Fig. 1), private spaces such as dwellings are rendered as black solids and public spaces such as streets and squares or church interiors as white. If we would draw Nolli plan of contemporary Rome, there would be a lot fewer white voids than before – the heavy-traffic streets would have to be rendered as solid blocks. Part of public realm was taken.

### *Integration*

*After the representative age with the subsequent post war concept of 'The Black Box' (Modernism, representing urban programs in clearly defined volumes) we gradually enter an era where representation fades and is go-*

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*ing to be replaced by integration [8]. Integration of architecture with existing and already defined city core. As a result, activities have to overlap and buildings must adapt to different programs over time (Bernard Tschumi's cross-programming concept [6]). If there is to be a 'new urbanism', it will not be based on the twin fantasies of order and omnipotence; (...) it will no longer aim for stable configurations but for the creation of enabling fields*

*that accommodate processes that refuse to be crystallized into definitive form; it will no longer be obsessed with the city but with the manipulation of infrastructure for endless intensifications and diversifications, shortcuts and redistributions– the reinvention of psychological space [3]. Infinite architecture of contemporary city has to be integrated and deal with most concentrated, intense and dynamic contexts so far.*

### ***Overlooked context***

Individual building is always seen first as a part of the whole. Every building engages in a dialog (which sometimes happens to be a quarrel) with the history, beliefs and needs of a particular place and time. City fragmentation, urban growth and demand for new kind of programs incorporated into existing urban fabric makes architecture territory spread on sites which have never been considered before: infrastructure nodes, postindustrial brownfields, highways surroundings, underground garages and passages, bridges and viaducts, roofs and walls of existing buildings, rail tracks, etc. On the one hand, these spaces

are unadapted yet and hard to deal with. On the other hand, they provide interesting conditions for vivid architecture of compression and intensification. Rough and uncommercialised territories determine new challenges and strategies for cityscape. The potential urban performance of the unprogrammed spaces is gigantic and could be introduced in a wide variety of projects: from small landscape concepts to large-scale developments. Many empty and unused zones can be heavily programmed in order to fill the urban material with diversity and missing integrated services, leading directly to higher efficiency and lower costs.

### ***Architecture takes the streets***



Fig. 2. A8ernA in Koog aan de Zaan – NL Architects.  
Photo by Luuk Kramer

Part of our public domain has been already overtaken by heavy traffic but it still can be given back. Even busy streets – treated as an opportunity, instead of as a disaster – could become a friendly environment to accommodate a new type of urban life.

Famous 'Westblaak Skatepark' and Restaurant in Rotterdam [5] – already an icon of the city's cultural

identity – proves that even in dense cities there are still places for recreation or play. It was constructed on an underused green area (perceived as an urban void in the central area) in the middle of the Westblaak, a major traffic artery bordering a shopping district. This central location is so effective that it guaranteed the skatepark's success and it is always crowded – both by skaters and

their audience, especially in summer. The development somehow compensated dramatic lack of useable green space within Rotterdam downtown district – the skatepark became there an asset for reinventing the wider city in creative ways to produce joyful, lively and playful urban space.

Another project that took advantage of the concrete jungle in order to create new urban quality is ‘A8ernA’ in Koog aan de Zaan (Fig. 2). The new road crossing Zaanstad town produced a brutal cut in the urban fabric, creating a challenging context for any kind of architectural development. Furthermore, progress in traffic system has resulted here in a radical separation between the Church and the former town center. The NL Architects project restored the connection between both sides by activating the space under the road. Instead of a disaster, the remarkable (because of its cathedral-like spatial quality) space under the road was considered an opportunity. New type of urban life was accommodated there: skate bowl,

soccer field, basketball pitch, parking lot, roofed square with the supermarket, little shops, fountain, mini-marina, ‘panorama deck’ and ‘river’. In an unexpected way, the elevated highway provides an opportunity to reconnect the village to the source of its existence.

‘Living Bridge’ concept for Hamburg Hafencity by Hadi Teherani is a completely different type of project, dealing with incorporating new functions into the traffic system. His proposal is ‘a city on the water’ – 700-meter-long development in the form of a five-storey bridge spanning over the Elbe River and including luxury apartments, shops, parks and other businesses. There are many other similar concepts, like ‘art-’ and ‘recreation-’ bridges (they all took inspiration from the 14<sup>th</sup> century market place bridge Ponte Vecchio in Florence but ‘Living Bridge’ – if approved from logistic and political point of view – would be the world’s largest such development and could then fundamentally change the way we think about infrastructure.

### *Reclaiming the landscape*



Fig. 3. The High Line in New York City – Field Operations and Diller, Scofidio & Renfro. Photo by Vivien Chin

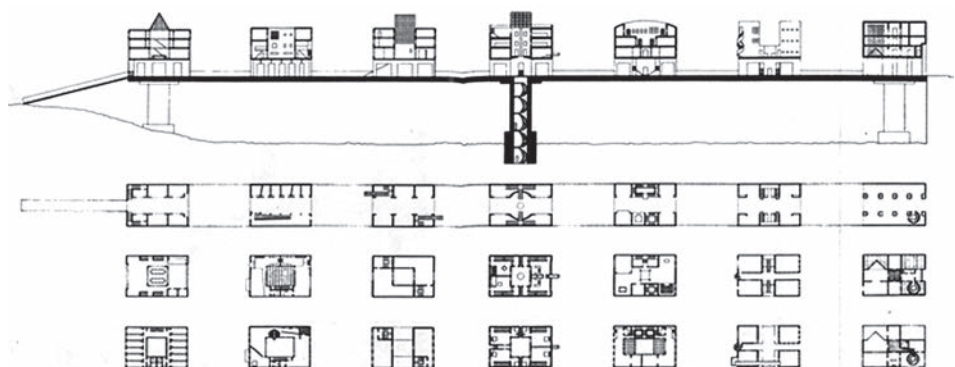


Fig. 4. Bridges of Melbourne – Steven Holl. Photo by author

A dramatic lack of pleasant useable greenery within dense city centres can be also solved by introducing landscaping to challenging and dense contexts, like degraded infrastructure zones. Interlace of infra, urban material and green areas leads here to reclamation of landscape.

The High Line project (Fig. 3) in New York City is a good example here – design for converting the old elevated defunct rail that runs 30 feet above Manhattan to a public space. Architects have fantasized about the High Line since at least the early 1980's, when Steven Holl first completed a theoretical proposal to build a “bridge of houses” that straddled the elevated tracks (Fig. 4).

Finally in 2004, Field Operations and Diller, Scofidio & Renfro was selected to design a master plan that would transform an abandoned section of elevated freight track into a public park [1]. The first two sections the three-section High Line are now completed; the third has yet to be approved. The designed walkway includes more than 100 species of plants that were inspired by the wild seeded landscape left after the trains stopped running. The design includes several squares, sitting and focal points, a giant outdoor movie screen, visible from the street and a public swimming pool with an elevated sandy beach. It is considered one of the most thoughtful, sensitively designed public spaces built in New York in years. On the other hand, it still provides flexibility and responsive-

ness to the changing needs, opportunities, and desires of the dynamic context – the proposal is visibly designed to remain perpetually unfinished. *The (...) design succeeds in preserving the High Line's tough industrial character without sentimentalizing it* [4].

Introducing a landscape program over the infrastructure was also the main topic of “Olympic Sculpture Park” project (Fig. 5) [2] in Seattle. The context here was an 8.5-acre industrial brownfield incorporating a drop of more than forty feet from street level to the waterfront, sliced into three by active railroad tracks and an arterial road. Weiss/Manfredi Architects proposed in such context an exemplary strategy of civic placemaking. The industrial brownfields context was approached here by rediscovering it and its potential to become part of an urban landscape by suggesting additional infrastructures, uses, and public activities. The concept was a complex “artificial topography” of unfolding planes reconnecting the city with its neglected waterfront. As a result Seattle gained a “park building” fusing architecture, engineering, and landscape architecture. In terms of context, on one level, the Olympic Sculpture Park can be seen as affirming the conflicts and tensions generated by Seattle's simultaneous development of industrial and postindustrial profiles. But on another level, it creates an unprecedented urban space allowing for new encounters and interactions.

### *Parasitic architecture*



Fig. 5. Olympic Sculpture Park in Seattle  
– Weiss/Manfredi Architects.  
Photo by Benjamin Benschneider

Another kind of relation between architecture and intense urban fabric could be a parasitic relationship. As more and more people filter into the city, open land to build on will become more and more scarce, and we may have to use every available bit of space we can, including empty bare walls, bridge pylons, and retaining walls. In this context, parasite developments – nowadays still considered only

single extravagant actions – could become essential tools in order to obtain the density of urban development. Such attributes of parasitic architecture as adaptability, transience, and mobility could be the answers to the ephemeral and dynamic character of contemporary cities.

Among many parasitic architectural objects, there is a visible tendency to serve the need for mobile living and



Fig. 6. Nomiya Temporary Rooftop Restaurant in Paris – Pascal Grasso. Photo by Kleinefenn

extraordinary experiences. The potential of mobile exclusive services is shown by Parisian architect Pascal Grasso who has installed a temporary, transportable Nomiya Restaurant (Fig. 6) on the roof of Le Palais de Tokyo museum. But then again The Prefab Parasite, designed by Australia-based Lara Calder Architects reveals the possibilities of reusing exist-

ing empty vertical surfaces. The proposed structure aims to turn previously plain wall into a liveable private space. Mimicking parasitic qualities, the home is designed for durability and adaptability, evident in its construction made of prefabricated panels so that the home could be affixed onto any wall or pylon large and strong enough to hold it.

### *Programming infrastructural nodes*

The most advanced relation between architecture and infrastructure would be the development fully integrating both urban and infra layers. The blueprints of the infrastructure system and the building would evolve then into simultaneously designed and tight cooperation between architects and traffic engineers would decide about the shape of the cityscape.

In 1997–1998, Monolab conducted an independent study called ‘Infrabodies’ on programming of emp-

ty zones along heavy infrastructure. The A20 highway, which functioned as a test case, is the northern part of the Rotterdam Ring – a bundle of infrastructure. The research was not approached in accordance with current laws and regulations in order to reveal the potentials. There were chosen six locations in the A20 context which represented typological examples of many comparative situations in Holland. Research put emphasis on intertwining of program and infrastructure in conditions of high compres-

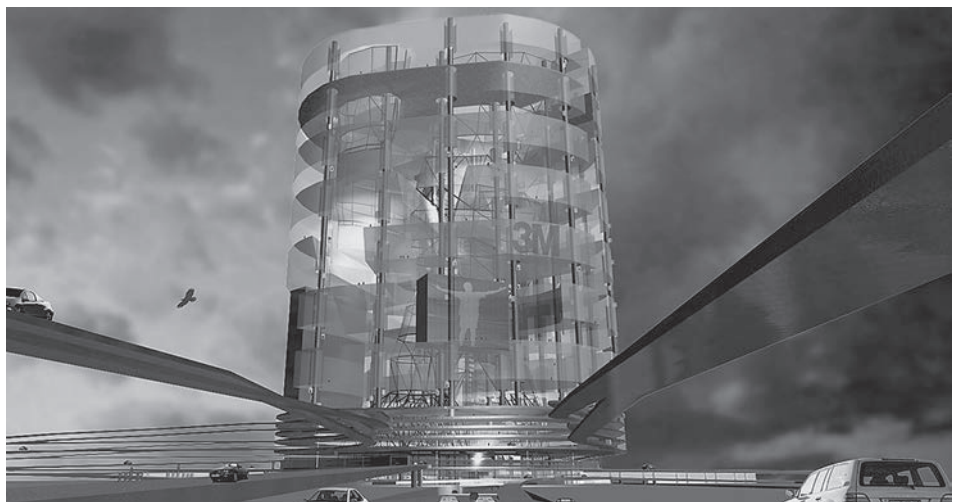


Fig. 7. Compressor Overschie – Monolab Architects

sion, as fusion creates new programs and performs best with flexible and variable programming. The main idea behind the concept is that nodes, embedded in existing infrastructural networks, are ideal locations to realize massive programs.

After that study Monolab Architects researched several similar test cases in Holland, such as infrabody 'Compressor Overschie' (Fig. 7) and 'A12 Long Term' – long-term view of the highway. *These kinds of sites are difficult to*

*develop, but they force us to learn techniques of concentration and intensification, the tools for urban planning in the nearby future* [9]. The projects prove that the urbanism is loaded with much more potential than we are using these days and that concept, fusing infrastructure and urban material with existing landscape, is the right way of integrating metropolitan programs, especially in cases where the visual presence of these programs is inappropriate or not wanted.

### ***(Cross) programming the city***

Bernard Tschumi in *Event-cities* [7] explores the relationships between spaces and events. This is apparent in the 'unclassifiable' or 'unprogrammed' space found in the gaps, margins, and in-between spaces included in many of his later projects (Kansai Airport, le Fresnoy in Tourcoing). These are places in which an infinite number of unplanned events could take place, where life is not exhaustively determined by functionalist architecture dedicated to the proposition that there is only one set of appropriate behaviours for a specific space. Representation is replaced by integration.

The same strategy could be used in the case of exponential urbanism. Many empty and unused zones in con-

temporary cities can be heavily programmed in order to fill the urban fabric with diversity and missing integrated services. There is a huge potential in (cross) programming these spaces as it could lead directly to higher efficiency and lower costs.

New contexts for architecture of contemporary city – apart from physical (infrastructure layer, city roofs, etc.) – are the cultural and sociological conditions like dynamic and interlaced life patterns (living/working/leisure) mobile and flexible life style. Density (concentrated layouts of functions) and integration/cooperation of previously separated functions are the tools to deal with all these contexts.

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### ***Przekraczanie granic. Nowe konteksty architektury w dobie procesu zagęszczania się miast***

Fragmentacja miasta, tzw. 'urban growth' i zapotrzebowanie na projektowanie budynków o elastycznym i multifunkcyjnym programie prowadzą do tego, że architektura współczesnych miast musi się mierzyć z nowym rodzajem kontekstu. Terytorium architektury rozszerza się na węzły komunikacyjne, przemysłowe tereny, otoczenia autostrad, par-

kingi i przejścia podziemne, mosty i wiadukty, dachy i ściany istniejących budynków, torowiska kolejowe, etc. Na podstawie wybranych realizacji i koncepcji w artykule przeanalizowano zależności między architekturą a takim nietypowym „agresywnym” kontekstem.

**Key words:** exponential urbanism, crossing boundaries

**Słowa kluczowe:** zagęszczanie miast, przekraczanie granic