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Urban civil engineering

OUTSKIRTS OF EUROPEAN CITIES

State of the Art Report

COST Action C 10

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State of the Art Report

edited by
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Directorate-General for Research

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CONTENTS

CONTRIBUTIONS TO THE STATE-OF-THE-ART REPORT

CONTRIBUTION TO A FRENCH BIBLIOGRAPHY	1
Geneviève DUBOIS-TAINE Ministère de l'Équipement, des Transports et du Logement, Plan Urbanisme Construction Architecture, France	
SOME FINISH ASPECTS	6
Aimo HUHDANMÄKI VTT Technical Research Centre of Finland	
COMMENTS ON UK BIBLIOGRAPHY	10
Malachy McELDOWNEY School of Environmental Planning, Queen's University, Belfast, United Kingdom	
SOME NORWEGIAN PERSPECTIVES	15
Inger-Lise SAGLIE Norwegian Institute for Urban and Regional Planning	
THE CASE OF SLOVENIA	22
Metka SITAR Faculty of Civil Engineering, University of Maribor, Slovenia	
COMMENTED BIBLIOGRAPHY ON BELGIUM	26
Jean-Marie HALLEUX Department of Economic Geography, University of Liege, Belgium	
FRENCH GEOGRAPHICAL BIBLIOGRAPHY	45
Pierre ZEMBRI Département de Géographie, Université de Cergy-Pontoise, France	
SOME PROBLEMATICS OF THE METROPOLITAN CONURBATION	48
Paolo GIOVANNINI Dipartimento di Urbanistica EPT, Firenze, Italia	
OVERVIEW: RESEARCH AND DISCUSSION IN SWITZERLAND AT A GLANCE ⁵⁴	53
Michael KOCH Arbeitsgemeinschaft für Wohnen + Stadtfragen, Zürich, Schweiz Jean RUEGG Institut de Géographie, Université de Fribourg, Suisse	
OUTSKIRTS OF CITIES IN SWEDISH LITERATURE	56
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THEMATIC BIBLIOGRAPHY FOR AUSTRIAN CITIES,
WITH SPECIAL REGARD TO THE CASE OF VIENNA
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65

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80

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In France, since 1975, research on outskirts, on peripheral areas, on the outside of the «town centre» has been developed in many ways. The «sprawling» phenomenon (Ascher,1995; Mongin, 1995) makes politicians anxious and new laws are set up. Their main goal is to stop the Metropolises spreading out. Many researches have been used as background by the Ministry to propose these laws.

These researches try to observe the phenomenon from different points of view:

- geographical analysis, which tries to define what is sprawling, what are outskirts, inner city, first and second urbanized rings, and so on (Beauchard,1996; Damette, 1989; Godard and Pumain,1996; Merlin, 1994). They also try to characterize the urban developments through topics such as: evolution of the population, location of services, of economic establishments (factories, shops,...). At the end, the aim of these researches is to define different types of urban structures or organizations: centres, sub-centres, polynuclear metropolises... (Ascher, 1995; Veltz,1996; Viard,1994...). Some (Frankhauser, 1994) try to characterize the new urban structures through «fractals analyses».

- sociological analysis tries to characterize and to fathom different types of human settlements (Augé,1992; Fourcault, 1996; Gaudin and Genestier, 1995; Grafmeyer and Joseph, 1984...). Some of the researches led in this domain essentially try to understand the spatial segregations, the appearance of different kinds of urban ghettos, what kind of urban violence it generates. Others analyse the new urban ways of life and sociological behaviours in order to better understand the social changes (Bordreuil, 1994; Tarrus, 1989; Guedez, 1996; Le Guirriec, 1996; ...). A great number of «urban public policies» are based on these researches: improvement of architecture, development of services, accessibility, social mixity, development of local employment and so on.

- economical analysis: what are the location's strategies of different kinds of economic actors (big, medium and small enterprises, factories, offices, shops and commercial centres) in relation to "urban values" (Perrin and Tarrus, 1995; Veltz, 1996). The French Government has set up a certain number of laws, to solve the problem of inequity (some districts or towns attract several economic activities and collect all the taxes, other districts or towns then don't have enough incomes to develop). Land values have been studied in depth, essentially in the '80s . The role of the local taxes on the enterprise's location have been also studied .

- transport is perhaps the domain where the most researches have been and are done (Orfeuil 1994; Dupuy, 1991, 1995; Beaucire, 1997; Wiel, 1999; Bonnafous, 1996...). France has a special «Management Committee» for the Transport researches in which the State, local authorities, manufacturers (car builders) and Universities are involved. In the domain of town planning, the researches they have decided are related to: the role of infrastructures (public and for private cars); the role of public transport tariffs and tolls on the residential and economical locations; the characteristics of the different kind of public transports and their impacts (underground metro, tramway, buses...).

- finally, the relationships between town and rural areas have been studied increasingly (Roncayolo,1990; Berger and Rouzier, 1997; Corboz, 1994; Lassus, 1977, 1990; Hervieu and Viard, 1997...). First the researches focused on the evolution of the rural economies related to the expansion of the towns and the necessary evolutions of the farms which staid nearby the towns. The land value has been also studied for these areas. Today, new

researches are done to study the articulation between agricultural and urban public policies through the demand of quite a large number of local authorities where rural and urban politicians try to set up coherent public policies.

At the same time, the PUCA (Research Department of the Ministry in charge of the urban research's management in the domain of the Ministry in France) decided five years ago to launch a new program called «ville émergente» which means «emerging city» (Dubois-Taine and Chalas, 1997). The goal of this program is to obtain a better understanding of all the reasons why sprawling and dissemination around the towns have happened in the last 50 years. It also tries to determine what are the «forces and values» in the background of this urban structure's evolution and which will continue to have effects in the future. Of course, the PUCA is sure that it is essential to know exactly what are the processes of the human settlements extensions to put forward new effective public policies taking into account this knowledge.

Today, new facts are modifying the relationship with the urban and rural areas:

- since 1900, mobility has increased extraordinarily and it has totally modified the organization of the urban and rural areas,
- the new technologies are at their beginning and we don't know exactly what impacts they will have on the urban and rural shapes (Guillaume, 1998; Bougnoux, 1995...),
- the de-synchronization of the urban rhythms is a new phenomenon and contributes to the dissemination of the functions in quite different places in the town (or outside of the town) (Chesneaux, 1995; Elias, 1996...).
- the endlessly increasing place of leisure in our society increases mobility, has major effects on the residential location and highly increases the number of places people want to reach each day, week or month (Lazzarotti, 1995...).
- new «urban objects» such as commercial centres, leisure parks, multi-screen cinemas, golf courses and so on, are some of the new urban places that highly organize urban life and consequently, the urban shape (IFA, 2000; ...).
- nature has taken a very important place in the mind of the population and of the economic actors (Hervieu and Viard, 1997...). The need to live in and to enjoy «nature» has modified the criteria, not only for housing but also for leisure activities. In this sense, rural areas are strongly desired by every one.

In conclusion, one can observe that the human settlements are composed of a network or a system of places, each complementary to the others: the town centre is just as desired as the commercial centre, the different leisure places, some working places but not in the same way. In this system, housing is the point from which all places can be reached (Dubois-Taine, 1998; Viard, 1994; Ascher, 1995; Le Guirriec, 1996...).

To change ways to observe the areas.

Some researches teach us that it is necessary to change the opinion we have on some areas, on some parts of the population, on new economic facts. Other data have to be collected to observe them, other kinds of observation have to be proposed. For example, in Lorraine, the «young retired people», thanks to their pension and to the help they bring their children and grand-children, have given an important economic impulse to a very poor region (Rosso, 2001). The economic data are not precise enough to identify this dynamic. In the Poitou-Charentes Region, population and economic life are decreasing in old towns such as Poitiers or Chatellerault. But the whole rural area is gaining more and

more importance thanks to the increase in housing in the villages (urban villages) and the economic growth along the main roads (Beauchard, 2000). The data only show a very large dissemination around the old towns, even though the reality is the constitution of a «polynuclear urban-villages metropolis». Here again, if we use them as before, conventionally, the data give us wrong results.

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SOME FINISH ASPECTS

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The concept of outskirts could be understood in many ways. There is not any kind of established meaning for outskirts of a city in Finland, but anyway there are studies, which touch the topic "Outskirts of cities". Some institutions like Technical Research Centre of Finland (VTT), The Centre for Urban and Regional Studies (YTK), The University of Joensuu, The University of Tampere have made studies concerning the outskirts question. In addition there are some other institutions and consultants which have made research in the fields of outskirts.

Here are some examples of VTT's research in the fields of outskirts of the cities.

LAHTI, P. HALME, T. & HUHDANMÄKI, A. *Seuturakenteen kuvaustavat. Esiselvitys. Uudenmaan liiton julkaisuja C41, 2001. 80 s. + liitt. 4 s.* Depiction of the structure of Helsinki region. A preliminary study of the elements those should be depicted in a structure map of the Helsinki region. The emphasis of the depiction is functionality and secondary the physical structure. The structure is depicted, firstly in a main map, and secondly in series of thematic maps. There are in the main map the most significant issues of the structure. In the thematic maps there are theme by theme depicted the structure of the region.

HALME TIMO, *Helsinki-Hämeenlinna-Tampere, alue- ja yhdyskuntarakenne HHT-vyöhykkeellä. Hämeen liiton julkaisu V:50, Hämeenlinna 2000, 82 s* Helsinki-Hämeenlinna-Tampere -zone, estimation of regional and urban changes. It is studied trends of the most growing urban zone of Finland.

HUHDANMÄKI, A., LAHTI, P., MARTAMO, R. & RAUHALA K. *Liikennehankkeiden kaupunkirakenteelliset vaikutukset. Arviointimenetelmän kehittäminen. YTV Pääkaupunkiseudun julkaisusarja B 1997:1. Helsinki. 62 s.* The impacts of traffic plans on urban form - Developing methods and tools for evaluating. The idea of the study was determine the long-term effects of traffic plans and systems on urban form like fragmentation, useless diversions, isolation, costs, environmental hazards and functional problems. The method of the study was to evaluate tentatively what impacts earlier traffic plans and system decisions have had on the urban structure in the Helsinki Metropolitan Area in recent decades.

HUHDANMÄKI, A., HALME T., MARTAMO R. & LAHTI P. *Yhdyskuntarakenteen hajautumisen ja pirstoutumisen mallintaminen. Liikenneministeriö, Ympäristö-ministeriö, Sosiaali- ja terveysministeriö, Kauppa- ja teollisuusministeriö, Suomen Kuntaliitto, TEKES, Tielaitos ja Ratahallintokeskus. LYYLI-raporttisarja 9. Helsinki 1999. 45 s. + liitt. 2 s.* The study Modelling of urban sprawl and fragmentation was a part of Finnish research programme LYYLI, which aimed to introduce an environmentally advantageous transport system and urban structure. The study was developed methods for evaluating urban sprawl and fragmentation. There was developed a new method for area definition.

HALME TIMO, KOSKI KIMMO, *Oulun kaupunkiseutu, alakeskusten kehittäminen. Oulun kaupungin painatuskeskus, Oulu 2000, 40 s.* Development of Sub-Centres in the Oulu Region. In the project created a sustainable, realisable and balanced sub-centre system in the Oulu Region, which supports the development of region as equal and well-serviced town region. The aim was to plan purposeful sub-centre network for the region and also to develop a planning method by which municipalities can themselves develop their centre networks, sub-centres and central services.

HEINONEN, SIRKKA, HUHDANMÄKI, AIMO, KALENOJA, HANNA & KIISKILÄ, KATI, *Yhdyskuntarakenteen ja liikennetarpeen muutokset suomalaisissa kaupungeissa vuoteen 2020. Lyyli-raporttisarja 19, Helsinki 2000.* The future changes in the urban form and transport demand in Finnish cities year 2020 was a study where was forecasted population, production and service structure in eight urban areas in three different social scenarios. The scenarios were Virtual Society, Eco-Society and Experience Society.

Toolbox for Assessing Sustainability in Local and Regional Planning

SPARTACUS System for Planning and Research in Towns and Cities for Urban Sustainability, Environmental Sub-model (First Version of the Prototype).

HARMAAJÄRVI, IRMELI, HUHDANMÄKI AIMO, LAHTI PEKKA *Yhdyskuntarakenne ja kasvihuonekaasupäästöt. Ympäristöministeriö, Helsinki 2001, 64 s.* Urban form and green house gas emissions. The indirect effects of the regional and community structure on traffic and heating system.

The carbon dioxide emissions in the Helsinki Metropolitan Area. A study where examined carbon dioxide emissions in the Helsinki Metropolitan Area through three alternative future urban structure models.

The impacts of the big railroads and motorways into urban costs

Large shopping centres research includes following topics: The effects of large-area retail shops - definition of the effect entity and evaluation methods related to the hypermarkets, Large shopping centres and municipal finances, Social effects and cost effects of changes in the retail network

Etätöön ekologisesti käytön otto, Asumisen, työn ja liikkumisen kaupunkirakenteellisen uusjaon ympäristövaikutukset. Ecological implementation of teleworking. Sirkka Heinonen 2002.

Information society research at VTT has included following topics: Indicators of a sustainable information society, Impacts of telepresence on transport and the environment, Analysis of the Finnish telework population. Sirkka Heinonen.

The Centre for Urban and Regional Studies (YTK) has studied on housing during the last years on the fields of outskirts. The objectives of the research carried out in the Centre are to promote the development of urban and planning theory and to contribute to informed decisions regarding the built environment. The research covers a wide range of topics including e.g. communicative planning, public participation in environmental planning, housing and community development, urban spatial structure and housing segregation, city culture and environmental impact assessment. The research staff is multidisciplinary and consists currently mainly of architects and sociologists. The Centre also co-ordinates The Graduate School for Urban and Planning Studies, which is a joint doctoral program with the Helsinki University.

The list of studies of the YTK related to outskirts is below.

Kaupungin tiiviys ja täydennysrakentaminen: sosiologisia kysymyksiä; Yhdyskuntasuunnittelun tutkimus- ja koulutuskeskuksen julkaisuja B; 81; Jani Päävänen; 2000; 951-22-5082-9. The density and infill of the city, sociological questions. The idea of infill and discouragement of infill.

KYTTÄ, MARKETTA - LAINEVUO, ARI - PÄIVÄNEN, JANI: *Turvallisen matkan päässä kaupungista: Lahden seudun pientaloalueet suunnitelmissa ja asuinpaikkoina. 2000.* Living in a non-planned area - interview research about the people who are living in rural area, benefits and disadvantages. The development of rural-suburban residential areas as a part of regional strategies. The project is concerned with the single-family house districts in the "city's countryside", both as planned areas and as lived environments. Different districts are assessed in relations to regional strategies.

Spatial differentiation in Helsinki Metropolitan Area

ILMONEN, MERVI - HIRVONEN, JUKKA - KNUUTI, LIISA - KORHONEN, HELI - LANKINEN, MARKKU: *Rauhaa ja karnevaaleja : tieto- ja taitoammattilaisten asumistavoitteet Helsingin seudulla. 2000. Pääkaupunkiseudun yhteistyövaltuuskunta, Uudenmaan liitto, Espoon kaupunki, Helsingin kaupungin tietokeskus ja Yhdyskuntasuunnittelun tutkimus- ja koulutuskeskus.* Housing Preferences of Key Social Groups in Helsinki Region. The research scrutinizes the housing preferences and lifestyles of the highly skilled professionals, "elites", working in the new information technology and design professions in the Helsinki region. These groups are in a dominant role in the internationalising and globalizing urban development. Most cities rely on the new information technology in their economical strategies for the future, competing for the investments in this field. The preferences and choices of the professionals working in the new technologies are estimated to be of importance from the point of view of the enterprises choosing their location. This puts new demands for the cities, especially for their housing markets and that other groups are guided by the preferences of these groups. The reverse side of these developments is the threat of increasing urban polarization.

MÄNTYLÄ, KAJ - PEKKANEN, JOHANNA - SNECK, TIMO: *Haja- ja loma-asumisen uudet muodot: tulevaisuuden näkymiä ja kehittämismahdollisuuksia. 1998.* New forms of scattered and recreational dwelling. The advantages and disadvantages of scattered rural building. The research aims at developing rural habitation to conform with principles of sustainable development. The accumulated knowledge of the pros and cons of rural

development are combined and carried further taking into account perspectives of inhabitants, society and sustainable rural structures. The results are of use in: developing and preserving rural areas as internationally recognized attractive, well-functioning and nature conserving habitat; upgrading the life quality of rural inhabitants and minimizing cost to society.

LEHTONEN, HILKKA - HIRVONEN, JUKKA - EEROLA, ESKO: *Asumisen ja työn muuttuvat kytkennät II. Pendelöinti ja sen ohjauskeinot. 1996.* The changing connections of housing and working – commuting area in Helsinki region

At the University of Joensuu Department of Geography Perttu Vartiainen, Janne Antikainen and Jarmo Kortelainen has made research on the field of the outskirts. The theme for research has been, urban networks, urban systems, the infill of urban form, migration, automobile city. Some examples:

- VARTIAINEN, PERTTU & JANNE ANTIKAINEN (1998) *Kaupunkiverkkotutkimus 1998. Kaupunkipolitiikan yhteistyöryhmän julkaisu 2/1998.* (Urban networking)
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- VARTIAINEN, PERTTU (1998) *Yhdyskuntarakenteen tiivistäminen jälkimodernin suunnittelun haasteena. Alue ja Ympäristö 27:1, 5-14.* (Urban infill as planning challenge)
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Sosiaaliset megatrendit ja HHT -vyöhyke; Uudenmaan liitto, Hämeen liitto, Pirkanmaan liitto; Ari Ylönen; Pirkanmaan liitto; Sarja D, julkaisu n:o 51; Tampere 2000; ISSN 0788-6578; ISBN 951-590-107-3. Study of social mega-trends like enlarged urban districts and enlarged commuting areas at the main city zone in Finland. In the study it is analysed as sociological point of view contradictory estimations of traffic demand, how contradiction is based different motivations: the decrease is interpreted as technical innovations and increase as lifestyles and preferences. The other topics are the outskirts, flexible telework and dual city.

COMMENTS ON UK BIBLIOGRAPHY

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In the UK system there is no specific definition of urban 'outskirts', although the term 'urban fringe' is commonly used to describe the area beyond the built-up city which is subject to constant pressure for (mainly housing) development and is consequently often the subject of 'green belt' protection policy. Writings on 'trend' and 'policy' are therefore frequently intertwined. COST C10 definitions of 'outskirts' include the twentieth-century 'suburbs' of the built-up city and urban 'outlier' settlements, both of which have separate bibliographies. All of these are located within the 'urban functional region' which is the subject of geographical and economic analysis and has a vast literature. Current economic location trends towards strategic 'clusters', sometimes planned but often independent of traditional location constraints, also have an emerging literature. All of these will be considered in general terms – starting with the 'urban region' as the context, followed by the 'urban fringe' as main focus, then the 'new settlement' and 'suburban' readings, with recent material on 'clustering' at the end.

The Urban Region

Geographical definitions of the urban region have focused on the urban labour market and the daily journey-to-work. The most influential early work on this was 'The Containment of Urban England' (Hall et al.1973) whose title reflects the endemic anti-urban bias in the British system, but whose analysis was based on American precedents (Berry, 1967) and was subsequently adapted by a wide range of British analysts (Drewett et al.1976, Coombs et al. 1982, Goddard and Champion 1983). Hall's definition of the functional urban region was an employment core of 20,000 jobs and a commuting hinterland (the Standard Metropolitan Labour Area) of electoral wards with more than 15% of their working population employed in the core. This definition was the basis of European comparisons (Hall and Hay 1980) which categorised western European city regions on the basis of their degree of centralisation/decentralisation.

Later versions of this approach to definition (CURDS 1983) distinguished between functional regions (monocentric) and metropolitan regions (polycentric), reflecting the two-tier local governmental system (shire counties or metropolitan counties with districts at the lower-tier level) which had been introduced in the nineteen seventies. The significance of the definition remains for shire counties in Britain (semi-rural hinterlands with a dominant city at their centre) which still exist, but not for the complex multi-centred metropolitan counties, which were abolished in the 'eighties. More recent city-region definitions for metropolitan areas (CURDS 1999) were felt necessary to help provincial cities (Birmingham, Manchester, Liverpool, Leeds, Sheffield, Newcastle, Bristol) compete with the burgeoning London economy in European and global markets.

More recent analyses have focused on the issues of 'sustainability' and the 'compact city' within the region. Compact city advocates (Jencks et al.1996, Williams et al.2000, Jencks and Burgess 2000) have assessed the impact of higher density development at national,

European and international levels and related findings to the sustainability concept. The most significant contribution to this debate has been the Urban Task Force Report (Rogers 1999) which relates densification to effective land utilisation, transportation strategies and urban design. International comparisons of compact city and densification experiments (de Roo and Miller 2000) point to the costs as well as the benefits of such approaches.

The Urban Fringe

The term ‘urban fringe’ was first adopted by Coleman (1977) as a derogatory description of the ill-defined, mixed-use low-density development at the edge of built-up cities which was a symptom of urban decentralisation and, in her eyes, a symptom of the failure of land-use planning to protect agricultural land from creeping urbanisation. Subsequent geographical analyses (Best 1981) showed these fears to be exaggerated, as urban sprawl declined with rapidly-falling population levels in the 1970s. More particularly, he demonstrated the effectiveness of green-belt policy in protecting agricultural land, the loss of farmland being 50% of its pre-war level in the late ‘fifties and ‘sixties (green-belts were introduced in 1955) and 30% of pre-war levels in the ‘seventies and early ‘eighties (green-belts were formalised within the structure plan system in 1968).

Green-belt policy, or ‘urban containment’ is therefore a prime focus of academic analysis, particularly as a form of mediation of urban change (Healey and Elson 1988, Elson 1993,1996). It has also been considered in an international comparative context (Herington 1985, 1990) and with particular reference to the different policy context in Northern Ireland (Murray 1991). Ambrose (1989) focuses on the political aspects of green-belt policy, and on the motivations of the diverse agencies - agricultural, housebuilding, conservationist etc.- who are involved in the debate. More recently this debate has been subsumed within the ‘greenfield’ versus ‘brownland’ argument in relation to housebuilding (Hall and Breheny 1996, Hall 1999) and, from the rural perspective, the necessary diversification of agriculture (Elson 1994). This transition of traditional urban and rural functions is well debated in a recent series of essays (Barnett and Scruton 1999) on the cultural, political, economic and sociological implications of the merging of ‘town’ and ‘country’.

Suburbs, Settlements and Clusters

‘Suburbs’ has also been used as a derogatory term, particularly by urban designers (Tibbalds 1992), but has recently been the subject of more favourable, sometimes nostalgic, coverage (Ravetz, 1995) and serious examination of their evolving role in different cultural contexts (Larkham and Harris, 1999). Recent research into the ‘sustainability’ of suburbs (Gwilliam et al 2000) found them to have been a neglected area in British urban analysis, but to have considerable potential for adaptation to more sustainable patterns of living, particularly in relation to public transport and local retail provision.

There is a vast literature on new settlements in the British context, particularly in relation to new towns (e.g. Evans 1972, Aldridge 1979), but these can be argued to be outside the ambit of the COST C10 terms of reference. Of more direct relevance are the emerging ‘urban village’ (Aldous, 1992) and ‘new settlement’ (Darley 1978, Darley et al. 1991, Breheny at al. 1993) movements, both driven by the need to provide substantial new housebuilding sites, particularly in south-east England, and the need to justify these in

‘community’ and ‘sustainability’ terms. The involvement of eminent academics such as Hall and Breheny, and the support of established institutions such as the Town and Country Planning Association make the new settlement case a strong one. The integration of new settlements into strategic planning (Amos 1990), Government thinking (DOE 1993, DETR 1998) and the sustainability debate (Breheny 1990, Jencks 1996) is now well-established. Such settlements are smaller and less self-sufficient than the new towns of the sixties and seventies, a recognition of the impossibility of local self-sufficiency in a globalised economy, but a contribution to provision for burgeoning household growth in successful economic regions.

The implications of the globalised economy are reflected in new types of settlement in the urban outskirts – ‘clusters’ of high-technology industry, often located along key transportation corridors or associated with universities and scientific institutions. The American experience (Garreau 1991) points to the dominance of such development in urban outskirts to the detriment of traditional city centres, but other international experts (Hall and Castells) focus on the planned nature of successful ‘technopoles’ and their integration into local and regional development. In southern Britain, this phenomenon has been tracked since the mid-eighties (Hall et al. 1987) and is now becoming a focus of Government policy (DETR 1998) and Government – sponsored research (PRAG 2000) in the United Kingdom and in Europe generally (Van den Berg et al. 2000). Obviously, it should be a significant feature in COST C10’s considerations.

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SOME NORWEGIAN PERSPECTIVES

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The outskirts of the city have not been widely studied in Norway. Nevertheless implicit in research in other fields, e.g. housing studies, there are works that will be of relevance for understanding the development of urban areas including the periphery. Planning debate has centred on the outskirts, however, so I will also present some views in this debate.

Since "outskirts of the city" could be understood in many ways, I have chosen to give an overview under different headings.

The problem of the urban–rural distinction: The concept of the “socio-material densification”

A much-discussed issue has been the relevance of the urban – rural distinction. One of the participants in the debate has been the sociologist Dag Østerberg. His aim is to combine the sociological and the architectural interpretation of urban areas. While sociology takes care of the social aspects, architecture is concerned with the material aspects of society and the built environment. These aspects are closely related. To synthesise these two aspects is not an easy task, since these two disciplines have such different backgrounds and situations.

Østerberg argues that the picture or mental image of a city with a surrounding rural area is reminiscent of the history book depicting the towns in the Middle Ages, the military-disciplinary city with fortifications and agricultural areas outside the boundaries. (Østerberg 1998 p 15) He looks upon the city as a densification ("fortetting") in a region. The process of centralisation that is still taking place, creates barbaric landscapes for the working forces. In the Oslo region this is most notable in the Groruddalen, an eastern part of Oslo, consisting of large 2-3 parallel motorways, areas for ware houses, shopping centres, industrial areas, post-war housing areas from the 60s and 70s with legacies from the models of Le Corbusier (Karsten 1998). According to Østerberg, this is a thoroughly planned urban area, but a barbaric and hideous landscape. It shows the "seriality" in the sense of being one in a large number. The landscape is one of mass housing, mass consumption and transportation installations for mass transportation. The landscape also reveals the class society as Groruddalen counts as an area with low social status. Numerous non-wanted installations are placed in Groruddalen such as goods stations and waste deposits.

Today's rural areas are urbanised. They are only less dense than the urban areas. Mass media are mediating between the more and less dense areas. The car is also an important mediator, allowing for more varied material and cultural consumption patterns.

Østerberg places himself in the tradition of Levebre, Giddens, Harvey and Soja focusing on the socio-spatial relationship. These theorists acknowledge the role of spatiality in social relations. Østerberg, however argues that they focus too much on space. He argues that focus ought to be on the material aspect, as the sheer materiality of the built environment allows for certain actions and forbids others. The material is slow in changing, and thus represents a "force" in itself.

The aesthetic critique

Christian Norberg Schulz has been an important contributor to the discussion on the development of Norwegian town and urban areas. He has been focusing on the concept of “place” as a normative starting point for the development of towns. Based on Heidegger’s notion of “being-in-the-world” he argues that place is essential for human experience of identity. Norwegian “tettsteder”, literally translated as “dense places”, suffers from lack of quality (Norberg Schulz 1992). Because of this lack of quality and the low density and ambiguous form of the urban areas, we are experiencing a lack of place. Norberg Schulz argues for the use of place, rather than space. Space is an abstract concept, while place is a more concrete direct experience of the immediate surroundings. “Life takes place” as he argues. In his discussion on the necessity of an identity for a “tettsted” he argues that *delimitation* is important. This delimitation must be easily perceived. The “tettsted” must have an easily perceived figure-ground quality. *Density* is another aspect. This also comprises the other elements in the Gestalt-theory of proximity and continuity. The character of a place is also dependent on form, colour and material as well as on local building traditions. A balanced development between change and continuity is another aspect in order to maintain identity and character of the place.

The “land-in-between”

The un-definable character of the neither urban nor rural areas has been given the name “*the land-in-between*”. It has also been called *service and communications* landscape with reference to the specific landscape surrounding large infrastructure. These areas have generally received very negative response in the planning debate. There has been little research aimed specifically for understanding these areas, but in the professional debate it has maintained a dominant role. Writers point out these driving forces behind the development:

- Increased mobility: Personal mobility through increased private car ownership
- *Economy: Mass production and mass consumption*
- Property market: Large properties and low prices compared to inner city areas
- Planning and planning ideals
- Housing preferences and housing ideals

Today's urban fringes represent a planning problem: How do we tackle these areas, and what should be the planning strategies? Some writers also point to the problem of market versus planning: Are the economic forces so strong that planning has little to offer, e.g. with regard to shopping centres, and integrated area and transport planning? A discussion has been on how to evaluate architectural quality in the urban fringes when much attention has been focused on adaptation to existing situation? As a clearly defined architectural context is not found, projects must have such a strong character that the project can be called “place-making” (Lundevall 1995, Børrud 1995, Ulltveit Moe 1995).

Because of lack of research it is also debated how extensive the problem of the “land-in-between” is in Norway. There are certain characteristics to be remembered when discussing urban problems in Norway. In Norway urbanisation was late. In 1950 half the population lived in rural areas, according to (*statistics Norway.?*) In later years this has increased to about 70 per cent (Hall 1991). Although an active policy of maintaining the scattered settlement pattern has been followed, the trend is still towards centralisation. The growth has been particularly high in central parts of eastern Norway. Some 20 percent live

in villages/towns with less than 2000 inhabitants. Only the major cities are large enough to show a distinct “suburban” fringe of any size. This is most notable in Oslo. But it is acknowledged that also smaller urban areas have traits of “land-in-between” on their fringes, but the scale is rather small. An important characteristic is that while many central European towns have a clearly defined historical centre, many Norwegian smaller urban areas lack this. The centre may also be undefined, wide spread and without character. The problem of the fringe is then a problem of the whole area, architecturally speaking. The general conclusion is that we know relatively little about the extent of the problem (Lundevall 1995).

The core–periphery dwelling areas in the outskirts: “Suburbia”

Much attention has been on socially degraded post-war high-rise building areas as “problem- areas”. The social life as well as the deteriorating physical environment has been foci for research. Planning of “suburbia” has been an explicit planning for a particular life form; the wage earning family life (Pløger 1999). It has been argued that these areas have been stigmatised in the public debate. If you actually ask the resident, suburban areas will be much better valued than their reputation should indicate. Rhetorically, it has been asked whether suburbia really exists. Statistically is it difficult to define a border for the suburbia. Suburbia contains a lot of varying situations with regard to scale, housing forms and life forms. Suburbia may be seen as a paradigm for planning that was anti-urban in its character. It meant a return to nature. Both the dwelling in itself, as well as the family life as social form was in focus, based on a family pattern with the women working at home, being the social glue in the neighbourhood. In Norway, the suburbs also meant a realisation of the housing policy as an important part of the building of the welfare state. Ideologically, suburbia was the model of the safe, orderly and controlled society. Planning was based on a rationalisation of human needs through the zoning principle. Suburbia was based on the assumption that social life could be designed through forming the public, semi-public and private spaces. The ideology was based on a “Gemeinschaft” with close contact as opposed to the “Gesellschaft” in Tönnies well-known concepts.

With time, each part of suburbia has developed a certain identity. In the debate it has been focused that research as well as public policy must take into consideration that these areas now also have a history and special preconditions. Large generalisations should be avoided. A specific problem is that the suburban ideals never corresponded to the urban qualities, such as the possibility to form loose social ties, possibility of anonymity, multiplicity of values and life styles.

Suburbia also represents a possibility for low density housing, either as single family housing, or as other forms of dense small housing areas. The values of such ways of dwelling have traditionally been highly esteemed, including peace and quiet, greenery, access to larger, continuous outdoor recreational areas outside the built up areas (Haveraaen 1993).

The green perspective

The role of the policy of protection of agricultural land.

The protection of agricultural areas has been a strong force in the development of Norwegian urban areas. It was one of the main arguments behind the Planning and

Building act of 1965. In Norway about 3 per cent of the area is suitable for agriculture. Urbanised areas represent 0,3 – 0,5 per cent of the area. It is unfortunately so that the most urbanised areas around the Oslofjord, the Stavanger – Sola region as well as in Trøndelag, make up for the 3 per cent cultivable area. Protection of farmland is intrinsically linked with the development of urban forms. In the '70s and '80s land use policies were directed to steer urban development away from the urban area, by "jumping over" agricultural areas, and building dwelling areas in a hill with soil of low productive value. In smaller towns this has typically been low density one family housing areas where the municipality bought the land, developed technical infrastructure and sold the plots to families who built their own house financed by the State Housing Bank at low interest rates. This has contributed to a fragmented urban pattern (Saglie og Sandberg 1996). In the bigger cities the housing co-operation played an important part and developed high rise industrialised buildings as well as high-density small housing areas (Hansen and Guttu 1997). Norwegian urban areas increased in size and decreased in density, particularly in the 1970s, but also in the 1980s although with a much lower rate. There are no statistics showing the development in the 1990s. It is, however, a commonly held view that the growth rate in urban area has been very low, and that the population density may have increased.

The role of outdoor recreational areas

Another part of the Norwegian urban development is the role of the outdoors recreational areas. In Oslo, for instance, it has been possible to maintain a border for the urban expansion through 40-50 years, in order to maintain continuous recreational areas. This policy is constantly challenged at each local election, but has so far withstood the attack. Also in other cities the role of "Marka is important in land-use planning.

From government to governance?

A study of the urban expansion of two small towns – Sandefjord (30 000 inhabitant) along the Oslo fjord, and Elverum in the inland of Eastern Norway – shows that decision taken when producing municipal master plans could explain the location of between 93 (Sandefjord) and 98 per cent of the urban expansion (Saglie and Sandberg 1996 a and b). These figures refer to the period between 1970 and 1990. The picture of the urban fringes as an uncontrolled, haphazard development does not receive much support. Instead, the development of the urban fringes is rather controlled by the planning system. Today's planning is certainly more market led, and we may see changes in this. Most development plans in Norwegian urban areas are made by private developers¹, and there is an increasing role for private initiatives in urban development. The change has been described as "from large scale building to market led construction" (Hansen og Guttu 1997). It has been shown that up to 90% of the approved local development plans are made by private developers (Norsk kommunalteknisk forening 2000).

Studies of planning processes in a governance perspective are rare. One example is a study of planning processes in an urban regime theory. Lyngstad (2000) argues that regime theory is a fruitful perspective for understanding the way planning decisions are made in Norwegian municipalities. Informal coalitions between actors appear on the basis of

¹ The Norwegian planning systems allows private interests to conduct the initial stages of the planning process including early interactions with public and other private interests and the drawing up of the plan. The municipal administration is responsible for the later stages in the process preparing for the political decision on the plan.

shared perspectives on future development. Regime theory is originally developed within a US context, where case studies have shown that coalitions appear between political leadership and business interests, but sports interests and press are also important actors in local contexts. This power of business interest is based on a systemic power, since most municipalities pursue a growth policy and are dependent on local taxes for provision of public services. This also holds true of most Norwegian municipalities. It is, however, a relatively new trend that some municipalities are reluctant to stimulate construction of dwellings. Their argument is that newcomers are too expensive with regard to public service, and that it is likely to take 20 years or so till the extra tax they bring pays for the extra cost cause. This situation is particularly the case in the municipalities on the fringe of Oslo. The study of Lyngstad shows that coalitions between business interests, the mayor, central civil servants, sports and cultural interests can explain outcomes of important planning and public spending decisions in a case study of a medium sized urban area.

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THE CASE OF SLOVENIA

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1 Preface

With regard to the Commented Bibliography for COST C 10, I would like to introduce some specifics, which determined the settlement patterns in the past few decades of urban development of Slovenia. Though the development dynamics have fundamentally changed, as well as settlement processes throughout Europe, I will try to point out the most important driving forces related to the urban phenomena of dispersed settlement development in Slovenia. This phenomena is considered by the majority of Slovene planners as the main characteristic of post-WWII urban development, and at the same time it represents a problem for spatial management. It was studied empirically, mainly by geographers, though it is an issue constantly present in urban planning, urban design, landscape planning, sociology and other related research that deals with the issue of settlement processes. The data presented is summarized from the research, commissioned by the Ministry for the Environment and spatial Planning after 1998, for the purposes of the preparation of the new spatial development plan of Slovenia.

2 The characteristics of the urbanization processes in Slovenia

Slovenia is a relatively densely populated country, with almost two million inhabitants and an average population density of 97 inhabitants per km². It is a predominantly mountainous country with varied relief, as 45,4% of it is alpine and sub-alpine. In addition, more than one half of the territory is covered by forests, which are expanding. The major characteristic is the wide dispersion of the population among almost 6.000 settlements. Such distribution is due to the policy of balanced regional development based on the polycentric concept of urbanization introduced 30 years ago.

The main framework of economic power is 13 city agglomerations with 35 regional cities of different size and socio-economic significance. More than 80% of the economic power is estimated to be concentrated in those areas. The Ljubljana and Maribor metropolitan regions are the dominant employment centres in Slovenia, followed by other, more or less isolated employment centres. These centres form the basis of the polycentric urban development system and are the bearers of economics, education, service, cultural activities and public functions. (Zavodnik, 2001).

The phenomenon of dispersed settlement development is distinctly linked to the demographic development in relation to the land use and housing policy of the period after Slovenia's independence, when the economic and population structures significantly changed due to the major social and legal changes in Slovenia. The percentage (share) of a mainly agricultural population (up to 1991) decreased from over half of the total population to as little as seven percent of the population. The Slovenian population growth is stagnating, marked by a birth rate decrease, steady increase of life expectancy, and a slight increase of immigration to the country, changing structure of households and family where the average family size decreased to 3.1 family members (Ravbar 1999).

2.1 The characteristics of contemporary settlement system

The monitoring of the transformation of the settlement system over the course of several decades showed that we can define two characteristic types of areas with specific development problems:

- I. urbanized plain areas, the territory of which gradually spreads along the areas of the economic and population concentration areas toward the mountains: unplanned concentration of the population in suburban settlements, accompanied by dispersed development of single family housing, caused by liberal land purchase and insufficiently selective urban policy.
- II. rural areas: two thirds of the territory, 400.000 inhabitants; depopulation of peripheral settlements and villages in hilly areas.

Condensed urban development areas, which are at the same time the centres of social, cultural and economical life, represent today the place of living for 70-80 % of the population. The population density in those areas is four times higher than average: they hold 3/4 of the total population and provide 4/5 of all work places.

The population in urban areas is increasing fast. In the past three decades the number has doubled, over 50% of the population migrated from the rural areas. The life style is typically urban and the predominant type of housing is detached individual houses. More than half of the inhabitants migrates daily to the centre city, which is also the main employment centre (Ravbar 2000).

A. The absence of building and land policy

For private investors in the past it was almost impossible to obtain the land designated for housing because it was state regulated to a certain extent and intended mainly for the socially 'appropriate' with directed financial aids. Nevertheless people did not give up living in single family housing, which is the most desired form of living still to date. The basic wish for owning one's land and home, and the fact that building one's own house was often a more realistic option to solve a housing problem than the purchase of an expensive apartment, was a determinant factor that decided people to build single-family houses. People who were employed and worked as farmers at the same time were even allowed to build on their land without permits. Some individuals were then buying the land zoned for agriculture and using it for building housing. This mainly unplanned process often started as illegal building and grew into dispersed settlement pattern spread around the cities. This resulted in a fragmentation of settlements - dispersed building also in the areas that until then had not been exposed to heavy development pressures. The consequences are mainly insufficient infrastructure and low building density of these areas. The fragmented land properties are at the same time making rational land use planning and more focused settlement development very difficult.

In general there is a shortage of land available for housing, even today, especially in bigger cities, although research on potential locations within land availability showed that available land should be sufficient for the next few years (Pogačnik 1999). It is almost impossible to find larger lots (10 hectares or more) for building multi-apartment complexes of higher density. Only smaller lots, intended mostly for less intensive building and single family housing are still available. Their land owners are trying to sell them at the best market price. These conditions call for the development of special instruments of

land policy and, most of all, for a better organization of infrastructure provision for building lots.² To answer the numerous demands for changing the land use plans to designate more building land, every year many local authorities repeatedly change their local spatial plans, regardless of the fact that a large share of land already designated for housing remains unused.

2.3 Housing policy as the main driving force for settlements development

The morphological structure of housing appears in two distinct forms: as tall, multi-story construction of non-profit and social housing (33%) with a high concentration of inhabitants; and as mainly unplanned construction of single family housing with low density (63%), irrational land use, insufficient traffic and other infrastructure, and insufficient service in single family housing areas. (Sendi et al 2000).

The expansion of housing construction in the early '80's, when Slovenia was still a republic within the Socialistic Federate Republic of Yugoslavia, reflected the supporting state policy - with aimed loans, and a favorable loan policy. Construction started to decline in 1987 when the "real interest rate", which included an actual inflation rate of the currency, was finally applied. With the new housing law the conditions got even worse, due to the parallel changes in financial policy which abolished the mandatory housing tax without providing other sources for non-profit and social housing. In the '90s, there followed the privatisation of public-rented housing which was one the most important reform in support of private property rights and market economy in the new independent country.

The decline in housing construction from the late '80s is best illustrated by the fact that almost the same number of housing units were built in 1998 as in 1959 in Slovenia. In the '90s the amount of housing construction decreased almost by half in comparison with the past decade. It is very disturbing that the building of non profit and social housing in that period decreased as well (from 26% to 19%). The gap between demand and supply is increasing even more. The consequences are visible in high apartment prices and increasing rents.

Housing affordability and availability remain major urban problems to date, left by a larger extent to be solved by the local authorities. According to them, approximately 6.900 social and 4.000 non-profit housing units are required to cover the current demand for rental housing units, which means that the waiting period for renting social and non-profit flats is relatively long. For this purpose the new Housing Act was prepared in 1991, followed by the National Housing Program in 2001. Both documents formed a basis for the development of the national and local housing policy by 2010 (Istanbul+5, Slovenian national report, 2001). According to the estimate, approximately 10.000 units/year would have to be built in order to cover the growing needs and fill in the gap in supply created in the past period: 20% social rental apartment, 25% non profit rental apartment, 5% for profit rental apartment and 50% apartments for purchase. In addition, the cooperation between public and private sectors for the provision of rental apartments is currently almost non existent. The current housing situation in Slovenia can be well expressed by

² Dekleva (1995) estimates that the cost for the improvement of the conditions would reach, for instance just for building the sewage system, approximately half a billion DEM.

saying that Slovenia is a place from where the state has retrieved while the new housing providers haven't formed yet (Mandič 1996).

COMMENTED BIBLIOGRAPHY ON BELGIUM

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Based primarily on research by Belgian geographers, this commented bibliography about Belgium is structured in three sections. It begins with a short comment on the urban phenomenon at both the national and intra-urban scale. In section 2, several dimensions of current peri-urbanisation processes are commented. Finally, section 3 presents the main collective costs due to this inappropriately planned peri-urbanisation.

1. - Urban phenomenon in Belgium

1.1. Urban phenomenon at the national scale

In order to comment the "outskirt" issue, it is necessary to start with a brief description of the urban phenomenon at the national scale. Belgium is a highly urbanised country. Following the Global Report on Human Settlements (United Nations Centre for Human Settlement (HABITAT), 1996), 97 % of the population can be considered as "urbanised". As 97 % of the population do not live in traditional cities, the problem of distinguishing between urban and rural can be very well illustrated in this country.

1.1.1. Settlement system : major characteristics³

Core area

The highest concentration of population is found in the centre of the country, from Gent to the Walloon Brabant and the Antwerp Campine. This area, clearly the most morphologically urbanised part of the country, also has a high functional urbanisation, with numerous important towns and urban regions, namely Brussels, Gent and Antwerp.

As a result of its administrative function, since the 19th century, Brussels has developed from being the capital of a centralised country to becoming the principal commercial and service centre as well as an important transport and industrial centre. Growth was then only possible as a result of massive settlement from the whole of the country, which was very soon supplemented by considerable levels of commuting. After the Second World War, its development into the European capital would lead to new streams of migrants, firstly from Walloon reconversion areas and later from the whole of Europe, with both guest workers from the Mediterranean region as well as more specialised workers from the service sector in Northern and Western Europe settling in the town in large numbers and compensating for the urban exodus of Belgians.

The second largest urban centre, Antwerp, grew particularly as a result of its harbour, which achieved international importance in the 15th century and again from the 19th century onwards. The harbour provided the impulse for the development of important industrial and tertiary activities.

³ On the basis of : H. Van der Haegen et al., 2000.

Walloon axis

In Wallonia, the structuring element is the Walloon axis. The existence of rich mineral reserves, primarily pit coal, was the main reason for busy and varied industrial activities in the Walloon axis. It stretches from the Borinage to Liège and Verviers, and is one of the most densely populated areas of Belgium. The growth in industry and population took place at a fast rate particularly from the 19th century onwards, with many new urban centres such as Charleroi emerging alongside existing towns such as Liège.

1.1.2. Metropolisation process and alternating migrations to Brussels

Concerning firms, we can state that the process of globalisation certainly leads to concentration and metropolisation. At the Belgian level, this trend is causing strong growth in the Brussels urban area, and to a lesser extent, in the Antwerp region. In terms of jobs, this is expressed by a high concentration of management jobs, and by a concentration in the business services sector. This concentration is taking place, at least partly, at the expense of urban centres lower down the hierarchy.

Unlike companies, the location of populations is still linked to the polycentric structure inherited from the past. Both in the cases of Flanders and Wallonia, Belgium is presently characterised by the existence of a dense and ancient fabric of medium-size towns. Due to the residential choices expressed by populations, this fabric, which is also the context within which people actually live, is very much being maintained. It is therefore hardly surprising that the growth of Brussels as a major European metropolis results in a huge daily migration pattern. Associated to the intensive intra-urban processes of peri-urbanisation, this creates major mobility problems. One can notice that, on a daily basis, the Brussels region attracts commuters from every (589) district of the country (G. Juchtmans et al., 1999). In this sense, Belgium can be considered as a unique urban system.

1.2. Urban phenomenon at the intra-urban scale

1.2.1. Release of mobility constraints and intra-urban organisations

As in many contexts (e.g., in France), the Law of Zahavi (1976) on transport-time-budget has been verified in Belgium. Despite intra-personal disparities, on a daily basis, people travel \pm one hour (P. Toint et al., 2000). In parallel, as the urbanisation process is an agglomeration process, one easily understands why the de-concentration of urban activities is a direct consequence of the release of mobility constraints. Whereas towns had maintained for a long time, strong densities, since it was the best way to create proximity between their components, the increasing speed of movements allows the maintenance of proximity by freeing itself from speed. In a recent paper, J.-M. Halleux (2001a) has proposed a model on the various processes of intra-urban changes linked to this release of mobility constraints. This reading can be used to describe the evolution of the intra-urban organisations in Belgium.

Sub-urbanisation versus Peri-urbanisation

On the basis of the unique pedestrian mobility, there are two possible releases of mobility constraints : motorised public transport mobility and car mobility. In parallel, three urban shapes can be considered : the traditional walking city, the transit city and the automobile city (P.W.G. Newman & J.R. Kenworthy, 1996). In terms of urbanisation, a pragmatic reading can associate "sub-urbanisation" to the use of public transport and "peri-urbanisation" to the use of the car.

The release of mobility constraints associated with public transports has had a huge impact on urban organisations and urban shapes. This started during the second half of the 19th century in both the towns of the Walloon axis (between Liège-Verviers and the Borinage) and the metropolitan axis (Brussels-Antwerp). During that period, the industrialisation process is concentrated on these territories and huge industrial suburbs emerge. Between 1850 and 1910, the major towns change from the traditional compact city to the transit city. The sub-urbanisation then concerns the residential function, as well as the very inductive industrial function, and the more induced retail function. Many parts of the major urban regions today are inherited from this sub-urbanisation period.

Since the Second War World, the release of mobility constraints has been due to the increase in car mobility. As a consequence, a more spread out peri-urbanisation has replaced sub-urbanisation. As stated in the French literature ("La transition urbaine" by M. Wiel, 1999 ; "La ville émergente", under the direction of G. Dubois-Taine & Y. Chalas, 1997), this second release of mobility constraints has not yet achieved all the likely consequences. This issue will be treated in the next section.

Autochthonous urbanisation by autochthonous commuting

Autochthonous commuting is a very important phenomenon. Historically, it started in 1870 (G. Juchtmans et al., 1999) when the conservative government decided to create very cheap railroad season tickets. The political aim was to minimise the drift from the land and its consequences in terms of workers concentration within the industrial centres. At that time, autochthonous commuting also developed because of the very dense urban network (and the very dense public transport network associated with it) as well as because of generalised land ownership in the countryside. As a tradition, autochthonous commuting is still very important. People prefer to commute rather than to change their residential location. This phenomenon is a key factor in order to understand the huge dispersal of populations through the country.

1.2.2. Urban region concept

Due to the release of mobility constraints, medium-size and large cities have taken on a form, which is not only much larger than the traditional city, but even larger than the continuous morphological agglomerations. As in many countries (H. Van der Haegen & M. Pattyn, 1980 ; D. Pumain et al., 1992, p. 40), this has led to the use of the "urban region" concept. The initiative was taken by H. Van der Haegen and analyses have been realised on the basis of the last three censuses : 1970 (M. Pattyn & H. Van der Haegen, 1979a and b), 1981 (S. Leemans et al., 1989 and H. Van der Haegen, 1991) and 1991 (H. Van der Haegen et al., 1996 and 1998). The method has also been described in English (H. Van der Haegen & M. Pattyn, 1980). The district typology produced by this method is widely used by both planners (although not officially) and researchers.

Structure of the urban region model - Definition

Within the Urban Region, growth and redistribution of functions produce a spatial structure, which is expressed schematically in a model based on several concentric zones. Ten zones are used within these models.

City Centre : the City Centre is the city's heart ; it is the decision-making and activity centre ; it has a high concentration of retail traders and services oriented towards the region.

City Frame with Densely Built-up Area : the City Centre is embedded into a network of densely built-up urban areas that are generally made of the historic inner city and its 19th century additions. It is a multifunctional area that is essentially made of residential buildings, but also of various activities such as commerce, workshops, schools, hospitals and manufacturing.

Central City : the Central City is composed of the City Centre and the City Frame with Densely Built-up Area. It is the old agglomerated central part of the Urban Region.

Urbanised Area : the Central City is surrounded on all sides by the Urbanised Area that is essentially made of contiguous, still less-dense 19th century buildings. Its main function is definitely residential, but several green spaces have been kept in place. Within more important towns, secondary retail and service centres can develop within the Urbanised Area. Finally, the building structure of the urbanised area forms a contiguous continuity.

Urban localities or Morphological Agglomeration : the Morphological Agglomeration comprehends the Central city and the Urbanised Area.

Operationalised Agglomeration : for the sake of practical planning and administrative use as well as for certain statistical analyses, it was preferable to have the agglomeration coincide with municipal boundaries. This adjustment led to the distinction between the Morphological Agglomeration and the Operationalised Agglomeration.

Urban Fringe : the Urban Fringe is adjoining the agglomeration. It is the peripheral region of the town. To a large extent, the growth of its population is determined by the peri-urbanisation of the centre. Morphologically, its housing, business and institutions need an extensive use of the soil. It may morphologically look rural, but is functionally urban.

Urban Region : the Urban Region is the combination of the Operationalised Agglomeration with the Urban Fringe. It is the spatially enlarged entity within which most of the basic activities of city life are "displayed", i.e., housing, working, education, shopping, cultural activities and recreation. The intense interrelations of these activities form a functional unity, which, however, is still and to a large extent oriented toward the traditional central city.

Residential Area for Commuting Migrants or Commuter Area : the Commuter Area, sometimes called "dormitory zones", is the zone attached to the Urban Region because of the strong development of autochthonous commuting.

Urban Field or Metropolitan Region : the Urban Region and the Commuter Area form the Metropolitan Region.

A few reference figures

It has been considered that urban entities need to have at least 80,000 inhabitants to be considered as an urban region. In 1991, the 17 urban regions represent more than half of the Belgian population (5,652,917 people or 56.7 %), scattered on a quarter of the surface of the Kingdom (26 %, 8,031 km²). The average density is 704 people per km². The urban regions also represent 65 % of the jobs and 73 % of the management jobs.

One-fifth of the Belgian population also dwells in the commuter areas. Therefore, over three-quarters of the Belgian population (76.6 %) are settled in a district of the metropolitan regions.

The Brussels urban region is the most important. With the associated commuter area, the whole central Belgium is covered. This urban region has 1.7 million people (2.55 million in the metropolitan region). The second urban region is Antwerp, with 900,000 inhabitants. The third is Liège with 624,000 inhabitants.

2. - Periurbanisation process in Belgium

As stated above, peri-urbanisation is considered as the urbanisation process (both morphologically and functionally) based on automobile mobility. Since the Second World War, it has been the major process producing the Belgian "outskirts". In this section, different dimensions of Belgian peri-urbanisation are illustrated, starting with an analysis of the Belgian situation from an international point of view. Afterwards, several themes related to residential peri-urbanisation will be commented : impact of housing policy, characteristics of the demand, land supply and building activity. Finally, we will comment on researches produced on two related topics : location of economic activities and landscapes.

2.1. Belgian peri-urbanisation from an international point of view

Although the peri-urbanisation concept still needs an international normalisation, several signs tend to prove that this phenomenon is particularly strong in Belgium. Three themes will be considered in a non-exhaustive approach : housing structure, agglomeration density and propensity for automobile mobility.

Housing structure

In Belgium, the most typical peri-urbanisation process takes the form of a detached single-family house. Compared to other European countries, the percentage of single-family houses, with 73 % in 1991, is very high. The only country with a higher percentage is the United-Kingdom (Eurostat, 1997 ; P. de la Morvonnais, 1998 ; <http://www.euhousing.org>). This situation has cultural roots and the single-family house is a social reference. In the 19th century, contrary to other European upper classes (e.g., in Paris or in Vienna), the Belgian bourgeoisie already followed the model of the single-family house (R. Schoonbrodt, 1987, p. 44). During that period, the reference seemed to be the Anglo-Saxon model of the rural gentry (C. Vanderhoff et al., 1999, p. 13). Undoubtedly, such a cultural attitude is a potential source of diffuse peri-urbanisation.

Compared to international standards, the owner-occupied sector is very high in Belgium (66 % in 1991). More precisely, the owner-occupied sector is strong for single-family houses (78 % in 1991) and weak for apartments (27 % in 1991). This housing structure is due to both cultural and historic reasons that will be commented in the next chapter on housing policy.

Compared to other European countries, another key-element of the Belgian housing structure is the importance of self-provided houses (where the first occupants arrange for the building of their own dwelling and, in various ways, participate in its production). During the 1980s, self-provision accounted for more than 60 % of housing completions (S.S. Duncan & A. Rowe, 1993, p. 1136).

Diffuse peri-urbanisation partly results from these housing characteristics, as without the appropriate planning (2.4. land market and building activity), the production of single-family houses on a self-provided way easily leads to numerous and spread out building sites (J.-M. Halleux et al., submitted to *BELGEO*). The situation is very different in both the United Kingdom and the Netherlands, where the percentage of single-family houses is also very high. However, developers produce most of these houses there. As a consequence, building sites are more concentrated. Compared to Belgium, this is one of the elements that leads to maintaining urban compactness.

Agglomeration density

A recent comparison between different European agglomerations has shown that the Belgian agglomerations have low density (C. Vandermotten et al., 1999). This is another element that testifies to the high degree of peri-urbanisation. The differences between Belgian and Dutch agglomerations seem to be particularly interesting (C. Vandermotten et al., 1999, p. 91). Although single-family houses are characteristic of both categories, the Dutch towns have a much higher density. The Dutch example shows that high residential densities do not necessitate apartment buildings.

Propensity for automobile mobility

As already stated, there are important relationships between urban shape and mobility. Therefore, as dispersal is characteristic of Belgium, the corollary should be an important propensity for automobile mobility. This seems to be true and the OECD observes that, in Belgium, vehicular travel in km per person and per GDP is one of the highest within the OECD countries (OCDE, 1998, p. 74). Therefore, an important car mobility seems to occur in return for the various dispersal processes.

In parallel, analyses on the financial costs of mobility have shown that, compared to other European countries, using a car is relatively cheap in Belgium. In contrast, public transport is relatively expensive (A Bieber & J.-P. Orfeuill, 1993, p. 130). Naturally, this situation leads to high motorisation.

2.2. Housing policy and peri-urbanisation

There are strong relationships between the important peri-urbanisation and housing policy. This issue has been widely commented, namely in French (for instance : W. De Lannoy & C. Kestellot, 1985 ; C. Mougenot, 1987 ; R. Schoonbrodt, 1987 ; O. Dubois, 2001), but also in English (P. Boelhouwer & H. van der Hijden, 1992).

The role of the public authorities has to be pinpointed on the owner-occupied theme. Since 1889, when the first housing act came into force, one of the main objectives has been to stimulate owner-occupation. This was achieved by several tools, namely important fiscal advantages, building loans and public interventions on the mortgage market (O. Dubois, 2001). As the promotion of owner-occupation is closely connected to the new construction activity, such policy is a major source of peri-urbanisation.

As the authorities preferred to promote housing construction through the private sector, and in particular, through the promotion of owner-occupied housing, the rental sector has been neglected. The social rental sector accounts for $\pm 7\%$ of the total housing stock, which is small compared to many European countries (O. Granville & C. Mertens, 1998). In parallel, the quality of the private rental sector is relatively poor as landlords are hardly encouraged to carry out maintenance or improvements in their housing stock.

2.3. Demand for residential peri-urbanisation

2.3.1. Motivation for suburban residential choice

Different surveys have been produced to analyse the motivation for peri-urban residential choice. These surveys provide an insight into the profile, motives and residential preferences of people moving house who settle in the urban fringe. These surveys were conducted in both Flemish (S. Savenberg & E. Van Hecke, 1999) and Walloon municipalities (B. Vauchel et al., 1996 ; L. Brück et al., 1999 ; J.-M. Halleux, 1999a). The differences between the two regions are limited to details, while the broad outlines are the same.

Profile

Urban fringe municipalities receive a majority of households coming from nearby urban centres, so migration distance remains limited. Within the peri-urbanisation group, most participants are at least in their late twenties, and mainly in their thirties. If there are not yet any children at the time of the move, they come in the period immediately following. They preferably settle in a detached home, which they own themselves. They have high car mobility and are quite affluent ; the disposable monthly income is generally brought in by two earners.

Motive

Dissatisfaction with the previous home is cited most as the reason for residential migration. Family reasons come second. Reasons relating to the former neighbourhood and work are less significant. The desire to become a homeowner, to leave a home that is too small or to exchange an apartment for a single-family dwelling, and to a lesser extent the lack of a garden are the chief reasons with regard to the dwelling itself. It completely correlates with family motives where forming a family (marriage/cohabiting) and expanding the family (birth/expansion of household) are central. Certainly when children arrive, features of the neighbourhood such as excessive noise and traffic and the lack of open spaces play a role.

The majority of all the motives for changing residence enumerated are closely bound to a particular type of migration. The stereotypical and culturally determined image of

suburbanising young expanding families looking for a detached home of their own with a garden is confirmed.

Traditionally and culturally determined picture : working in the city and living on the fringe

A number of factors lead almost automatically to housing peri-urbanisation. The desire to acquire a home of one's own is strong, but in the long term, it will certainly be more advantageous than obtaining somewhere to live via the rental market. Builders (self-builders) are directed to the urban fringes, as building land forms no or little part of the urban landscape. Purchasers can find property both in the city and on its fringe, but if they are looking for a single-family dwelling with a garden which is sufficiently large for a traditional family, the range in the city is more limited, but above all more expensive. Combined with the image that a city is a place to work and shop, but not an environment in which to bring up children, it appears natural in the present-day Belgian context that young families are moving to the "outskirts".

The children occupy a key place across the whole range of motives for changing residence. Expansion of family leads to dissatisfaction with the home and the neighbourhood, particularly among movers who leave the city centre. In terms of planning, the role and position of the child in the city certainly merits greater attention (J.-M. Halleux, 1999a).

Peri-urbanisation and economic development

There is a strong relationship between economic development and the peri-urbanisation process in both space and time. Analyses on land consumption have clearly demonstrated that economic conditions have a direct impact on the growth of built-up areas (J.-B. Jehin & B. Mérenne-Schoumaker, 1998 ; J.-B. Jehin, 1998) : peri-urbanisation is strong when demand is financially strong.

From a spatial point of view, peri-urbanisation reflects the regional or local dynamism very distinctly, as huge space consumption is characteristic of developing regions. There is also a clear relationship between peri-urbanisation and economic cycles. The study of the relationships between the development of urbanisation and economic cycles has shown that the increase in the standard of living directly leads to an increase in land consumption.

These conclusions pose a problem on the conditions of a real sustainable development : how can we achieve economic growth without putting pressure on land ?

2.4. Land market and building activity

Two planning tools are essential to understand the relationships between the land market and building activity in the outskirts : the zoning plan (called "plan de secteur" in French and "sector plan" in Dutch) and the lot division permit ("permis de lotir" in French and "verkavelingsvergunning" in Dutch).

Zoning plan

Zoning plans (sector plans) cover the whole country. Unlike in many other countries, it was the central government - before responsibility was delegated to the regions - that was

in charge of these plans. They were realised between 1964 and 1987. Since then, they have not been reviewed on a global scale.

A major characteristic of zoning plans is that, globally, potential urban zones are overabundant. This is true in both the Flemish and the Walloon parts. However, due to density disparities, it appears that the overabundance is more important in Wallonia, where potential land supply could accommodate twice the current population (Ministère de la Région wallonne, 1994a). This overabundance also affects the Walloon outskirts of Brussels, i.e. the Walloon Brabant (Ministère de la Région wallonne, 1994b). Incontestably, this overabundance is a major factor of diffuse peri-urbanisation.

Different reasons explain the overabundance of potential urban zones. Cultural background first has to be taken into account as the Belgian population (and consequently their political representatives) consider that land is not a specific good that has to be protected or used with parsimony (R. Acosta, 1994). It is likely that such an attitude takes root in the characteristics of the natural environment (J.-M. Halleux et al., submitted to *BELGEO*). Compared to many other countries (e.g., The Netherlands, Denmark or Switzerland), nature is not as fragile in Belgium and most of the land can easily be allocated to an urban use.

In such a cultural environment, many expansionist lobbies (from national to local) have been able to contribute to the growth of potentially urban zones (R. Schoonbrodt, 1975 ; C. Vandermoten, 1982). An economic force was behind these lobbies : the urban land rent. Indeed, the market value of potentially urbanised land is much higher than non-potentially urbanised land. In general, local politicians supported the expansionist lobbies, as their first aim was to create development possibilities for the districts they headed.

Lot division permit

The lot division permit is the most common way to produce urbanisation. Most of these permits are asked by private land developers in order to produce land plots by providing all the necessary infrastructures. After servicing, self-provided houses are built on these land plots. Due to the overabundance of potentially urbanised land, these permits can be asked for broad territories, which inevitably leads to diffuse peri-urbanisation. There are two main types of division permits : with or without creation of new roads. As the latter is both easier and cheaper (in terms of infrastructures), it is the most common. This is why ribbon developments are so frequent in Belgium (J.-M. Halleux et al., to be published).

2.5. Peri-urbanisation of economic activities

Housing is not the only function that is concerned by peri-urbanisation. Peripheral relocation of economic activities has also been characteristic of urban evolution in the last four decades. A statistical study on employment base (A. Colard & C. Vandermotten, 1996) has shown that industrial activity is not the only one to move out-of-town. Services are also affected, namely services to businesses and commercial and leisure services.

B. Mérenne-Schoumaker has written two syntheses on the location of economic activities, a first one on industry (B. Mérenne-Schoumaker, 1996a), and a second on services (B.

Mérenne-Schoumaker, 1996b). These syntheses tackle the relationships between peri-urbanisation and the location of economic activities, namely within the Belgian context.

In the field of industrial location, the issue of economic estates has to be pinpointed. For 40 years, these equipments have concentrated most of new investments as well as a majority of extensions and transfers (B. Mérenne-Schoumaker, 1991 ; B. Mérenne-Schoumaker & G. Devillet, 2001). With the exception of the Brussels metropolis, where the land market is very strong, economic estates are usually produced by public sector institutions (inter-communal development agencies) rather than by private property developers. For practical reasons, economic estates are developed out-of-town, and so are also a powerful source of peri-urbanisation.

Concerning the peri-urbanisation of service activities, most researches to date concern the retail issue. A major conclusion is that the recent period has been marked by a huge increase in the number of shopping centres of various types (B. Mérenne-Schoumaker, 1998 ; B. Mérenne-Schoumaker et al., 1991). Many of those centres have been produced in an inappropriate way as there were not enough connections between economic planning and urban planning (B. Mérenne-Schoumaker, 1995).

Nowadays, the extensive movement of peri-urbanisation also concerns activities that were long considered as specifically urban (B. Mérenne-Schoumaker, 2001 ; B. Mérenne-Schoumaker, to be published). This affects both services to people (cinema, bowling, leisure centre, clothing and sports goods shops, restaurants,...) and services to business (offices, lawyers, computer firms, research centres,...). This recent evolution has not yet been the subject of important analysis.

2.6. Landscape

The urban fringes occupy vast territories in Belgium. Urbanisation of the countryside occurs in many different forms and is the most important factor in the transformation of landscapes. As a consequence, the "outskirts" landscapes have been studied, namely by M. Antrop. Several sub-themes were investigated :

- the relationships between traditional regional landscapes and urban fringe landscapes (M. Antrop, 1994 ; M. Antrop, 2000a) ;
- the methodological use of landscape metrics (M. Antrop, 1998 ; M. Antrop & V. Van Eetvelde, 2000) ;
- entropy as an indicator of fragmentation and heterogeneity within the urban fringes (M. Antrop, 1998 ; M. Antrop & V. Van Eetvelde, 2000).

3. - Collective costs of an inappropriately planned peri-urbanisation

3.1. Mobility

In Belgium, mobility is a major issue and numerous technical reports have been produced. Traffic-jam is a key-problem and social costs of car mobility are high compared to other transport means.

The analysis of the last three censuses is interesting on the congestion issue (G. Juchtmans et al., 1999). Between 1970 and 1981, the average duration of work commuting decreased from 26 minutes to 24 minutes. At this time, many workers had stopped using the bus,

tram or bike in favour of the car, which resulted in an increase in the number of short journeys. The workers who were travelling in 1991 had an average journey time from their home to work of 32 minutes. During the 1980's, the reversal compared to the 1970-1981 evolution is mainly due to the slowing down of traffic as a result of road congestion. This evolution particularly affects the urban regions of Brussels and Antwerp, as a result of the ongoing peri-urbanisation from these major metropolises.

As already stated, there is a clear relationship between the dispersal of both populations and activities and the over-use of car mobility. This is shown by the 1991 census analysis (G. Juchtmans et al., 1999 ; J.-M. Halleux et al., 1999) as well as by a specific study on Walloon districts (M.-L. De Keersmaecker, 2001 ; X. Georges, to be published). Car-journeing and long-distance trips are more frequent where density is the lowest, particularly within periurban districts.

3.2. Socio-Spatial Segregation

Different researches have shown that peri-urbanisation contributes to an increasing socio-spatial segregation (M. Oris, 1998 ; M. Oris, 1999a ; M. Oris, 1999b ; M. Oris, 2000 ; H. Van der Haegen et al., 1998 ; T. Eggerickx et al., 2000 ; M.-L. De Keersmaecker, 2001).

One can first notice that within urban regions the analysis of the social structure leads to the conclusion that, at the neighbourhood scale, the least important social differentiation concerns the recent peri-urbanisation housing estates (H. Van der Haegen et al., 1998, p. 129). Peri-urbanisation is also a major source of impoverishment of the major cities (M. Oris, 1998 ; M. Oris, 1999a), as most middle-class people are willing to live in the outskirts. This contributes to a spatial concentration of social problems within traditional urban fabrics. As municipal income is largely determined by municipal taxes, this also contributes to financial problems for urban municipalities (S. Savenberg & E. Van Hecke, 1998 ; S. Savenberg & E. Van Hecke, 2000).

The social dimension of peri-urbanisation is also a problem in the "peri-urbanised" areas, particularly within the first peri-urban belt. As new peri-urban settlers have important financial possibilities, the housing markets in those localities are "under pressure". Many local people therefore have to find new locations. This phenomenon leads to an important sprawl as, usually, cheaper opportunities will be found further away (E. Van Hecke, 1991 ; C. Vandermotten et al., 1996 ; M. Oris, 1998 ; J.-M. Halleux, 1999b ; M.-L. De Keersmaecker, 2001).

3.3. Disurbanisation - the difficult "recycling" of urban fabrics

As previously stated, in Belgium, the peri-urbanisation process is very important in many aspects. At the scale of an urban system, peri-urbanisation developments will lead to disurbanisation if they are more important than the global growth. Disurbanisation takes the form of various kinds of fallow lands : industrial wastelands, empty retail units, offices and apartments to let,... (J.-M. Halleux, 2001a).

Although this issue has not yet received much attention, the phenomenon seems very important, particularly in the Walloon axis where the land market is not strong enough to produce an automatic urban renewal. In these regions, there is a "communicating vessels" phenomenon. Globally, what is developed in the periphery is lost within the traditional

urban fabric. In such situations, recycling of the urban fabric is not possible as the "outskirts" competition is too strong. The situation seems to be different in developing urban regions, such as Brussels or Antwerp. In those regions, the land market is much stronger and the demand is important for both the outskirts and the traditional urban fabric.

3.4. Extra costs for community public services

Recent researches have been produced on the interactions between diffuse peri-urbanisation and community public services (J.-M. Halleux 2001b ; J.-M. Halleux et al., to be published). These researches have shown that the most important extra-costs are related to infrastructure networks (road building, sewage, electricity cable, drinking water pipes,...). For these infrastructure networks, it is likely that diffuse peri-urbanisation leads to a huge increase in terms of running costs for maintenance and repair. Moreover, unlike investment costs, running costs are often the responsibility of the community (taxpayers via local taxation and consumers via charges of the distribution companies). Therefore, there are hidden subsidies to the peri-urban areas towards which well-off households migrate, to the detriment of densely populated towns where the under-privileged population is more and more concentrated.

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Peripheral specific spaces have been really detectable since the French 1975 census. A work, under the signature of Bauer and Roux (1976)⁴ created sensation by approaching for the first time these peripheral territories, and by giving them a name: “rurbanisation” (from “rural” and “urbanisation”). Others followed as well in the geographical discipline itself with an analysis of the spatial structures⁵ as in other disciplines, like for instance regional economics⁶. The 1980s were made profitable to multiply the case studies, which made possible a first synthesis, in 1991, with the book of Bernard Dézert, Alain Metton et Jean Steinberg⁷. This opus proposed a typology of peripheral urban spaces which takes into account functional and morphological criteria, with a certain number of useful definitions for the effort of unification of the terminology we intend to do in our group. The only remaining major ambiguity resides between the terms *périurbanisation* and *rurbanisation*, one being too often used for the other. The *rurbanisation* seems to constitute the least dense nuance, the landscape of which still remains rural, with some recent extensions around the small former village cores.

The 1990 decade is especially characterized by the search at the same time of (i) the objective limits of the urbanization in order to help the statisticians of the INSEE⁸ in their search of the proper scale of appreciation of the phenomenon (whose ZPIU⁹, and then, since 1994, the *Aire urbaine* - urban area - have been the last two attempts), and of (ii) the peripheral areas structuring factors. Works done by the INRETS¹⁰ and researchers such as Francis Beaucire highlight the role of mobility and the predominance of the car in structuring the peripheral territories. In addition to these factors, the abundance of land offer at low prices and a weak control of the urbanization process linked to the 1982 decentralization (all the mayors can give permits for new constructions without any control: in the Paris region, there are 1281 mayors!) make possible a global explanation of the urban sprawl. The Law of Zahavi (constancy of transport-time-budget allocated to themselves by individuals for their daily trips) is revisited, and fully demonstrated by constancy of average travel times whereas the distances (and thus mean velocity) increase. In 1997, Vincent Fouchier¹¹ showed that density is a factor which exploits the modal share of the personal car (in an inversely proportional relation) and the length of day-trips, without any incidence on the travel duration. In other words, average travel times are equivalent in all the parts of a town, in spite of the differences in density and thus in travel distances.

⁴ Bauer (G.), Roux (J.-M.), *La rurbanisation ou la ville éparpillée*, Paris, Seuil, 1976, 192 p.

⁵ Berger (Martine), Fruit (J.-Pierre), Plet (François), Robic (Marie-Claire), “Rurbanisation et analyse des espaces ruraux péri-urbains”, *L'espace géographique*, n° 4, 1980, Paris, p. 303-313.

⁶ Guengant (Alain), *Les coûts de la croissance périurbaine*, Paris, ADEF, 1992, 153 p.

⁷ Dézert (B.), Metton (A.), Steinberg (J.), *La périurbanisation en France*, SEDES, 1991, 226 p.

⁸ Institut National de la Statistique et des Études Économiques : the french Bureau of Census.

⁹ Zone de peuplement industriel et urbain.

¹⁰ Bieber (Alain), Massot (M.-H.), Orfeuill (J.-P.), *Questions vives pour une prospective de la mobilité quotidienne*, Synthèse INRETS n° 19, 1991. INRETS : Institut de recherche sur les transports et leur sécurité / Research Institute on Transports and their safety.

¹¹ Fouchier (Vincent), *Les densités urbaines et le développement durable. Le cas de l'Île-de-France et des villes nouvelles*, SGVN, La Documentation française, décembre 1997, 212 pages.

The analysis of day-trips corroborates these reports with an increasing share of travels between *périurbain* and suburbs, and to a lesser extent between *périurbain* and town centre, without any increase of the travel duration. For as much, is it necessary to consider the proliferation of high-speed infrastructures as the sole responsible for this not very sustainable development? It is true that the inhabitants of *périurbain* and *rurbain* territories adapted infrastructures (by-passes in particular) which were not conceived at the origin for the routing of day-trips. Force is to note that almost all of the “black spots” of the principal road networks are located in a radius of 30 km around the main urban areas. Other factors must be taken into account like multi-activity within the households, larger insecurity of the labour market, in short an increasing distension of the links between habitat and workplaces. Without forgetting the recent explosion of trips for “other reasons”, essentially for household and leisure consumption, without inevitably leaving the urban peripheral areas because of the development of commercial, ludic and cultural complexes.

These significant contributions make it possible now to consider new approaches of the *périurbain* phenomenon, privileging social and environmental aspects in particular. The formers are linked to the ageing of the populations living in peripheral areas (the first researches on this theme have begun in the French Vexin¹²) and to the premature ageing of some low-cost residencies. The environmental approaches relate rather to the evolution of peripheral landscapes, which are extremely complex¹³.

¹² It's a mainly rural area in the northwestern part of the Paris region, classified as belonging to the *rurbain* periphery.

¹³ Bertrand, 1999.

SOME PROBLEMATICS OF THE METROPOLITAN CONURBATION

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The metropolitan area, or rather the metropolitan agglomeration, is the place where it is possible to experience the contradictions of modernity but at the same time it is a kind of crossroads where the transitions of the age are searching for new paths. In the metropolitan agglomeration, reality appears ever-increasingly fragmented and different values, cultures, life styles, interests and ethnic groups meet, live and clash.

It is thus the site of numerous diversities, differences and inequalities where multiplicity and plurality achieve the maximum intensity, and where the conflict arising out of the heterogeneity of objectives, values and interests is greatest. But it is at the same time the place where there is the greatest need to promote communication and agreement between various bodies and parties in order to reduce this conflict.

The metropolitan area is also the site where the choices available to each individual are multiplying, but there is often a reduction in the ability to orient oneself in an indeterminate space where there is frequently a lack of differences and points of reference capable of aiding the construction of a mental map.

The metropolitan conurbation expresses the convenience of concentrating productive processes in order to exploit economies of scale and agglomeration. But at the same time this is precisely where there are the greatest dis-economies and the largest amount of energy consumption and environmental waste (L. Fusco Girard, 1997).

The large dimensions of the metropolitan conurbation make it increasingly difficult to maintain or recoup a sense of belonging to a community which shares common objectives. In the common contemporary metropolitan outskirts, on the other hand, it seems relatively easy to re-establish a village life based on non-coercive neighbourhood relations.

The growth of the metropolitan conurbation has rendered inadequate the traditional view of the city as something that consists of a centre, some outskirts and an extra-urban area; such a concept needs enlarging to include at least five different contexts: the historical city centre, the consolidated city, the suburbs, the satellite urban centres and the mixed areas of urbanised countryside (fringes) (E. Piroddi, 1997).

Everyone has attempted to locate themselves in the conurbation according to market rules and without corrective measures, not even on the part of public institutions. Indeed, the latter have often contributed to the waste of resources and have encouraged both a lack of responsibility and forms of welfare paternalism. Public institutions have often not been capable of moving beyond a formal level of control to the active control of results so as to ensure respect of the regulations.

Some authors (G. Imbesi, 1990; C. Beguinot, 1998; B. Secchi, 1999) see in the recent transformations of society an undeniable improvement in the quality of life, which has also produced new needs in terms of the demand for space. The characteristics of this are:

- a) the functional diversification of spaces
- b) the **valeability (viability?, value?)** of settlement transformations in real time
- c) compatibility between new functions and conditions of accessibility (G. Imbesi, 1990).

This new demand has given rise to a complex form of supply in terms of specialised residential, industrial, commercial and administrative suburbs, additional settlements or the recouping of ancient village settlements for second or third homes. All these forms of supply represent the new components of the metropolitan area. Many of these areas have

one or more central functional zones but they are always accompanied by a morphological periphery. However, the quality of such areas needs to be evaluated according to different parameters from the ones used for historical and consolidated settlements. Evaluation should be based not only on the internal well-being of the individual components but also on the external well-being, that is in relation to the metropolis.

Metropolitan quality is regarded as being in a constant state of dynamism and improvement in that it no longer tolerates degraded and marginal spaces, and provides at the same time an opportunity for the development of all possible resources. Even agricultural land, from this point of view, is no longer seen as some kind of reserve kept separate from urban development or as a marginal area, but rather it is regarded as an area that is constitutive of the quality of the metropolis and therefore has to be planned as well. According to these authors, the metropolitan suburbs can no longer be interpreted as a quality-less living place in contrast to the ancient city, but as a space for opportunities that have been made possible by the unfinished nature of an urban fabric that has plenty of empty and full spaces to guard, preserve and transform.

The transformation of American suburbs

The dynamics of the new emerging, territorial-scale city are clearly described by Albert Z. Guttenberg in relation to the 'pilot' experience in America. In his *Notes on the United States* (1978) he writes: «... American cities have invaded their rural hinterland areas: highways are slicing up the countryside, single-family housing lots are dotted around indiscriminately, glaring publicity billboards line the main arteries...». All of this, which can be described by the term 'sprawl' and is in part connected to the political and socio-economic characteristics of America, had already created opposition movements in the past. In the 60s this opposition fought for the revitalising of central areas, while in the 70s the battle was waged in the name of a new environmental awareness which seemed as if it might transform cultural and operational practices in many fields of knowledge. While the movement for urban renewal in the 60s tried to invert the exodus of the population and of wealth in the direction of the outskirts and the environmental movement of the 70s and 80s sought to slow it down, current movements opposed to sprawl are expressions of a desire on the part of new urban communities to put some order into the process of growth and of the rural communities to keep the urban invasion at bay. They are therefore the flag-bearers of the need to control and manage these tendencies.

Some American authors, for instance Leinberger and Lockwood (1986) reject the interpretation of sprawl as a structural component in American policy about its territory, and interpret it instead as a transitional phase between two relatively stable states, that of the compact, single-centre city of the past and the looser, multi-modal city of the future. This thesis is supported by the fact that low-density residential areas are being flanked by new suburban centres called «urban villages», «megacentres», «suburban centres», and so on. Examples of these include Walnut Creek in California, Princeton in New Jersey and Schaumburg in Illinois.

The new «urban villages» are considered to be an expression of the transition from the manufacturing economy to the service-based economy. This shift has created an enormous increase in the demand for office space, and these offices tend to locate to suburban centres and marginal areas where there can be considerable economic and social advantages (for example, the availability of female labour in search of employment). But these «urban villages» are also the expression of the tendency of workers to find housing near their workplace, unlike in the past when the workplace was a factory. The birth of

these new centres has meant that the original suburbs, which were once points of departure for traffic, have now become points of arrival for traffic heading not only towards the metropolitan centre but also towards other suburbs. The increased volume of traffic has produced congestion and the traffic issue has become an 'emergency' that needs to be managed. At the same time, however, it is also producing innovative solutions.

At a territorial level, the effect of this situation is competition with the metropolitan centres and the growth of new suburbs.

New forms of metropolitan congestion

The traffic 'emergency', even on a metropolitan area scale, has also been emphasised by Italian authors. Besides the traditional, radial pattern of transit towards the centre, the establishment of metropolitan suburbs has resulted in the formation of other transits towards other suburbs. Moreover, the residential suburbs have become the origin of movements and those where there are productive or service industries have become points of destination.

The outskirts are generally considered to be suitable for private car traffic, but going into central areas by car is increasingly difficult or even prohibited. Therefore the efficiency of radial connections with the centre is now measured in terms of the service level of public transport – not only in terms of speed and frequency but also its diffusion and accessibility at the suburb end.

Inter-suburban movements normally take place by means of private car, given that up till now there haven't been access or parking problems at either end. It must be noted, however, that this situation is changing rapidly in some suburbs, particularly as a result of a lack of parking space (G. Zambrini, 1997).

Suburbs are suffering from traffic in transit, traffic which serves no purpose for its inhabitants but which nonetheless increases the strain on the environment, makes local movements dangerous, and places local dynamics at the mercy of urban and/or metropolitan ones. If in the initial phases such traffic gave a certain vitality to the suburbs, it now represents a strongly negative factor in terms of the environment. There are, then, problems in the suburbs that involve the whole urban sphere. Faced with such problems, there is the pro-road, pro-transport lobby which urges the need to select traffic (urban highways), while others see this process of selection as leading to an exacerbation of the problem. The latter therefore suggest containing traffic, above all by limiting speeds throughout the urban network. This policy could lead to a growth in short distance movements (on foot) and a development of the transversal significance of roads, that are being forced to develop their longitudinal aptitudes (their traffic capacity) excessively.

Institutional transformations

Amongst the instruments in need of renewal there are also certain planning strategies which in the current age of powerful internationalisation have become increasingly standardised. The strategies adopted should, by contrast, respond to criteria of compatibility with the structural characteristics of different contexts and with the resources that are available or can be activated, in such a way that there can be due consideration of different local, national and international demands.

The global system not only requires specialised hi-tech and management function poles. A well-preserved historical and cultural heritage and a natural environment which is properly valorised are equally important. Too many communities in the world aspire to and adopt

the same model for their future and in the process they are losing their distinctiveness and becoming less competitive.

The modification of the institutional situation in Italy, which has redefined the planning responsibilities of various local bodies – the regions, provinces and local councils – has given the latter ample powers and new instruments for the concerted management of the area. These instruments include territorial pacts, project contracts and area contracts, and they have contributed to the accentuation of the impulse towards sprawl in the field of urban planning. The specific, individual project-based approach to planning has been reinforced by legislation in the 90s in relation to «complex projects». The new national legislative instruments provided by Acts no. 203/91, 179/92, and 493/93 sanction a process whereby a plan no longer works from the global towards the particular, but in the opposite direction, from the particular to the global. All of this could result in the medium term in a powerful impulse towards an excess of localism, an accentuation of the phenomenon of sprawl, the increasingly casual proliferation of infrastructures and a more and more unsustainable form of development. In order to avoid this, it is essential that a principle of mutual support between national, regional and local bodies should accompany the monitoring of initiatives so that directives become more efficacious and so that there is a genuine and active discussion of planning instruments in order to achieve common objectives.

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OVERVIEW: RESEARCH AND DISCUSSION IN SWITZERLAND AT A GLANCE

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Preliminary remarks: Interpretation of the research topic “Suburbs”

This overview is based on the following considerations/theses on urban suburbs against a specifically Swiss background:

1. Suburbs are usually looked at from the perspective of the core cities. Though originally relatively independent political and administrative settlement units, they space-functionally increasingly depend on the core cities that induce the peripheral development.
2. This process led to the fusion of core cities and periphery into larger urban areas respectively cities. It has become a major issue to integrate these areas into a systematic spatial concept with their satellite towns and all other new areas.
3. The increasingly functionalised integration of cities and their respective periphery, with whole country parts and other urban nodal points world wide as well as the outsourcing of the core city services into the suburbs leads to a new perception: Suburbs enter an interchange with other suburbs to gain independence from their core cities. This creates a new kind of urban network. The historical core cities are, however, still imbedded in these networks due to their role as important cultural nodal points though they lose their central position (see Baccini and Oswald 1998).

Proximity of city and rural surroundings

Swiss agglomerations can hardly be compared to those of other European countries. Only the metropolitan area of Zurich, whose development was long denounced as malignant growth, could stand a comparison. Due to a distinguished topography and a lack of natural resources a relatively balanced and peripheral settlement structure developed in Switzerland over the centuries.

The industrialisation spawned a certain concentration on single cities. At the same time though it supported peripheral settlement structures through the orientation on hydropower of Switzerland's various streams. This situation generated persistently close relations between cities and their natural rural surroundings. Nevertheless, where large-scale agglomeration developed - as in the case of Zurich - decreasing quality of life was criticised.

Switzerland therefore established a specific affinity to garden cities whereas large city growth was instantly viewed as an alien element and therefore prevented.

Instead, the concept of a “decentralised metropolitan area Switzerland” was favoured (Meili since 1933). This overall idea influenced consecutive concepts of the Institute for National, Regional and Local Planning (ORL Institute) ETH Zurich until the 1970s. The impact of these resentments against urbanization trends can nowadays still be felt in the debate on spatial planning in Switzerland. Andre Corboz (1983,1993) and François Walther (1994) have dealt with the rural roots of Switzerland's urbanity in their research.

New Urban Realities

Observation of the cantons' and the federation's spatial development as well as spatially oriented research projects underline Switzerland's new urban reality. Existing agglomerations distinguish themselves through fast and ongoing growth.

It was notably the spatial planning report of 1987 (Swiss Federal Council 1987) that strongly suggested containment of this development. The research project COST Action C2 on the impact of large-scale infrastructures on settlement structures studied urbanization trends on the basis of regional case studies of Geneva/Lausanne and Zurich (Bailly et al. 2001).

Only in *Grundzüge der Raumordnung Schweiz* (Swiss Federal Council 1996) the new urban structures are recognized and referred to as "Switzerland as City" or "Metropolitan System Switzerland" with Greater Zurich as the major urban driving force. Sometimes it is even referred to "Zurich downtown Switzerland".

Moreover, urban neighbourhoods are seen from new perspectives. Leisure or temporary cities in the mountainous regions are put into a functional and compensatory relation with large-scale agglomeration areas. Holiday and/or secondary residences therefore further the "return" of the city dwellers to the countryside (see Bundi and Atzmüller and Meier-Dallach, in: Koch and Schmidt 1999).

Despite this development, the *Innenansichten des vernetzten Städtesystems Schweiz* published by the ORL Institute (2000) clearly show how municipal autonomy and regional identity undermine large-scale thinking and planning.

There are basically two aspects that influence the debate on Switzerland's urbanization trends:

1. the political importance of rural areas vis-à-vis the cities on the federal level
→ political majorities are manufactured in rural areas
2. a comparatively strong municipal autonomy as well as strong federal structures with partly very small units promote a limited and anachronistic view.

New initiatives as well as the set-up of a tripartite agglomeration conference on the federal level nevertheless point towards a possible change (see Klöti, Herczog, Linder, in: Koch and Schmidt 1999).

Michel Bassand (i.e. 1998) is one of the major initiators of the anew discourse on the specific urbanity form of Switzerland's Mittelland. The ORL Institute published his works on Switzerland as metropolis or *Metropole Lémanique* with other facets of the respective discussion on "Switzerland as City" in an anthology (Koch and Schmidt 1999).

New Definitions and Designs

Franz Oswald and Peter Baccini gave the *Netzstadt* (1998) probably the most sophisticated morphologic and adaptive definition of current urban relations and their possible future development. The «Studio Basel» at the ETH Zurich, run by the architects Roger Diener,

Jacques Herzog, Pierre de Meuron and Marcel Meili, tries to illustrate Switzerland's new urban morphology within the framework of a combined study and research project (Schindler 2001).

Anyhow, there are countermovements that make urban structures of accreting suburbs and agglomerations subject of research and applied spatial planning and development politics. Naming like "Glattalstadt" (Glattal city), Limmattalstadt (Limmattal city), "Metropole Lémanique", "Lorzenstadt" or even "Metropolis Switzerland" illustrates new urban realities: cities that are pieced together from fragments of various developments between the core cities, held together by increasing regional mobility and economic tradeoffs.

The "phenomenon" city is observed beyond political borders and traditional views related to core cities. New functional and spatial relations, new forms of urbanity, new urban ways of working and living and new definitions of the "city" form the basis of efforts for further systematic development of these urbanised areas.

Various studies in different suburbs and agglomerations uncover and demonstrate the specific potential of these areas, and therefore make it subject of both political and planning related interventions such as:

- the anew preoccupation with the suburb planning "Jolieville" in Adliswil/ Zurich of an international student workshop at the ETH Zurich (Buchmüller et al.1995).
- the study of a Solothurn SIA (Swiss Society of Engineers and Architects) working group on the natural habitat Gäu (see Rudolf, no year specification)
- or the study on the Limmattal ("Grosser Drache", Metron 1995)
- as well as research on the "Glattalstadt" by Mario Campi et al. (2001).

A special issue of the magazine Archithese (Geissbühler et al. 2000) put the project on "Lorzenstadt Zug" into the context of Switzerland's urban landscape. It also compiled additional planning studies of new areas, the so called "Switzerland in between". The most recent and characteristic event was the Wakker Prize awarding of the Swiss Heritage Society to the city of Uster in the agglomeration of Zurich for keeping its own identity though long being a suburb of Zurich (Galliker et al. 2001).

OUTSKIRTS OF CITIES IN SWEDISH LITERATURE

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This bibliography presents some of the literature on urban peripheries in Sweden, mainly in the discourse of architecture and urban planning.¹⁴

The interest in the peripheries of Swedish cities has mainly been directed towards the housing estate suburbs of Stockholm, Göteborg and Malmö, the three most populated cities in Sweden. The background for this interest lies in the general attention drawn to these areas since their problems were acknowledged in the mid seventies. Research programmes have been designed to meet a discussion that has reached far beyond the political and scientific societies. Popular culture for instance has communicated the pros and cons of life in the housing estate suburbs in books, cartoon strips, television series and rap lyrics – many times put forward to defend these areas against prejudiced assumptions in the public debate. Finally the issues have been put on the agenda through the Government's Bill Development and justice – A policy for metropolitan areas in the 21st century (Proposition 1997/98:165), which has directed a fair amount of money to research into this particular field.

Less attention has been paid to other suburban types and phenomenon, although there have been investigations that address the issue since the 1960s. Lately a few anthologies on architecture and urban planning have collected texts under the actual themes of 'urban outskirts' or 'peripheries': Nyström, L. (Ed. 1997), Holmberg & Wetterberg (Eds. 1998), Wetterberg (Ed. 1999). These compilations obviously reflect a growing interest among architects and planners in the complexity of the greater urban regions, and in the urban outskirts in particular, but so far the major volume of present day literature deal with housing estate areas rather than peripheries in general. This may be due to the peripheries' lack of spectacular qualities, their familiar or insignificant appearance. And whereas the housing suburbs are expected to fulfil the needs of everyday life – and therefore can be criticised for not doing so, the functionally diverse and fragmented outskirts of the urban areas mostly offer some sort of complementary functions to their users, and are not expected to do anything else. The outskirts work in an instrumental way and for different purposes, and as such the problems detected may seem just as fragmentary as the landscape they inhabit. This can explain why they have not been subjected to the same public or scientific interest as a coherent concept.

Consequently, the concepts of 'outskirt' and 'periphery' have not explicitly been defined. The definitions of concepts make the starting point for this presentation of Swedish literature on urban outskirts.

Concepts related to the peripheries of the cities are discussed by for instance Marcus (1998) who investigates 'urban' as a spatial category, in order to understand what is thought to be less 'urban' – such as edge cities. Blom (1997) defines 'periphery' in terms of quality of living – 'immaterial periphery' – as opposed to a geographic position related to a centre. Blom uses the term 'microperiferic islands' to discuss differences in

¹⁴ A commented bibliography by Clark & Ek (2001) covers research on the big cities of Sweden after 1945 within the field of Human Geography.

quality of life within urban regions. Wetterberg (2001) seeks a relational definition of the periphery based on a combination of morphology, history and power relations.

The question of the 'dissolving' modern city is scrutinised by Klarqvist (1999), who uses for instance space syntax analysis to discuss whether the modernist doctrines can be said to have caused the 20th century cities to dissolve. Klarqvist takes a position against the findings of Rådberg (1988) on the relation between architectural doctrines and density of urban developments; based on a thorough discussion Rådberg claims functionalism guilty of the fragmentation of modern cities. Franzén & Sandstedt (1981) have in their thesis brought up the concept of 'neighbourhood units', which they argue was the leading model for urban housing expansion, not only when the concept was introduced after the war, but all the way to the seventies' building of the large housing estates in the urban outskirts. The concept, that originally was meant to create a feeling of community, was then accused of causing alienation and social isolation.

Concepts related to mobility have also been investigated: Reneland (1998:4) specifies 'accessibility', and Johansson & Persson (Eds. 1996) shed light on the concept of 'reach' in an anthology with essays on mobility patterns in this era of increased movement possibilities.

The impact on the peripheral areas of increased mobility has been discussed and investigated from different points of view. Public transport network in sparsely populated areas, such as places where week-end cottages have been turned into permanent dwellings, work under different circumstances than in the inner city, and the use of private cars is many times necessary to make everyday life work for people who live far from stops for buses, tubes or trams. Furthermore out of town shopping centres generate traffic for goods as well as for people. The ever-increasing amount of transportation is a problem, but the new lifestyles that are built upon a high mobility have great qualities also. Berg (1996) discusses the question of mobility and rootedness, and future needs for transportation from a human biological perspective. When it comes to the physical features of the outskirts he puts forward a somewhat simplified image of the (visual) relation between town and country.

The quality of life is much dependant on how logistic problems are solved for individuals and families on a daily basis. Reneland (2000) investigates changes in accessibility in Swedish towns. He highlights for example contradictions in the goals for sustainable cities in a study of the relations between green areas and peoples average distances to service. The impact of out of town shopping centres has been investigated by for example Forsberg, Hagson & Tornberg (1994) from a consumer but also an environmental point of view. The environmental issues of transportation in the outskirt areas have been investigated by for example Hagson & Mossfeldt (1998) who have studied the environmental impact of transportation of goods to peripheral shopping centres compared to inner city locations.

There are also a number of studies on the relation between land-use and different sorts of transportation. Hagson, Elmqvist, Karlsson & Mossfeldt (2001) study what is argued to be unforeseen consequences on land-use and traffic due to by-pass roads in the peripheries of towns. Reneland & Hagson (1994:2, 1994:3) have studied public policies on public transportation networks in relation to population density as well as the population density in relation to costs and level of service of the public transport system. Studies in

coordination of the planning of public transport and urban land-use planning have been presented by Hagson & Mossfeldt (1994) and Forsberg (1995).

While the housing estate suburbs in public debate have been accused for being too well planned, other parts of the peripheral areas seem to emerge without any plans at all – neither on the local level, nor on the urban regional level. Forces behind this seemingly spontaneous growth have however been brought to light by for example Améen (1964). His work focuses on urban development in relation to land ownership and administrative borders. Johansson (1974, 1987) continued this morphological line of thought and called Stockholm ‘the townless big town’ in his thesis on the impact of land ownership on the patterns of urban growth in Stockholm. Bodström (1994) also focuses on land use policy in Stockholm as part of the politics of residential planning, and Hall (1997) gives a comprehensive discussion on the planning of Stockholm. In the case of Helsingborg (Elsinore) the border zone between town and country is investigated Schönbeck (2000) with reference to settlement patterns and land incorporations.

Bjur (1984) points out the emergence of a new planning practice around the turn of last century, when urban design no longer could be seen as a mainly aesthetic pursuit, but had to handle the new fragmented order of the fast growing urban areas. The discrepancies between functional and administrative borders became a problem of the larger urban regions, and the topic has been further described by Hägglund (1987). Hägglund points at the negotiation that has to take place between actors in the public planning processes, the co-ordination of several municipalities involved in the Greater Stockholm area, whereas Norrsell (1995) has investigated rights as a factor influencing infill projects in the Stockholm outskirts.

A quite common process and a dilemma for many smaller urban fringe municipalities is the transformation of weekend cottages and summerhouses to permanent residencies. The people who move in permanently often mean a welcome tax contribution to the municipality, but at the same time permanent residents can claim publicly financed services like road maintenance, water and sewage systems, disposal of waste, school buses for children and so on. Nyström, J. (1990), has described processes behind the development of such areas with reference to the system and the actors involved.

Comments on the urban outskirts settlements concerning their physical appearance and performance as such are few, and most of them written for the sake of debate. These contributions can be said to speak in favour of the 19th century city, that is the pre-modernist and pre-fragmented outskirts city. To start from the other end though, with non-evaluating or discussing texts, Andersson (1977) thoroughly describes the changes of the land-use and building structures of cities during the 20th century. However, as his investigation was made before the urban outskirts were starting to get attention, the contribution of conceptual tools for the discussion of peripheries is missing. Nyström, L. (1997) discusses the urban landscape in terms of usefulness and necessity. She points out that the fragmented and dispersed areas of scattered functions can not only be found in the outskirts of the bigger cities: in the county of Blekinge in the southeast of Sweden you find that the four small towns along the coast now almost have grown together into one urban landscape. Although a sparsely populated one, the area still has all the functions of a larger urban region. Bjur & Engström (1993) argue that this is a way in which Swedish towns differ from typical European ones. According to Bjur & Engström the economic

performance of a city region in Europe normally improves with increased density, whereas the economic welfare of Swedish urban regions seems to be less dependent on density. The resources are more evenly spread out over the country, where the small towns dominate the picture. In international terms there are hardly any big cities in Sweden (Stockholm being the biggest with a population of 1.6 million people in Greater Stockholm). On the other hand the small towns that function as regional centres in rural or old industrial areas are fully equipped and well working in spite of small and spread out populations of the hinterlands. Most of these towns do not tend to grow together since they are not located as near each other as in the example of Blekinge, but in many regions, particularly the Malmö region in the south and Mälardalen east of Stockholm, there are tendencies towards a continuous urban landscape.

Reactions on these changes of the urban landscape come from many writers. Rådberg (1997) and Söderlind (1998) point out the functional and aesthetic shortcomings of the spread out functions in the peripheries of the urban centres. They both put the blame on modernist planning, and suggest a return to pre-modernism urban designs. Rådberg favours the garden city of modest size, and Söderlind in hope for an 'urban renaissance' stresses the need to define again the border between town and country. Both writers have received much public support, but have also been heavily criticised for their allegedly simplified views on urban planning and design.

The largest volume of writing on phenomena in the urban outskirts comes from texts on the housing estate suburbs of the larger Swedish cities. These areas are called Million Programme suburbs, named after the building project initiated by the Social Democrats in the 1960s to build one million apartments in ten years. They are also commonly known as 'concrete suburbs' due to the visual impact of the building material. The reputation is slowly recovering for these areas – a cautious optimism is evident as the suburbs start to become some sort of familiar back-ground for everyday life, as opposed to the pathologic milieu they, rightly or not, for a long time have been pictured as.

The Million Programme suburbs have been studied from for example social, economic, ethnologic and aesthetic points of view. Ethnologists in particular have been eager to investigate this field. Daun (1974) caused a stir in the public debate with his thesis on suburban life, in which he looked beyond the clichés of gloomy boredom in the housing estates. Several writers have followed in order to shed light on differences and nuances in what Ristilampi (1994) argues to be the 'sign' of the Million Programme suburb, not the suburb itself. This has been underlined also by Zintchenko (1997), who maintains that simplified images of these areas over-shadow the complex reality. These simplifications are connected to problems that need to be brought to light. Molina (1997) discusses the racialization of suburbs, whereas social and cultural disintegration in the segregated city is investigated by Nylund (1998, 2001). Comments on the phenomenon 'concrete suburb' have been made by for instance Arnstberg & Ramberg (Eds. 1997), Arnstberg (2000) and Lilja (1999). The yearbook of The Swedish Museum of Architecture (Rörby Ed. 1996) is an anthology on the housing projects of the Million Programme. The big housing estates are the most famous – or infamous – ones, but roughly one third of the dwellings from that period are actually one-family houses of different kinds, many of them in the urban peripheries, almost next door to the housing estates and sometimes parts of the same neighbourhoods.

There is a well-known 'dwelling career' directed from the housing estates to villas (the farther away from the big estates the better, roughly). Aspirations to leave the 'concrete suburbs' for better places to live are described by Mörck (1997), but there are also a number of studies that point out the suburbs as places with a feeling of homeliness. Gunnemark (1998) writes on the conditions for local identity in the practice of everyday life, and points out that these areas are places where people feel at home. Bodström (1999) deals with somewhat similar aspects of the suburbs and the conditions for life there, and Boman & Levin (1994) in a small book with interviews pick up thoughts from Stockholm youths: taken from the interviews these young people seem to experience the urban landscape as a coherent whole, and with less prejudice than older generations. They appreciate not only the 'concrete suburbs' but also the desolated buildings and fragments of land with no specific use they find in the urban peripheries. Again, these peripheries need not be geographically determined, but rather socially, culturally or aesthetically, as mentioned by for instance Olshammar (2000). Lieberg (1992) has for his thesis studied how young people in a suburb use public space. As in the case of the Stockholm youth, the teenagers of Lieberg's study use many different parts of the urban landscape for their actions as individuals and groups. Lieberg argues that despite the 'over-planned' design of the city and the housing areas, teenagers still find or create space for their special needs of retreat or interaction. Alfredsson & Cars (1997) and Ketola (2001) deal with the confrontation between local perspectives and institutionalised planning, as they investigate bottom-up and top-down approaches in planning for changes in housing estate areas.

The buildings and the urban design of the housing estate suburbs have been much criticized, but less investigated. The Swedish Urban Environment Council has initiated debate on the actual design of these areas through anthologies like Nyström L. (1997, 2000). Bergström (2000) and Klasander (2001) discuss properties of the modernist housing estate suburbs in terms of for example relations between the perceptions of the built environment and the use of it.

Many design issues of these suburbs are indeed relevant in the discussion of the urban outskirts altogether: scale and proportions are obvious, and also the questions of delimitations (physical or invisible), configuration, and the buildings' relations to established symbolic language to mention some.

From a Swedish point of view the large scale housing suburbs are part of the urban landscape in focus of the COST C10 action. In many ways their future may lie in their abilities to interact with the functions of the surrounding landscape, where often driving forces for an economically sustainable urban structure can be found.

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THEMATIC BIBLIOGRAPHY FOR AUSTRIAN CITIES,
WITH SPECIAL REGARD TO THE CASE OF VIENNA AND INNSBRUCK
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This paper includes a list of recent publications within the thematic context of the C 10-Action. The main focus is on publications in German language, mainly by Austrian authors, but it also includes some English and German publications.

First some comments on the state of the art of Austrian research on “outskirts”, sub-urbanisation, the urban-rural-continuum and methods of differentiation between urban and rural regions.

Until today Austrian regional planning is orientated on Christaller’s model of central places. Bobek/Fesl and Fesl/Bobek (1978, 1983) classified all Austrian cities using an adaptation of Christaller’s concept. This means that not only new locations of shopping centres and other businesses have to be approved to fit into the concept, but it also determines the network of public traffic being still orientated to the city core and neglecting the need to combine suburban or outskirt areas without passing through the city centre. This may be one important reason for the immense growth of individual traffic between different outskirt areas.

Research including a critical review of common concepts of regional planning were often rejected by traditional referees. Only recently some critical publications were published (Borsdorf/Paal 2000, Borsdorf/Heller/Bogner/Bartl 2000, Krakover/Borsdorf 2000) to rethink traditional concepts of spatial order and to adapt them to the current patterns of human habitat and human behaviour.

The Austrian concept of the “urban region” (Fuchs 1997) is adapted to the German concept of the “Stadtregion”, but adjusted to Austrian conditions. But in contrast to the German discussion about the relevance of this model in Austria there is no discussion on the theoretical basis of this model. Only the “Virtual Project Urbanisation” (<http://business.carinthia.com/bgolob/virp/virphome.htm>) is dedicated to find new methods for delimitation and differentiation of the urban-rural-continuum.

But the urban structure of Austrian cities is more complicated. Lichtenberger (1993) published her model of the dualistic structure of Vienna. Unfortunately this model refers only to the structure of the core of the city. On the other hand, sub-urbanisation processes and structures are mainly analysed on the meso- and micro-scale. This may be caused by the lack of theories and concepts for the sub-urbanisation process (Häussermann/Siebel 1992). A definition seems to be complicated because the processes are partly contradictory and follow their own laws of time and space in the different urban agglomerations. Suburban regions are still not regarded as specific spatial units (as it was done by Sieverts, 1999, in Germany). Suburban regions are characterised by differentiation, complexity, by certain “chaotic structures” and a mixture of new and traditional elements. This may clearly be observed regarding the cultural landscape and the architecture, but at a closer look one may also find specific structures in the economy (secondary and tertiary sector), in the labour market, in public and private infrastructure, in traffic systems and in social patterns.

A lot of investigations deal with the new shopping and service centres at the outskirts of

Austrian cities (Dujsik 1981, Karhan 1991, Wagner 1998), the new patterns of supply and demand (Borsdorf 1997, Borsdorf 1999), the effects of these new structures for the cities and the spatial behaviour of people (Borsdorf/Schöffthaler 2000), as well as the economic success and the potential of conflicts (Jung 1997, Borsdorf/Hess 2001). Effects of industrialisation of the suburban region were analysed by Abart (1998). Socio-cultural change of the urban fringe was the topic of the study by Janetschek (1978). Structural analyses for different communities at the outskirts of Vienna were undertaken by Englert (1993), Stummvoll (1975), and Hülber (1984). Human spatial behaviour with regard to supply functions were investigated by Schwarz-Vartok (1989), Binder (1995) and Jannach (1991).

Other main topics are the problems of traffic (Fried 1992, Müller 1987) and land-consumption (Weber/Moser 1990). In this context the important book of the German author Tesdorpf (1984) should be mentioned.

Studies on the quality of life were realised by Schweitzer (1976), Lehr (1998), Maderthaner (1997), and Borsdorf (1994). In this context the study of Eibl-Eibesfeld (1987), based on a biological behaviour theory open a wider view on life-quality studies of buildt environment. He also participated in a study on the outskirts of Vienna (Eibl-Eibesfeld/Haas/Freisitzer/Gehmacher/Glück 1985), dealing with new concepts of “full-value-habitat” in the urban fringe in order to avoid environmental and traffic problems by suitable urbanistic structures. Flade (1990, 1993) analysed the quality of habitat as part of quality of life. More applied aspects were given by Rainer (1995) and Schacherl (1996).

An important function for the development at the outskirts are the land-values, which were investigated by Vogler (1998) and Hackl (1996), with an important link to the real estate market (Paal 1996). A very new trend – the “gated community” Fontana Park in the south of Vienna was analysed by the same author (Paal 1998) and by Wainig (1997). Traditionally the citizens of Vienna tend to own second homes at the outskirts – a result of the regulation of flat rents in older parts of Vienna which allow the population to live there at low rents. Second homes in the outskirts were analysed by Lichtenberger (1980), Slupetzky (1980) and Baumhackl (1989). At least the studies on regional specific patterns of sub-urbanisation should be mentioned. The “alpine town” was the topic of a reader, published by Borsdorf/Paal (2000).

Little work has to be done on the theoretical framework of sub-urbanisation processes in Austria. Leb (1995) presented a case study on Guntramsdorf, and tried to define the sub-urbanisation quota and the sub-urbanisation rate. She differentiated between stagnation and expansion types of sub-urbanisation. But we still miss a valid definition and typology of suburban respectively outskirt settlements.

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CYPRUS CONTRIBUTION

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Introduction

The Cyprus case differs from most other cases examined in this program. Being an Island State, Cyprus exhibits unique characteristics pertaining to urban and rural development. In particular, the whole of Cyprus can be viewed as a single settlement or better as a series of large and small interrelated urban and rural settlements, which are separated by vast open spaces in the interior (agricultural land, forests or other government lands etc.) and by undeveloped areas along the Mediterranean Coast. It is somehow difficult to compare the Cypriot urban settlements with their major European counterparts, since they are much smaller in size, both in area and in population. That is what makes Cyprus unique and gives the place its special status as an Island State/Economy.

Due to its strategic location in the eastern Mediterranean, Cyprus has suffered throughout its history from invaders and conquerors. They have all left their mark on the Island and especially on the form and the structure of the settlements.

Although Cyprus is an Island State, its major urban concentration is located in the interior and especially in the geographical centre of the Island on the western boundary of the Mesaoria Plain, and not in the coastal area. The urban settlement is the City of Nicosia and its environs (the Nicosia metropolis).

The Nicosia Metropolis

Since 1974, the Nicosia metropolis has been divided into two distinct ethnic sectors. Due to the Turkish invasion of the summer of 1974, and the continuous occupation of the northern part of Cyprus, two geographical zones – the Greek south and the Turkish north – characterize the Nicosia metropolis. These zones, or sectors as they are most commonly known, are separated by a thin strip of land: along the outskirts of the metropolis the strip is vacant land while the remainder that lies within the core of the built-up area comprises of abandoned buildings and structures in a dilapidated state.

The buffer zone is a demilitarised area and is commonly known as the “Green Line”. Even though the “Green Line” is an invisible barrier – not a built one – it displays similar characteristics to the former Berlin Wall: it separates the two peoples of Cyprus and prohibits human interaction.

The structure of the Nicosia metropolis has been greatly affected by the Turkish invasion of 1974, the presence of the “Green Line” (physical boundary which prohibits expansion to the north), the lack of interaction between the Greek and the Turkish settlements and various market forces. In particular, between 1973 and 1976, the population of the Greek sector of Nicosia increased by 40%. This was due to the influx of refugees from the northern part of the Island and the government policy to house the refugees in purpose-built organized settlements (large housing estates) in the suburbs (southern outskirts of the Nicosia metropolis). The government tactic – although correct under the circumstances and the social pressures of the post war years – was one of the primary reasons for the

continuous expansion of the built-up area to the south: the inclusion of the refugee housing estates in the urban fabric.

Another important factor that influenced the structure of the Nicosia metropolis was the gradual merger of the Municipality of Nicosia with the surrounding communities (the suburbs), therefore forming a “coherent” (metaphorically not literally) multi-nodal urban space.

Historically, Nicosia has been the main focal point for Cyprus. Among other things the City is the major centre for employment, culture, higher education and specialized services. Nicosia history has helped to create an urban fabric that permits its residents opportunities for enlightening interactions and life experiences.

Apart from the physically oriented *Nicosia Master Plan*, which is a joint bi-communal planning effort (it was drafted under the auspices of the United Nations) and concentrates on the walled city and the adjacent Central Business District or the core of the City (it adopts a unified vision), there is no other common planning document, tool or vision for the Nicosia metropolis (the Greek south and the Turkish north).

Due to the lack of joint planning efforts between the two geographical sectors of Nicosia, this brief analysis concentrates on the southern sector of Nicosia—the Greek sector (the Nicosia Urban Area for the purpose of the essay). The Nicosia Urban Area presents a dynamic urban space and displays decentralization characteristics, otherwise known as suburban sprawl. The *Nicosia Local Plan*, which is the main planning guide (public policy document) for future development for the Nicosia Urban Area, recognizes this trend and adopts a series of policies to revert it or at least to confine it within an acceptable framework.

The *Nicosia Local Plan* designates the general distribution, location, and extent of the uses of land for residential, commercial, industrial, recreation, conservation, education, public buildings and grounds, other public facilities, and other categories of the public and private uses of land. In addition, the *Local Plan* ensures that the character and location of the transportation system will support economic development and protect natural resources while enhancing the mobility of people and goods. The transportation element of the *Plan* reflects the multi-modal approach that the community has adopted in meeting the transportation needs of its residents.

The *Nicosia Local Plan* regulates the location and intensity of uses through the spatial representation on the Future Land Use Map, the Zoning Map and the Goals, Objectives and Policies. The policies state the community’s position on various matters pertaining to growth and change and illustrate how the community expects to achieve the goals and objectives.

The adopted strategy of the *Nicosia Local Plan* is consistent with sustainable development and its principles adopted during the 1992 Earth Summit and with the vision and philosophy of the *Green Book for the Urban Environment* of the European Union.

The Nicosia Urban Area consists of seven municipalities (Nicosia, Agios Dometios, Engomi, Strovolos, Aglangia, Lakatamia and Latsia) and one community (Geri) and has an estimated population of 203 500. Details are contained in the following Table

(Population of the Nicosia Urban Area 1982-2005). The *Local Plan* covers an area of approximately 19 000 hectares.

TABLE: POPULATION OF THE NICOSIA URBAN AREA 1982-2005

MUNICIPALITY	POPULATION			
	1982 (1)	1992 (2)	2001 (3)	2005 (3)
	48200	47000	47500	47500
Agios Dometios	13500	12100	12800	13200
Engomi	5800	9900	14000	16000
Strovolos	43000	51500	57700	59000
Aglangia	12800	17500	22500	23500
Lakatamia	15800	24400	29000	30000
Latsia	7500	10000	13000	14000
Geri	2400	5000	7000	7500
TOTAL	149000	177400	203500	210700

Source: The Nicosia Local Plan

- Notes:
- (1) Census of Population, 1982.
 - (2) Census of Population, 1992.
 - (3) Estimated (Department of Town Planning and Housing).

Most of new development (building construction) and public infrastructure provision (streets, water and electricity distribution etc.) takes place on the periphery/edge of the Urban Area and especially in the outlying southern areas/municipalities. This form of new development, which is primarily governed by the private sector initiative and the vested rights of the Cyprus Constitution, has altered the scale of the urban space and resulted in the expansion of the Urban Area. The Cyprus Constitution overprotects property rights and provides for just compensation when the value of a specific property is decreased substantially as a result of a planning measure or decision.

Even though, one of the main goals of the *Nicosia Local Plan* calls for the enhancement of the special status of the Nicosia City Centre or the core as the social, economic and cultural nucleus of the Urban Area and the Island as a whole – through the adoption of specific planning policies and guidelines – the Nicosia Urban Area is recognized as a multi-nodal space. In fact, the urban landscape is not homogeneous but rather an interconnected series of activity centres of varying sizes and intensities. The *Local Plan* in a manner encourages this form of development in order to achieve balanced development within the entire geographical area of the *Plan* (competing municipalities, which are part of the Nicosia Urban Area).

Less intensive land uses are located around the periphery of the different urban activity centres and between the activity centres. These land uses compliment the urban activity centres or nodes and provide less intensive living and working environments, i.e. a single-family residential neighbourhood surrounding a neighbourhood-serving commercial district or high density, multi-family areas adjacent to the City Centre or downtown.

The activity centres or nodes are connected with a system of corridors. There is a direct relationship between the growth of the activity centres and the expansion of corridors. Presently, the road network is the only component of the corridor system linking the activity centres.

The corridors have a three-field purpose in the Nicosia Urban Area. One, they link and make the activity centres accessible. Two, they act as edges or boundaries that define geographical areas within the urban fabric. Three, the corridors themselves are linear areas of interaction and activity. Businesses located along the corridor attract customers travelling through the corridor.

This planning technique does not contradict with the adopted strategy, which emphasizes the importance of a healthy, vital, mixed-use and vibrant central urban core. In this new urban space, the various municipalities and their respective activity centres complement each other, while the central urban core (the Nicosia walled city and the immediate Central Business District) maintains its symbolic importance.

Even though much emphasis is given (by the *Plan*) on the compact urban model and the mono-nodal ancient/traditional city mode (the Nicosia walled city and its immediate environs, in particular), the structure of the Urban Area exhibits urban sprawl characteristics. These characteristics have been influenced by the following dynamics:

- Public demand for less compact, more private and amenity-oriented urban environment (large properties or parcels of land at low prices, privacy, nature-oriented design, more green private and public spaces etc.).
- The psychological factor that drives people away from the “Green Line” and in particular to the southern periphery of the Urban Area.
- The high cost of the subdivided lots (urban subdivisions) in the inner city quarters.

One of the major flaws of the *Nicosia Local Plan* and the Planning System in Cyprus is the inability to contain development within the boundaries of the designated Urban Area or Areas. In particular, single-family housing, not necessarily associated with the agricultural or any other sector of the economy, can be built in agricultural or other land, as long as the property has a minimum land area of 4000 square meters.

To this extend, a clear and well-defined delineation between the Urban Area and the immediate (abutting) countryside does not exist; rather there is a transitional zone of very low-density scattered development. This form of uncontrolled development has contributed and is still contributing to spot development, provision of substandard public infrastructure and amenities, pressure for the expansion of public infrastructure and utilities to sparsely populated areas at high cost, substandard urban design etc.

The recently published *Consultation Paper for the Revision of the Nicosia Local Plan (Consultation Paper)* states that the Urban Area’s future must be driven by redevelopment more than new development. The *Consultation Paper* was drafted by the Department of Town Planning and Housing and the Cyprus Planning Board and circulated by the Minister of the Interior.

Redevelopment is defined as the process that is used in developed areas to rehabilitate, infill, use under-utilized areas more efficiently, achieve balanced mixture of compatible uses, and/or replace developed areas by changing the types of uses, intensities or densities of the land uses, to achieve an economically higher and better use of the land. In parallel, the *Consultation Paper* envisions a multi-modal, efficient and operative citywide transportation system. Presently, one of its major components, that of the public transport system, is obsolete.

The adopted strategy of the *Consultation Paper* aims, among others, at the following:

- Achieve higher densities, encourage mixture of compatible uses and introduce high intensity uses, primarily along the main transport corridors and their immediate environs, to sustain an efficient and financially feasible public transport system.
- Provide proper infrastructure modes for short distance public movement, other than that provided for the private automobile, i.e. efficient bicycle network and safe and well-maintained pedestrian network.

The Other Major Urban Concentrations

Similar findings or provisions are found in the *Local Plans* and the *Consultation Papers for the Revision of the Local Plans* of the other three major urban concentrations on the Island:

- The *Limassol Local Plan* that regulates growth for the City of Limassol and its environs (tourism and topography have affected the structure of the Urban Area).
- The *Larnaca Local Plan* that regulates growth for the City of Larnaca and its environs (certain physical and man-made barriers have affected the structure of the Urban Area: oil refinery and related facilities to the north and airport and salt lakes to the south).
- The *Paphos Local Plan* that regulates growth for the City of Paphos and its environs (tourism and topography have affected the structure of the Urban Area).

The current *Local Plans* were drafted by the Department of Town Planning and Housing and the Cyprus Planning Board in cooperation with the local authorities, and adopted by the Council of Ministers on December 3, 1999 (land use and zoning maps and other detailed supportive maps) and on May 12, 2000 (text). Presently, the *Local Plans* are under revision.