The belly of the planner

Discovering the urban potential of the Limmattal

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The so called "suburbia" is challenging several disciplines: regional planning, urban design, landscape architecture…. Often, to often, the images which are leading the projects of these disciplines are retrospective: they are telling the stories of "untouched nature", "beautiful, harmonious and protected landscape" and "concentrated, tiny little settlements as neighbourhood". Images like this are ignoring the reality of the suburban space and territories. The past can not be the future. Wishful thinking of not reversible periods of urban development will not help to invent new tools for developing "suburbia". We have to explore the urban reality of these territories. This article tries to convince for a new look, a new view on the suburban life and space - which is almost urban. In a first step we describe the Limmattal as a typical "swiss scape", in which landscape and agriculture territories are transformed into a specific kind of "urban scape" and network of public spaces. In a second step we explain our methodological approach to map these "unknown territories". This leads us in part three to some proposals for "crossover" and transdisciplinary approaches for a kind of re-invented planning and spacial design. [1]

News from nowhere

The decentralised industrialisation process in the 19th century in Switzerland shaped a life-space that was urbanised in a dispersed way and thus still remained part of the landscape. The model of the "garden city" was adapted as a way of extending its own tradition of settlement development. The "desired countryside image" and the "terrible city image" (André Corboz) had become basic orientation-points influencing the planning profession as well. "Town planning" was developed as "village and estate planning". In 1932 the archtitect and liberal politician Armin Meili propagated the "broadly decentralised Swiss megalopolis" from St. Gallen to Geneva. Apparently, what seemed to be retrograde actually became a guiding principle. Subsequently, the cities in Switzerland remained strongly connected to the countryside, or interspersed by it, and the urbanisation went on in a very spread, decentralised way. The urbanised, built-up landscape between the city centres must be spied out anew, and the traces and layers of Swiss urbanisation must be revealed, for them being the specific starting points of emergence and development of the "intermediate city".

In the 1960ies unmarried couples moved to Spreitenbach (Canton Aargau) to bypass Zurich's concubinage law not allowing them to live together. Exceptional permissions and conditions in Würenlos allowed to build the motorway restaurant as "event-gastronomy", a term that did not even exist at that time…the suburbia seems to be the place of freedom and invention. Lets have a look on often seen but still unknown territories of daily live of a metropolitan area.

1 The urban landscape

1.1 little big swiss scape

The upper Limmattal belongs to the metropolitan area of greater Zurich, the most important economic area of Switzerland. The pronounced valley-form morphologically and functionally determines the settlement area. It covers over 24 km between the city of Baden and the city of Zurich, bridges a border between the cantons Zurich and Aargau and includes 14 municipalities (6 in Canton Aargau and 8 in Canton Zurich) with very different profiles regarding population and job structure as well as growth.

Most Swiss people know the Limmattal as a transit corridor, not for being a place to go or to stay in. Nevertheless, the misjudged valley has an impressive history waiting to be explored.

Picture: Greater Zurich Area

The Limmattal is an intensively and variously used space, stamped by mobility and traffic infrastructures (public transport as well as individual transport); it contains numerous service and shopping centres, very diversified forms of housing (multi-storey buildings, smaller blocks of flats, single family housing, rural village-cores, etc.) and offers numerous economical activities in service and industry. With the Limmat River meandering through the valley, the forests on top of the hills, the vineyards, fields and acres, nature likewise is always present.

Today's situation, with urban sprawl being omnipresent in the whole valley, is the result of a long ongoing process. In the 1970's the new built motorway and the huge shopping mall "Shoppi" in Spreitenbach consolidated and ensured the continuous development of the region as well as the valley's reputation of being a typical suburban part of Switzerland. When talking of the Limmattal hardly any Swiss thinks of the rural idyll it used to be for a long time.

Picture: Settlement area around 1880

At the beginning of the 19th century the Limmattal is a picturesque valley with only few small settlements. In 1847, the opening of the first railway line section triggers the rapid industrial development. Only 15 years later the valley communes were home to the textile, construction and machine-building industries. An extensive correction of the river harnessed the force of the water to generate electricity. At the end of the 19th century, settlements are still positioned clearly in the centre of the municipal jurisdiction like the yolk in a fried egg.

Picture: Settlement area around 1955

On the left side of the Limmat River, the economic boom and the planning-euphoria of the 1950s transformed, within the following decades, these separated settlements into one continuous structure meandering through the valley. On the right side of the riverbank, next to the infrastructures but on the sunny side of the valley, the villages developed much more slowly and started to be appreciated by the middle- and upper class as residential communities.

Picture: Settlement area around 1970

In the 1970s the boom came to an end and building activities slowed down. Nevertheless, the generously dimensioned building-zones generated an ongoing development of disperse settlement resulting in an enormous land consumption. The railway, in particular the large marshalling yard and the motorway have a strong influence on the whole structure of the Limmattal. Since these infrastructures run so close to the river, the settlements can hardly relate to the water. Nevertheless, diverse ecological and recreational spaces developed along the Limmat.

Picture: Settlement area around 1995

If one compares today's settlement figure with the corresponding from end of the 19th century, the former structure can hardly be recognized. The municipality borders lost the relation to the settled area that grew together and now forms a hardly interrupted urban "ribbon". "Limmattal-city" complies with forces going beyond political borders and institutional planning strategies. Only about 10 years ago planners and municipalities changed their concepts and started to focus on densification and development to the inside of the already settled area. New planning instruments like "settlement separation belts" (Siedlungstrennguertel) help to prevent further sprawl.

1.2 Re-Visited: a journey into the new urban scapes of Limmattal

Although the orientation towards Zurich is still in evidence, there is also something like a drive for emancipation for the Limmattal; at least one can pick up an atmosphere of an increasing self-confidence for the original qualities of life and work. When one looks closer, this 'suburban and intermediate city zone' reveals itself as an urban cosmos with an amazing atmospheric attraction.

Recovering the Limmattal is a matter of seeing it as a part of the everyday urban story: It is about the "myths" which are hidden in the "thicket of the arterial roads", around the identities in the noise shade of the big infrastructures. It is about planning-history and appropriation attempts. And it needs a certain portion of self-mockery to handle with the realities of the mass society from which nobody can hide.

In contrast to the classical relationship of centre and periphery, in the built-up area there is no real reference size apart from the infrastructure elements, only a juxtaposition of structures, sometimes extremely variable in form and scale: organic village centres next to large functional estates, motorway junctions next to carpets of family homes. The contrast between town and country has long broken down in favour of an intensive reciprocal interweaving of natural and urban fragments. Between the carpets of buildings and the infrastructure-stretch many different forms of landscape such as avenues of poplars, allotments, cow pastures, football fields, railway wastelands or riverside forests. Closer examination reveals an extremely multi-faceted area, contradicting the prejudice that the Limmattal has simply been built all over and inundated with traffic. Although the river has for the most part been straightened and channelled in the course of the last 150 years, there are varied sequences of landscape near it with occasional agricultural zones, oxbow lakes and, as in the inflow area of the Wettingen dam, reed beds of high ecological quality.

Picture: Limmattal in 1994

Looking at the morphological structure we recognize different recurring types of mono-structural settlement carpets. “Dots”: single family house colonies, “Patterns” geometric housing zones of the 50, 60 and 70s, “Bigs”: huge freestanding volumes and patches of industrial buildings. Mixed structures are mainly found in and around the historical cores. It is not surprising to find the “bigs” located along the railway and motorway and to find the hills mainly covered with “dots”.

Single-family housing-areas are a kaleidoscope of private life-dreams. The residents of the outskirts can live out their lifestyle dreams radically, without consideration of established norms and opinions. Some highlights are expressed in unusual forms of architecture: organic earth-houses looking like caverns can be found, alongside an almost genuine fairytale castle with turrets and moat, eyed by mysterious mythical creatures from the Limmattal sculptor Bruno Weber’s nearby park, “witch’s cottage” included.

Picture: “Dots” – “Patterns” – “Bigs”

Along the infrastructure belts "extra-large-buildings" form identifiable urban symbols in the Limmattal: the Swisscom telecommunications centre, the Mülligen parcel service, the Schlieren gas works, the Spreitenbach “Shoppi-Center” or the “Fressbalken” motorway service-area in Würenlos are buildings with a long-range effect whose sheer size makes them to landmarks in the urban landscape and which sometimes seem more imposing than the structures of the metropolis itself. Alongside these ubiquitous markers other urban structures exist in hiding, as it were: a marshalling yard, storage sites and parking areas of considerable size, hardly noticed in the public consciousness, are the blind spots of the Limmat city, areas of trans-shipment and exchange, transfer points of an urban space. What appears cold, empty and land-consuming during the day proves at night to have the peculiar fascination of a “new night-active landscape”. The marshalling yard certainly is a characteristic part of the Limmattal identity. Some love it some hate it. There even exists a project, by an ambitious architect, for covering the whole yard with an artificial green hill.

Looking at today’s situation these dreams of “back to nature” are more than ever pure utopia: the whole valley is densely covered with settlements and infrastructure facilities. For the few remaining protected free spaces it is difficult to successfully oppose the economical pressure.

1.3 Space of flows

Traffic infrastructures influenced the settlement development in Limmattal during the last 100 years. The different “ribbons” meander side by side through the valley. Motorway, railway, main and local roads were planned so pragmatically that they isolated the river away from the inhabited areas. Particularly in-between the railway/motorway and the river lot of hardly accessible spaces are remaining. They are ignored or forgotten by the booming development. These “urban biotopes” represent another characteristic element of the Limmattal.

Despite the excellent connection of most municipalities to the public transport network of Zurich, the Limmattal remains, like most “outskirts”, a car-dominated area. Public transport suffers the handicap of monocentric orientation on the metropolis. The network within Limmattal is not yet dense enough. Thus in Limmattal the proportion of cars per household is fairly high (1.14), compared with the average in Canton Zurich (1.0), the Swiss average (0.98)

or the average in the city of Zurich (0.7). However, it is not as significant as expected in such a well-equipped area. [2]

The fact that new built roads only shift problems and usually generate even more traffic is no new finding. Nevertheless there are still various huge road-construction projects like the duplication of capacity for the motorway tunnel Baregg near Baden (actually under construction). The shifting of this bottleneck will bring back into actuality projects like the long-discussed expansion of the Gubristtunnel (by-pass between Limmattal and the Zurich airport). We don't know yet what effects will have the western by-pass of Zurich on Limmattal, which will be inaugurated approximately in five years.

The central project for public transportation in Limmattal is a new commuter railway system for improving the connections within the Limmattal. The projected route interconnects the centres, the main housing areas and the industrial zones. The capacity estimations show however that the project is not yet profitable enough. In the medium term the examined area will stay car-dominated.

Picture: Catchments area of commuter railway stations (radius of 500 m) and motorway entrances/exits (radius of 1000 m)

1.3 New Limmattal nature

In the past agriculture and forestry shaped the landscape's appearance. Today agriculture and forestry lost their economic importance and potency thus bringing up the question of the role of agriculture in today's society and for landscape conservation. On the other side the demand for spaces for leisure time activities and recreation is continuously growing.

In the last fifteen years different efforts were made to extend the protected areas in Limmattal and to improve the nature qualities of certain zones. Above all, compulsory environmental compatibility studies, as for the renewal for the concession of the power station in Wettingen, led to a series of compensatory measures. The power station in Dietikon soon also will have to apply for a renewal of the concession. Probably there too will follow compensatory measures. For sure there will be such measures when ambitious infrastructure projects, like the discussed extension of the Gubrist motorway tunnel are realised.

The qualities of Limmattal landscape are frequently mentioned. Very appreciated is the fact that local recreation areas are easily and quickly accessible, anywhere you come from. They assume an important role in promoting the relatedness to a common spatial entity for Limmattal inhabitants. The close contact to natural leisure areas is very important for Limmattal's quality of life. Consequently, they are intensively used for leisure activities as jogging, riding, rowing, walking, bathing, gulf plays (in the plain of Weiningen) and barbecues. These areas are not only frequented by the local population, but attract people from the whole Zurich Area. The plain near Weiningen for example is widely known since it is one of the few places where dogs are allowed to run freely, without lead.

In its current condition the valley is the result of an almost complete over-forming of the formerly rural, cultural landscape. The contrast between city and countryside is long dissolved in favour of an intensive mutual penetration of natural and urban fragments. Between the settlement carpets and the infrastructure lines, various landscape-forms such as cottonwood-rows, allotment gardens, cow pastures, football fields, brownfields or riverside woodlands subsist. The last mentioned are regarded as an important biotope as much as for instance the

railway corridor including the huge marshalling yard, which is appreciated for offering habitat to reptiles. Although in the last 150 years the river has been regulated and canalised to a large extent, there is a wide variety of open spaces next to the river: some agricultural zones, old closed meanders like the one at the power station in Wettingen or ecologically important reed areas. Thus the riverbanks also become recovery and recreational areas. Some are valorised by adding facilities like barbecue-places. Others are transformed completely by the infrastructures into hidden “natural” spaces, which are surprisingly fascinating, maybe due to their uncommon appearance.

2 Mapping the unmapped

Looking for a new perspective: As described in the introduction, outskirts are an urban reality that has developed out of a concurrence of complex dynamics. They were not planned as a whole and not as such, therefore do not correspond neither to an image nor a model that we could identify and understand. But the fragments resulting from institutional planning and individual decisions form a kind of “camouflage suit”, a “hidden-city” or urban patchwork. Once this complexity is faced and accepted, a way must be found to deal with it. Out of this challenging situation new chances have arisen, first of all a newly established dialogue between different disciplines all dealing with the territory but having for a long time ignored each other. The more the spatial and functional emancipation of outskirts from the core city has been growing, the less the methods of the classic urban development with their adjustment on traditional spatial order-systems can be applied to them. For the planning disciplines it is the duty but also the opportunity to rethink their own concepts and references. This refers on the one hand to sketching appropriate space-systems, on the other hand on "programming" and networking urban functions. This also means a questioning about the changing roles of professionals and about the plan as designing, space-forming instrument. The formalist notions on spatial identity, city form and architectural development often propagated and defended with great self-confidence are too overall and coarse: in the end it is nothing more than the wishful thinking of town planners, while they definitely overestimate their means of influence and control. An appropriate strategy that would enable planners to intervene efficiently would first of all have to face, without reservation, the existing, real forms of space and life.

Presupposition for such an argument is a detailed knowledge of the matter to be treated: the Outskirts. Maybe the first task of planners could mean to turn upside down their own working process and to draw afterwards the plans of an already existing project. This process differs from a 'classic' spatial analysis in this respect, that it must take into account unknown or unusual factors, since the outskirts do not reveal themselves in well-known references or models, their underlying rule is still to be identified. The subsequently described approach, which was developed within the framework of two research projects in parallel [3], tries to draw the image of outskirts: to map the unmapped.

Picture: View of the Limmattal form a high-rise building in Spreitenbach (© Büro Z)

2.1 Scanning the DNA

As part of the research around the Limmattal, a conceptual access was applied with the attempt to make the space-defining elements visible. The first approach to the region, seen as a 'scan': the spatial structure of the Limmattal is 'scanned' for repeating and nameable structural elements. The urban conditions are laid open as layers of an urban topography. The iconographs thus created first of all allow a graphic illustration of the individual elements of this spatial structure. Superimposing these elements by means of drawings in the sense of a Limmattal-DNA is the attempt to make visible important structural characteristics or development potentials. These are then the basis for scenarios that aim at breaking through the thinking routine in a playful way in order to help discover new urban spaces of opportunity [4].

Picture: Borders: contact lines of city and landscape

Compared to compact historic cities, in the Limmattal the border of the urban-landscape resembles a fractal: the contact area to the landscape tends to infinity, even if it is not always tangible.

Picture: Cores and relicts: historic memory

First of all the historic settlement cores, but as well biotopes, forgotten or restored fragments of nature are the components of heritage and memory of the traditional towns and landscapes. Cores and relicts are handled with special care, they become more precious by rarity value. They can partly be steeped by new elements. Postcards from the Limmattal bring to evidence how often those historic elements, even being highly fragmented and missing the original context, are used for building an image, an identity. Only in few cases the predominant interpenetration of contemporary urban structures is emphasized, demonstrating a "modern" self-image.

Picture: Ribbons: inflected space

The infrastructure ribbons shape the nature of Limmattal and are nevertheless extra-territorial. Their logic is over-regional and hardly harmonises with the nature of the farming villages, however those owe their growth to the transport infrastructure. In the longitudinal direction of the valley dominates high speed, crosswise to the valley dominates slow speed. So the space is simultaneously bent in the longitudinal direction because of the speed pulling it together. Leaving the highway, one can experience the different urban layers, starting with commercial- and leisure-areas, until getting through to the almost hidden, elder historic cores.

Picture: Clones: generic city

The monotonous prairie of residential areas and industrial zones occupies the free spaces between the infrastructure lines of Limmattal. The granulation and the scale of these structures, especially considering their astonishing uniformity, stands in remarkable contrast to the induced wish for individualisation. In opposition to the signal effect of the ufos, the clones require an approach from the private side to be understood. The clones are the "prairie of the wishes". They are the key to understand the spatial phenomena of the

Limmattal because they represent the sphere where the inhabitants bring about, in the most radical way, how they dream to live.

Picture: Ufos: self-sufficient attractors

The de-connection of some activities from the core-city context and the strong and almost exclusive connection to infrastructure-systems produces the ufo type: solitaire-forms, sometimes freestanding, sometimes combined to form mono-functional islands, the ufos only allude to themselves and define their own context. Already on account of their size and impact, are ufos the landmarks of the urban landscape of Limmattal. Attractors like the shopping-centre in Spreitenbach, islands of commercial box-buildings or identity-forging moments like the highway restaurant in Würenlos (so called "galling-beam"), those elements assert themselves as Landmarks competing with the city-centres.

Picture: Blind spots: "empty spaces" between city and landscape

The latent availability of free areas in comparison to the adjacent city of Zurich allowed the settlement of many big "blind spots" like marshalling yards, freestanding car-parks and stock-areas which are characterised by an extensive absence of density but cannot be considered as landscape-elements. Typical for these "other spaces" is that they are not really perceived outside their strictly functional context.

2.2 Places with new –urban-attributes

After having applied the scanner to the Limmattal and designed the maps of its "genes", through the superposition of those maps in different number and combination, several observationson the urbanpotential could be done. The different interesting pictures that seemed to reveal something about the essence of the Limmattal, about its nature – in one word: its DNA – are named and described in the following paragraphs.

Picture: Ambivalence

The Limmattal is a conglomerate of sprawled, inhomogeneous fragments of settlements and landscape that interpenetrate mutually. It is a complex texture of single elements that often do not relate to each other. The single components themselves may refer to urban or to specifically anti-urban images, however, they mostly have little draught. Old village cores are found to be lying next to functionalistic big settlements, motorway-crossings nearby single-family-house areas, and shopping centres next to marshalling yards. The transport infrastructure certainly forms the structural backbone, meanwhile the settlement growth takes place rather vaguely.

Picture: Emancipation

The historically grown settlement cores are part of the diverse structure of the Limmattal. However, in opposition to the classic relation between centre and periphery, the old centres are no longer a superior reference factor, because the periphery as well assumes central functions. The historic structure of independent city-cores separated from each other by open

landscapes is not legible any more. The housing settlements, the activity-, leisure- and commercial areas in the Limmattal are growing together to form a ribbon-city.

Picture: New centres

Especially along the highway and the railway infrastructure, new centres have appeared. Like "artificial worlds", those new centres dissolve the traditional relation between the size of the urban settlement-body and the hierarchical position of its centre. The new centres generate their own benchmark.

Picture: Liquefied space

The historic city was characterised by an overlay of various programs on a limited and clearly defined area, surrounded all along by an open, public space. Through the change of times, the old spatial unity became more and more dissolved. In the Limmattal this process evolved in favour of a high functional differentiation leading to distinct and separate areas, each of them responding to a different spatial and temporal system. The public space of Limmattal is straightened, temporary used and almost liquefied.

Picture: Hybridisation

The opposition between city and countryside is dissolved: landscape becomes a part of the city and city becomes a part of landscape, both parts demanding on each other. The Limmattal in its current condition is the result of an almost complete manipulation of the formerly rural man-made landscape. Landscape is no longer an "outside-space, it has been enclosed. A relation of mutual penetration and dependence has appeared, where clear definitions - like the notions of city, countryside and landscape – have lost their sense in favour of multiple encoding items and hybrid forms. Between the settlement areas and infrastructures, the landscape exists in most various expressions, going beyond traditional landscape-images. There are cottonwood avenues, allotments, cow pastures, football fields, railway brownfields, but also biotopes like floodplain woods. The transformation of landscape creates living spaces including both urban and rural components.

3 Towards a new urbanism

Heterogeneity, fragmentation, juxtaposition, density, mixture are keywords that describe this urban fabric. These "concentrated outskirts" are a patchwork of contrasted elements; each space is well kept, is of high quality; the environment is very pleasant, with a lot of green spaces. The lack of uniformity becomes pleasant: with each step, one can discover something unexpected. It seems to be the "land of the boundless possibilities": one can fulfil his dreams, build the house he always wanted – even if it is strange, unconventional or unusual. It won't bother anyone and almost won't be noticed since it goes under in the heterogeneity of the surroundings. The landscape is present everywhere. "Limmattal is beautiful" and it seems that the quality of life in this valley is quite high: "the outskirts have to be explored in their

beauty". The Zurich region as a whole, including Limmattal, can be regarded as a today's garden city.

And one can say that the Limmattal is a miniature of Switzerland: there are found to be low-density settlement areas, rural areas, transport infrastructures, industrial areas, forest areas… Leisure activities are not spectacular, there are no big urban parks, people enjoy their house, their garden, the squares, the forest and the rural areas surrounding the valley.

The observation of these outskirts depends on the scale chosen to do it. If one looks at the Limmattal at a larger scale, Limmattal belongs to a network of places made up of large cities, middle range towns, villages, and rural areas… The valley can therefore be considered as a place on its own or as one element of this whole urban system. One can also consider that each part of the network can be a central, specific place and therefore Limmattal as well can be seen as a central place – for instance for consumption and leisure.

The Swiss city network is very peculiar. Despite for the Zurich area, which is often considered as the Swiss core, (because it's the main economic centre), the hierarchy between the other towns is pretty loose. Switzerland is a real network of places. Just to give an example, one needs only one hour (at the most) to go from one main town to another. Therefore, Swiss planners are not facing urban sprawl per se. They rather have to cope with a broad filling scheme, where the gaps in-between the towns are urbanised and build together a metropolitan area. But this area is not fully urban. Actually, Switzerland still has a strong rural tradition. Even though people are discovering that urbanity – considered as a lifestyle rather than as a built form – has already conquered rural places, they are not ready to admit that they are living in an urban landscape. In terms of perception, it is important noticing that many people who are living in outskirts are describing their surroundings as rural, although they are defined in statistical terms as parts of an urban agglomeration. In that respect, defining Switzerland as a "Stadtland" is a very interesting way of thinking. But one must be aware that it does not fully reunite the rural and the urban poles, which have to be integrated in a kind of a "rurbanisation" scheme. People as well as practitioners have to reconcile both urban life and the figure of the village: this remains the bottom-line from where one can conceive and experience social and political gatherings. Both have to be thought together.

That means also to understand measures of developing the urban landscape as interdisziplinary work. This focusses planning as its wants to be: doesn´t matter – we have to reinvent planning, that means to remember the sucesses and to invent new tools and new coalitions of actors to develop the city beyond the cities.

Notes

1 This articles is based on: Koch, M., Schröder, M., Schumacher, M., Schubarth, C., Shadow City. Urbanistic Exploration in the Limmattal, in: Eisinger, A., Schneider, M. (eds.) 2003: Urbanscape Switzerland. Topology and Regional Development in Switzerland. Investigations and Case Studies. Basel, Boston, Berlin.

2 Data sources: Statistisches Amt Kanton Zürich (ed.) Statistisches Jahrbuch des Kantons Zürich 2002 and: www.ag.ch/staag/ (web page of Statistisches Amt Kanton Aargau)

3 Cp. Koch, M., Ruegg, J., Schumacher, M., et al.: Les territoires intermédiaires: modalités de régulation de l'urbanité désancrée, à partir d'analyses morphologiques et phénoménologiques (The intermediate territories: means of regulation for detached urbanity, basing on morphological and phenomenological analyses), research project in the context of COST C10, supported by the Swiss federal office for education and science. / Cp. Wall, A., Koch, M., Schmeing,, A., et al.: Zwischenstadt andernorts

(Intermediate-city elsewhere), sub-project of the research-group Ladenburger Kolleg, supported by the Gottlieb-Daimler- and Karl-Benz foundation

4 Cp. Bormann, O., Koch, M., Schröder, M., Schumacher, M., 2003: Zwischenstadt: Inzwischen Stadt (Intermediate-city: already a city). 100% Stadt, Graz, p. 37-39

References

Bormann, O., Koch, M., Schröder, M., Schumacher, M., 2003: Zwischenstadt: Inzwischen Stadt (Intermediate-city: already a city). 100% Stadt, Graz

Borsdorf, A., Zembri, P. (ed.) 2004: European Cities – Insights on outskirts. Structures. COST Office, Bruxelles and PUCA, Paris

Dubois-Taine, G. (ed.) 2004: European Cities – Insights on outskirts. From Helsinki to Nicosia: Eleven case studies & Synthesis. COST Office, Bruxelles and PUCA, Paris

Eisinger, A., Schneider, M. (eds.) 2003: Stadtland Schweiz. Untersuchungen und Fallstudien zur räumlichen Struktur und Entwicklung in der Schweiz. Basel, Boston, Berlin.

Eisinger, A., Schneider, M. (eds.) 2003: Urbanscape Switzerland. Topology and Regional Development in Switzerland. Investigations and case studies. Basel, Boston, Berlin.

Sfar, D., Schubarth, C., Schumacher, M., Koch, M., Ruegg, J., 2004: Fallstudie Oberes Limmattal. Zwischenstadt im Clinch: Anforderungen von aussen an den Raum, Praxis des Einzelfalles und Versuche der Kooperation (Case-study Upper Limmattal. Zwischenstadt at odds with external demands, individual practice and essays of cooperation – in German). Büro Z, CEAT. IGUF.