

The Swedish Institute in Rome. Projects and Seminars, 4:1

Via Tiburtina
Space, movement and artefacts in
the urban landscape

edited by

H. Bjur & B. Santillo Frizell

Rome 2005

This publication is also available at:
<http://www.svenska-institutet-rom.org/svenska/projekt/tiburtina.html>
where also future research will be published continuously.

© The Swedish Institute in Rome and individual authors.
ISSN 1824-7725

Via Tiburtina
Space, movement and artefacts in the urban landscape

Barbro Santillo Frizell	
Foreword.....	5
 Hans Bjur	
Space, Movement and Artefacts in the Urban Landscape.	
Contemporary Urban Landscape Archaeology. Via Tiburtina.....	7
 Mir Azimzadeh and Hans Bjur	
The Configuration of Urban Spaces. Interaction between layered	
spatial systems, generic function of movement and urban life.....	21
 Olof Brandt	
Inside or outside? The relationship between the sanctuary of St.	
Laurentius and Rome.....	26
 Barbro Santillo Frizell	
Sheep, shrine, sulphur.	
Via Tiburtina and the urban pastoral landscape.....	31
 Kristina Hellerström and Hans Bjur	
Movement on the Edge. Interventions in the Urban Landscape.....	38
 Allan Klynne	
Chasing villas. Transformation, survival and preservation of Roman	
villas along the Via Tiburtina.....	44
 Simon Malmberg	
Rituals on the Road. Two highways at Rome and Ravenna	
AD 400-750.....	47
 Bibliography.....	51

Scholars in the project

Hans Bjur, M.Sc. Arch., since 1992 professor and chair of Urban Design and Planning at Chalmers University of Technology; since 2005 professor of Urbanistica at the Swedish Institute of Rome, and professor of Urban Transformations at Göteborg University.

Barbro Santillo Frizell, 1997-2000 chair of the Department of Archaeology and Ancient History at Uppsala University, since 2001 professor in classical archaeology and ancient history, at present, director of the Swedish Institute of Classical Studies in Rome.

Olof Brandt, PhD in Early Christian archaeology. Research Fellow at the Swedish Institute for Classical Studies in Rome in 2005- 2007. Secretary general of the International Association of Classical Archaeology (AIAC).

Allan Klynne, PhD in classical archaeology and ancient history. Research Fellow at the Swedish Institute for Classical Studies in Rome.

Simon Malmberg, PhD in classical archaeology and ancient history. Research Fellow at the Swedish Institute for Classical Studies in Rome in 2005- 2007

Mir Azimzadeh, M.Sc. Arch., Ph.D Urban Design and Planning.

Kristina Hellerström, M.Sc. Arch., doctoral student presumptive (supervisor prof. Bjur)

Foreword

The aim of the Via Tiburtina project is to analyze how historic layers integrate into the urban development of the city of Rome in a long term perspective, seen as a palimpsest. Our research is directed towards phenomena in the outskirts and suburbs, how the movement of men and goods influence and change the focus of activity through history. Via Tiburtina, one of the most dynamic Roman roads, which originated as a cattle-trail long before Rome became Rome, was chosen as a case study. It connects the city of Rome with Tivoli, an important commercial center and military stronghold, which throughout history was the key to Rome.

The project was granted financial support from The Swedish Research Council (Vetenskapsrådet) for two years, starting in January 2006. The application was evaluated by the advisory committee as having highest scientific quality and aims, with a potential for breaking new ground. The project is being developed at the Swedish Institute in Rome since 2003, in collaboration with Professor Hans Bjur, leader of the project. Its initial phases were financially supported by the Fondazione Famiglia Rausing and Chalmers University of Technology.

Its main aim is to investigate the possibilities of developing new lines of research in integrating two academic disciplines, Classical Archaeology and Urban Planning, one belonging to humanities, the other to the field of technology, in a project with common scientific goals and with participants from both sides. A great challenge to us, who are trained in different academic traditions with diverging aims, is to pose questions and identify problems of common interest and to formulate theories and methods. One aim of the project is to bridge the gap between our disciplines and, through a joint research program, create a platform for dialogue.

The rapid reshaping of the landscape around Rome and the development of the suburbs, especially after the Second World War, has brought about great changes in the external environment and the living

conditions of the population. Via Tiburtina runs through one of the most exploited areas in the Roman Campagna, with heavy traffic and poorly controlled building activity. Many of the archaeological monuments, such as the Roman vaulted stone bridges crossing the Aniene River, are in a very poor state of preservation.

It is vital to integrate the experience of archaeology and modern cultural heritage management into the practice of modern urban town planning and to introduce ethical, aesthetical and historical dimensions in contemporary physical urban planning. Especially in suburbs and outskirts with vague identities, it is important to preserve and develop a richer environment in promoting the local character in the way it was shaped by history. The conservation of the cultural environment should be integrated with other forms of planning and should also apply to the conservation of not only single buildings but also complete neighborhoods to revitalize the cultural environment and historical identity. Via Tiburtina offers many nodal spots of high historical intensity and value and thus provides great potential in such a project.

During its history of eight decades, the Swedish Institute in Rome has conducted archaeological research and large excavation projects. For the last twenty years the institute has been engaged in problems regarding research and preservation of the cultural heritage. Recently, we have actively promoted projects in the direction of conservation, especially in developing new methods of conservation and tools to analyze the physical state of buildings and monuments. A further step in this direction is to promote research that integrates archaeology and urban studies in a wide sense and to contribute to the ongoing debate of how to preserve and develop our cultural environment.

Barbro Santillo Frizell

Professor, Director of the Swedish Institute of Classical Studies in Rome

Space, Movement and Artefacts in the Urban Landscape

Contemporary Urban Landscape Archaeology.

Via Tiburtina

The overall question in this research project is: How can cities integrate historic layers (palimpsests) into their urban development? The scientific aim of the project is to critically examine and synthesize mainly existing archaeological, urbanistic and other adequate knowledge of human movement and artefacts in the urban landscape. The aim is to open up new perspectives on the city's historic assets and patterns – on their significance, integration and design. One specific goal is for the result to lead to the identification of central issues within a new multi-disciplinary subject: urban landscape archaeology. Another goal is for the research and the subject to be of direct practical use in the ongoing social construction processes.

The long-term aim is thus to generate knowledge, theories and methods of analysis within this interdisciplinary field of knowledge. Our focus is on the urban landscape, and this makes our subject new and still undeveloped. At the same time, the complex of problems promotes an interdisciplinary approach, which is at the same time both theoretical and practical. In the last decades, the concept of "urban landscape" has been introduced in the fields of urban research and planning, in order to facilitate an analysis of modern urban development with growing peripheries (Bjur 2003; 2005b). At the same time, an interest in the landscape has been developing in the field of archaeology, as a result of the fact that in recent years object-related excavations have been replaced by a number of inventory projects. Landscape archaeology has matured to become a discipline in search of its own theoretical foundations. This development has confronted archaeological research with new epistemological problems and the need

to seek co-operation with other disciplines (Santillo Frizell 2002a). We wish to test whether the meeting between the two academic disciplines of Classical Archaeology and Ancient History, on the one hand, and Urban Design and Planning, on the other, concerning the problems of the contemporary urban landscape, has the potential to develop ethical and aesthetic dimensions within the process of social construction.

With its long history of complex relations between centre and periphery, the city of Rome will be the primary object of study during the first stage of the research project. In our preliminary studies for this research project, we have identified the Via Tiburtina – from Forum Boarium by the Tiber to Tibur (Tivoli) – as an adequate location for a case study. The urban spaces and the landscape surrounding the thoroughfare have a long history leading all the way up to the present urban development plans. The aim is to provide an empirical foundation for discourses about the subject of urban landscape archaeology. We have identified four motives for wishing to carry out an explorative case study in Rome in particular.

First, Rome's several thousands of years of urbanism illustrate in a most unique way the basic research problem, viz. the relations between:

- Old and new (in several layers)
- The landscape and the artefacts (during three millennia)
- The movement, the urban space, and history (through several different cultures)

Secondly, Rome's development has for a long time been subject to an extensive research in several academic disciplines and from many different aspects. There thus exists an unusually rich empirical material with which to begin – to develop and elaborate. For eight decades, the Swedish Institute in Rome has – through its activities – created a substantial store of knowledge for further research on Rome and its surroundings. We intend to make use of these possibilities to carry out a synthetically oriented research. It is evident that the material provides

an interesting space for new research projects, with the possibility of making syntheses and discovering new perspectives from the existing store of knowledge. It is also urgent that the results of the research carried out at the Institute are worked up so that they can be communicated and integrated into the decision-making process regarding questions of present and future urban development, preservation of monuments, etc.

Thirdly, in Rome the problem of urban development has an interesting complexity and is given an advanced treatment in practice (Bjur 2003). The new general plan – Il Piano Regolatore di Roma 2002 – is based on a strategy that gives rise to the need for a new kind of synthetic knowledge about the development of the whole, about the long-term perspectives, and about the transformation of the urban spaces and the urban landscape, i.e. the three core issues mentioned above. One specific aim is to link this research project to the ongoing social construction process in Rome – as a pioneer project (cf. the section on reference group).

A fourth reason for choosing Rome and Italy as the basis for our research project is our aim to develop a research that will be of international importance. Our field of research – with the possibility of implementing theories, methods and results – has international range and is relevant not least for most of the member states of the European Union (Bjur 2003; Lloyd Jones 2004). It is our intention to make use of and further develop the basic possibilities for international communication of this research and this subject matter already in existence among the sister organizations of the Swedish Institute in Rome (The British School of Rome, The American Academy, etc.) and other organizations within the academic network.

Thus, the main aims of this research project are the following:

- To develop a new and multi-disciplinary knowledge concerning urban landscapes which will be of universal validity and usefulness in present-day social construction processes.
- To develop interdisciplinary methods and a multi-disciplinary

research milieu, primarily based at the Swedish Institute in Rome.

- To develop theories, methods and discourses for a new academic discipline of teaching and research: urban landscape archaeology.
- To introduce ethical, aesthetic and historical dimensions into present-day physical planning.
- To draw international attention to this knowledge, and to make it useful in the ongoing discussion about modern urban development.

An Overview of the Field of Research

The distinct discipline of landscape archaeology has been in existence now for a number of decades, but there has so far been no focus on the urban landscape. The definition of landscape archaeology found in the Oxford Companion to Archaeology fits well with our intentions: "Landscape Archaeology is concerned with both the conscious and unconscious shaping of the land: with the processes of organizing space or altering the land for a particular purpose, be it religious, economic, social, political, cultural, or symbolic; with the unintended consequences of land use and alteration; with the role and symbolic content of landscape in its various contexts and its role in the construction of myth and history; and with the enactment and shaping of human behaviour within the landscape." However, although these aspects are in the highest degree valid also in our research, there is still a clear and obvious difference between the interests and demarcations of landscape archaeology and what we call urban landscape archaeology. The great difference lies in the relative position of the spaces and artefacts. In landscape archaeology, they are related to the structures primarily of their own time period; while in the field of urban landscape archaeology, they are also related to the modern landscapes. Perhaps it is possible to claim that the artefacts of urban landscape archaeology are related to the landscapes of all time periods, i.e., to a palimpsest. This profound temporal perspective – *la longue durée*, to use Braudel's expression (1986) – as well as the connection with the

present, lends relevance and distinction to the subject.

The field of ethnogeography has long taken an interest in the urban landscapes (Entrikin 1991, Tuan 2001). The archaeologist Ray Laurence has made use of the latest theories from 1990's ethnogeography (E.W. Soja 1996, with references to D. Harvey 1989 and H. Lefebvre 1990) to analyse the territorial expansion of Rome from the fourth century to the second century B.C. Briefly, his main question is this: How was the Italy of those days composed (through the linking of old and new cities with constructed roads) in order to create a unity? (Laurence 1999, cf. Andersson 2002.) This question leads Laurence on to interesting theories about and analyses of the relations between the city, the traveller, and the road, or the interaction between roads, cities and Italy itself. He introduces ways of reasoning that are also valid for our research: e.g., the concepts of "the mentality of space-time" or "the betweenness of space". In order to make concrete his thought we may consider the distance between Rome (the Forum Romanum) and Tibur as such a space-in-between. However, as claimed by Torsten Hägerstrand and temporal geography (Hägerstrand in Carlestam & Solbe 1991), time and distance are relative phenomena, i.e., the actual distance between Rome and Tibur could be lessened through the design of the road and the mode of travelling. Perspectives on urban landscapes from the disciplines of ethnogeography and temporal geography offer interesting methods, theories, and perspectives for our research. Questions concerning the cultivation of the landscape (as a means of extending – actually and mentally – the territory of Rome), means of shortening distances (artefacts, such as triumphal arches, hydrants, theatres and milestones and activities, such as the cultivation of land, field drainage, etc.), the creation of new nodes and spaces for human activities (in the landscape), such as: cemeteries, baths, quarries, large villas, aqueducts, road stations, temples, and grave monuments – taken as a whole, all these artefacts and spaces created a Roman identity. The modernizing processes of later cultural epochs have analogously developed the identity of Rome through the creation of new movements, spaces, and artefacts.

One classic problem in the fields of urban research and planning is the relationship between the local and the global, i.e., the city's entire spatial pattern, its configuration. In recent decades, various digitally based methods for making spatial syntax analyses have been able to contribute new analyses of the city's configurative properties to the morphological tradition (Hillier 1996, Azimzadeh 2003). In recent years, the method of syntax analysis has been applied also outside the fields of architectural and urban research, e.g., in archaeological research dealing with complex artefacts and milieus, such as the city of Pompeii, where two Swedish researchers have analysed public space with the aid of this method of analysis (Fridell & Weilguni 2003).

A Description of the Project

Theory

In this research project, the disciplines of Classical Archaeology and Ancient History and the Theory and History of Urban Construction will together form the core of a multi-disciplinary research milieu. Both subjects are concerned with man's relations to the environment (in the wide sense), with spatial dimensions and long time perspectives. The city of Rome has been constructed and reconstructed over thousands of years, which means it has a layered construction, like a palimpsest, i.e. parchments that have been written upon bearing the traces of not completely erased layers of previous texts. Remembering Sigmund Freud's allegorical use of Roman palimpsest to model the structure of the human mind, we can associate the urban form of Rome with the mind of an imagined extremely old person who has lived through every conceivable situation over a life span of three thousand years (Freud 1979). Rome bears the imprints of events that have formed the existence of the city through different periods in its history, and with different degrees of clarity they all display their pres-

ence in the existing urban form of the city.

Our intention is to analyse and interpret the city of Rome with surroundings as a palimpsest, hypothetically made up of six distinguishable, interrelated layers: [1] The landscapes of the Bronze and Iron Ages surrounding the Tiber, the mountains, and the sea; [2] Classical Rome (a period of ca. twelve centuries); [3] Medieval Rome (ca. ten centuries); [4] the Rome of the Renaissance and Baroque (ca. four centuries); [5] Modern Rome (after 1871, ca. one century); [6] Super-modern Rome (Il Grande Raccordo Anulare, ca. three decades). These different layers have interacted through the historical development of urbanism, and their existing elements in the urban landscape will be identified, studied, and described. The imprints of the various layers of time may occur in the spatial organization, in artefacts, or in "tenacious" physical, social and cultural structures. One hypothesis is that these structures have to a large extent determined the development of the urban landscape of cities and that also in modern times they continue to structure urban spaces and surroundings (Lanciani 1988, Muratorio et al 1963; Bjur 1987, 2003, 2005b; Bjur & Wetterberg 1990).

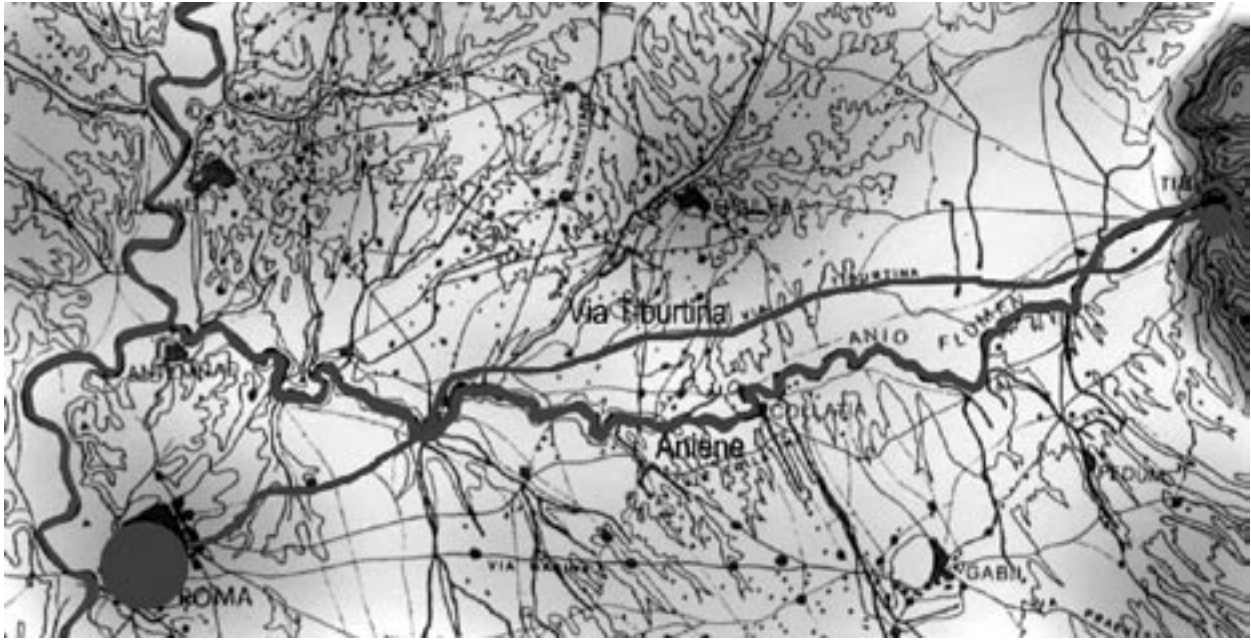
Movement is fundamental to the function and development of every city. The space of movement gives evidence of the external connections of urbanism, of the dependence upon and significance of a surrounding region, of the spaces of industry and micro-ecology, of the mutual relations between city and countryside. Rome and Tivoli – which constitute the connecting main nodes of the Via Tiburtina – represent larger and smaller cities and different urbanistic situations, which can be compared to each other. Traffic and transport determine the overall spatial configuration of the cities, and this in turn determines the spatial organization of the city districts. Thus it is they that give life to the city, as pointed out by Fernand Braudel in his research on the history of the Mediterranean world. Without roads and markets, no cities could exist (Braudel 1986, 1987, 1990; Horden & Purcell 2001; Laurence 1999). However, it is not the roads themselves that bring together the different parts of the city to form a unity (one city),

but the people making use of these spaces of movement. Therefore, research into these must be conducted primarily within the academic fields of the humanities and the social sciences, not the technical sciences. The roads can be studied as social, economic and political projects, and the research that is to highlight the interaction between urban development, movement, and human activity will necessarily be multi-disciplinary.

Rome has two different morphologies, one in the city centre and a completely different one in the spontaneously growing periphery. The new urban landscape is in many ways problematic: it lacks structure, legibility, and identity. In this project, one hypothesis that will be tested is that the reinforcement of overall historical structures can create new intelligible contexts and a new sustainable order in the long term (Bjur 2003, Gasparrini 2001, Marcelloni 2003, Lloyd Jones 2004). Research into morphology and the history of urban construction has shown that the formative ability of the urban infrastructures (e.g. rivers, roads, railways, parks) is incredibly strong. It is this very property that makes them interesting as starting-points for a planning of the new urban landscape. Since the urban space – with its relations to activities, social life, and culture – is in focus, available morphological methods and methods of spatial syntax analysis will be applied and critically discussed (Hillier 1996, Azimzadeh 2003a;b).

Method

The aim of the first stage of our research project is to develop an adequate multi-disciplinary empirical foundation for the subject matter as well as to test and develop interdisciplinary methods and theories. This is to be done in relation to a definite urban space in Rome: the Via Tiburtina. On this foundation, discourses concerning the discipline of urban landscape archaeology will be developed. Although for natural reasons these discourses will be rooted in the scientific field of each separate discipline, they will then converge into the focus of the



new shared discipline. The means to achieve this integration process are first of all regular seminars, colloquia, and workshops (one to three weeks each) linked to the project's objects of study: Rome, Tivoli, and the Via Tiburtina. We regard these planned regular activities in Rome as the project's interdisciplinary fora. These recurring planned meetings – where ideas, theories, and discourses founded in the scientific field of urbanism encounter those of archaeology, where contemporary interpretations of urban landscapes are united to historical perspectives, and where present-day social planning is brought into a dialogue with the humanities and social sciences – constitute the basic organizational form to achieve the scientific aim. The intention is for the first stage to yield two primary results – one scientific, and one practical. The scientific results will be presented in an interdisciplinary publication, most likely in the form of an anthology, with the title *Urban Landscape Archaeology*. The practical result will be the creation of a research network in the field, a Forum for Urban Landscape

Archaeology at the Swedish Institute in Rome, to which will be linked both national and international scientific and practical competence.

The long-term aim of our research project is to generalize the knowledge derived from the case study in Rome. In the second stage of the project, the emphasis will be on comparative studies of primarily European cities, where a structural similarity could be a selection criterion (historic landscape structure, origins in Antiquity, etc.). Through these comparative studies, the discipline of urban landscape archaeology is intended to be given a wider, more general determination. The developed theories may then be applied in new case studies in order to be tested and thereby further advance the discourse of the subject. To what extent the comparative studies could also include cities in e.g. Asia is to be determined in the final phases of the first stage. One other significant difference between the two stages is that the first is carried out mainly by senior researchers, while the second is intended to integrate several postgraduate projects to further the long-term development of the subject. According to our preliminary plans, the second stage will cover three years of research.

To the project will be linked a reference group, a small group of experts in the fields of: 1. ethnogeography (international experts); 2. contemporary Roman urban planning (from the local government administration, or so); and 3. a person from the Antiquarian Authorities of Rome and Lazio, who are responsible for the ancient monuments along the Via Tiburtina. The composition of the reference group serves both to cover the critical need for knowledge into the complex research problems and to contribute to a constructive discussion on the problems of interdisciplinary method. The reference group is to meet regularly in Rome together with the other participants in the project.

The Implementation of the Project

The research will be led by professors Barbro Santillo Frizell and Hans

Bjur. The research project is thus a co-operation between the academic disciplines of Classical Archaeology and Ancient History and Urban Design and Planning, and between the Swedish Institute in Rome, Uppsala University, Chalmers University of Technology, and the University of Gothenburg. Head of the project is professor Bjur. The Swedish Institute in Rome acts as host institution. Senior researchers from both disciplines with the relevant competence have already been tied to the project for the entire first stage. Further expertise will then be added when required, through temporary appointments. The main need for special knowledge is in the fields of e.g. ethnogeography (particularly specialized in temporal geography), landscape architecture, settlement history, and economic history – for an analysis of the urban landscape from many different aspects.

The project is made up of a synthetic project and six part studies, which have been identified and defined through the preliminary study. The part studies will be presented in more detail below. The synthetic project is intended to provide a frame and a direction for the part studies, and to allow content and knowledge to interact in the research process, as well as to develop interdisciplinary discourses as a guide to the continuing development of theory and method. One such discourse has already begun to be developed during the preliminary study (Bjur 2004b). One further essential task is to promote the practical applications of our research. The synthetic project will be carried out jointly by all the researchers in the project. Responsible for the scientific guidance will be professors Santillo Frizell and Bjur.

The part studies have both their own research problems and aims as well as common foci. One such focus is movement, in the wider sense. For example, the hypothesis in one of the studies – where the localization of Roman villas and their pattern of activity in the landscape is examined – is that it is the intensity of through traffic as well as the attractiveness and accessibility of spaces – rather than socio-economic factors, as commonly thought – that creates clusters in the landscape. However, the method of providing a foundation for the testing of this hypothesis makes use of both existing methods and

empirical knowledge about Roman villas. There are thus from the very start connections between the different part studies and hence also a potential for identifying new questions as well as answering them.

International Co-operation

The research and activities carried out at the Swedish Institute in Rome are, per definition, of an international character. Use will be made of networks within the humanities, the authorities in Rome and Italy, and organizations studying the built environment from various aspects. Contacts with the British School of Rome, especially the Tiber Valley Project (where a theme similar to ours is studied), are being developed. In the field of urbanism, professor Bjur has had a co-operation with professor Roger Trancik of Cornell University (and Cornell at Rome) for the last ten years, on the theme of "the city (of Rome) as a palimpsest". In his capacity as expert in the European Union's Working Group on Sustainable Urban Design, professor Bjur also has access to valuable information and competence in the contemporary European social construction process.

Preliminary Results

Our earlier research into both historical and modern social construction has led us to emphasize movement as a primary factor of development. This perspective has given rise to new concepts and methods which can be applied in both historical and contemporary analyses of the built environment, e.g.: internal vs. external moments; centrifugal vs. centripetal forces; nodes and passages (thoroughfares); boundaries and identity. In our preliminary study, we have begun our efforts to critically apply these concepts and methods to the urban landscape of Rome. The introduction of "urban landscape archaeology" as an adequate name for a multi-disciplinary field of research is a result of

our preliminary studies carried out between 2002 and 2004.

These preliminary studies have also shown that the north-eastern segment of Rome around the Via Tiburtina contains many interesting objects and situations. From Antiquity up until the present, the development has taken place around certain still existing boundaries, nodes and places. In his essay "From Transitorium to Tivoli" (cf. Bjur 2004b), professor Bjur has identified primary urban spaces and artefacts: Transitorium, Subura, Porta Esquilina, Porta Tiburtina, San Lorenzo Fuori le Mura, Campo Verano, Stazione Tiburtina, Pietralata, INA-Casa Tiburtina, Forte Tiburtina, Ponte Mammalo, Carcere di Rebibbia, San Basilo, Il Grande Raccordo Anulare, Santa Sinforosa, Acque Albule, the quarries (travertine and tuff), Ponte Lucano, the sanctuary of Hercules Victor, Tivoli, and up to Subiaco in the Apennines, where one finds the sources of Rome's aqueducts.

In several preliminary studies (Santillo Frizell 2002; 2003; 2004; 2005), professor Santillo Frizell has identified the spatial pattern of movement generated by the transhumance economy as a carrier of cultural meaning in a long-term perspective. She has been able to show how the activity influences the interaction between city and countryside and how it links the centre to the periphery on several distinct levels, from basic trade and industry to production, markets, and religious and ideological superstructures.

Based on the results from our preliminary studies, we have been able to identify a number of relevant part studies.

Significance

Apart from its purely scientific aims, this project also has practical goals of great importance, which serve to better understand and clarify a universal set of problems in our time (Bjur 2003, 2005b). Put simply, it is caused by a paradigm shift in the field of urban development, from the city centre as the dominant problem and focus, to the urban landscape and the wider region. It is evident that planners,

architects, archaeologists and others who stand in a professional relationship to the city – both scientifically and in practice – are faced with a new situation. The whole is transformed by the parts, and the ethical dimension emerges as particularly significant, i.e., the ability to view problems, solutions, and knowledge in their contexts and through time. With the city seen from this angle, the meeting between archaeology and urban planning has an interesting development potential. The meeting also encompasses a potential aesthetic dimension. If archaeology and other relevant aesthetic and humanistic sciences can help to make knowledge about the artefacts and the historical landscape available to the process of urban development, new possibilities of integrating it into physical planning and design are opened up. The built layers from different historical epochs could be made to interact in the (planned) urban landscape. For the people inhabiting the present-day urban landscape, the effect could be both a visual perception and a deeper emotional experience.

In Rome, a majority of the population live on the ground outside the Aurelian city wall, *Ager Romanus* (Bonamico et al 1968; Tomasetti 1979; Bartolotti 1988). Here there is thus an intense life of both work and leisure. Processes that carry meaning take place in the urban landscape. There are still a number of very old-fashioned traditional activities being carried out, including the keeping of livestock and some farming. It is still possible to see flocks of sheep, cows and horses grazing between the housing or activity areas of "super-modernity" (Bjur 1996; Augé 2000; Sudjic 1992; Zardini 1999; Boeri 1993). How can these activities be integrated into the process of modernization? Their existence touches on the one hand upon the previously mentioned ethical and aesthetic dimensions – they have a cultural and didactic value – but on the other, they are also of purely practical use by keeping the landscape open through grazing.

The Configuration of Urban Spaces

Interaction between layered spatial systems, generic function of movement and urban life

The aim of this study is to display the configurational properties of the urban system and its potential in forming different patterns of movement as bases for a diversity of urban activity, and, by adopting this approach to the process of formation and transformation of the complex spatial system of Rome, contribute to a deeper understanding of the meaning of historically generated urban layers. The intention is to support planning activities regarding both conservation and development of the historical urban fabric and its artefacts. Thus, the problem being addressed is the concealed effects of the physical transformation of cities over time. The aim is to uncover the characteristics and potentials of the evolving urban spatial structure of the city as a relational (configurational) system. The methodology is based on the concept of urban palimpsest, i.e., how urban layers from different epochs interact, and on the application of Space Syntax analysis, which will be applied to identify and analyse the historically created structural layers in the urban system east of the city, in order to discuss primarily the function of the Via Tiburtina.

The cities of Europe – and in particular the various professions involved in urban development – are faced with the task of influencing both physical objects, environments, and spatial structures in the entire city. We call this the configuration of urbanism, i.e., the composition and structure of the city, viewed as a system (Azimzadeh 1999; 2000; 2003b). In this study, the more precise question is this: What is the significance of the Via Tiburtina in the configuration of Rome? The physical construct of the city of Rome has undergone – and is still undergoing – a continuous process of transformation. The physical changes often result from both planned and unplanned interventions. The functional and social consequences of these changes, however, have not always been clearly foreseen. One reason is that the relation



Nain

The case of the bazaar of the city of Nain is an example showing the destructive impact of a planning attempt over historic places and artefacts in cities.

At the first stages of new urban development the bazaar (marked by the dark spots), constituting the spine of the urban system of the historic city was still well integrated in the global urban system and functioned as a well visited shopping centre.



At the later stages of urban development, the building of two streets and a square formed a thoroughfare parallel to the bazaar with a devastating effect on it. The bazaar lost its configurational position and became much less integrated in the urban system and not able to attract the movement from its surrounding areas. The new thoroughfare drained the main part of the energy of the natural movement within the body of the old city, which previously nourished the bazaar. The building of the parallel cross-cutting streets put an end to the life of the bazaar. This happened to the bazaar of Nain, although it was not touched directly by the spatial interventions carried out, and despite that it was maintained in fairly good order.



The picture shows the bazaar of Nain on a workday. Today, of 154 shops in the bazaar only 11 shops are still in business.

between the physical construct of cities and urban life lies not only at the level of the visible physical form of the city and specific urban activities, but has mainly to be analysed as a spatial structure, underlying the physical form. In the main, cities and urban life are related to each other on the one hand through these hidden configurational systems, and on the other through generic functions like movement and encounters, which are generated by these structures (Azimzadeh 2003b, Hillier 1996).

The concept of palimpsest, which displays the formal diversities with references to different periods of historical development, is an aid to the understanding of the layered construction of the city of Rome. But the concealed aspects of the urban palimpsest, where it is most involved in the evolving urban life, are concerned with the configurational properties of the emergent layers in the spatial system of the city. The application of the Space Syntax method will help to clarify the mechanism of interaction between these layers in the context of the global urban spatial system. The method also has the capacity to uncover the relation between these interacting layers and the evolving urban activities, and thus movement as a generic function of urban spatial configurations (Azimzadeh 2003a; 2003b).

The analytic process of Space Syntax aims to convert our tacit understanding of urban spatial systems to explicit knowledge. It can be described as a move from the observable feature of the built form of cities to the abstract spatial structure underlying the physical forms, and a return to the observable world through representing and modelling the spatial systems and describing their properties by quantifiable measures. These (syntactic) measures in the analysis of an urban spatial system display the configurational property of the system. For example, a relation between two urban spaces which appears to stay the same, can actually manifest itself as configurationally different due to the fact that these spaces are embedded in different relational contexts. When one part of the configuration changes – whether it is an element or a relation – the whole (the global system) may change. Our earlier studies show, e.g., that the fact that the public space of suburbs



Yazd

The distribution of shops and workshops in the city of Yazd indicating the pattern of movement throughout the city. This pattern, which supports the historical bazaar to remain an active shopping centre alongside the emergent street shops, is generated by syntactic (configurational) properties of the street network of the city in the long course of urban transformation.

functions more or less well in people's daily lives, is due more to how they have been fitted into the overall spatial patterns of the city than to local properties and improvements in the environment (Azimzadeh 2003b; Klasander 2003). The planning task is thus to create a high degree of legibility locally and above all an integration into the global structure of the city.

A universal examined property of the urban spatial system – or the urban grid – is its essential function in generating patterns of movement, which are dependent upon its configurational specificity. That is, depending on how it becomes configured, the urban grid facilitates patterns of movement, and consequently patterns of encounter and co-presence, which represent cultural characteristics of the urban society (Hillier 2001). Thus, an increased knowledge in the field of urban configurations in planning could support the development of the urban culture. The generic function of movement is the basic link between urban spatial systems and urban life, i.e. activity. And new patterns of activity involve new demands on co-presence (as a consequence of movement).

Mir Azimzadeh and Hans Bjur

Inside or outside? The relationship between the sanctuary of St. Laurentius and Rome

The aim is to study how the movements of pilgrims to the tomb of the Roman martyr St. Laurentius on the Via Tiburtina have been reflected in texts and maps, architecture and archaeology from the Porta Tiburtina to the church of San Lorenzo fuori le Mura, and how this movement has articulated the relationship between *Urbs* and *Suburbium* in different ways in various periods throughout history. Was the sanctuary in Rome or outside the city?

Common handbook knowledge already gives part of the answer. Laurentius was one of the most venerated martyrs in Late Antique Rome, together with the apostles Peter and Paul and the young girl Agnes. This deacon of the Roman church was buried on the Via Tiburtina in 258 A.D., before the construction of the Aurelian city walls in the 270s. *Urbs*, the city of Rome, and the surrounding *Suburbium* were divided by the Republican City walls further south west, where the Via Tiburtina left the city through the Porta Esquilina. The area along the roads outside the city wall was used for burials, and in line with this tradition Laurentius was buried in a Christian cemetery along the road. After the construction of the Aurelian walls the city came closer, but these tombs were still in the *Suburbium*. The name of the area itself, *Exquiliae*, probably means “those who live outside.”

Burials were allowed only outside the city walls, so in a certain sense the Aurelian wall divided the city of the living from that of the dead. But the situation is more complex and nuanced than that. In fact, burials had been made outside the inner, Republican city wall before the outer, Late Antique wall was built. The area immediately outside the Aurelian city walls became part of the city in a new way when the emperor Constantine in the early fourth century decided to build a huge Christian basilica close to the tomb of Laurentius because of the frequent pilgrimages to the tomb of the famous martyr.

The area inside the Aurelian walls, from the Porta Tiburtina to the



The area from the Porta Tiburtina to the sanctuary of Laurentius (T. S. Laurentii) on the map of Bufalini (1551)

Porta Maggiore and further south, was full of luxurious residences. Close to the Porta Tiburtina, imposing remains of a decagonal domed fourth century building, conventionally known as “*Tempio di Minerva Medica*”, are often identified as a nymphaeum of the *Horti Liciniani*, but recently it has been argued that it probably is a part of Constantine’s imperial residence, the *Sessorium* or *Palatium Sessorianum*, further north than was former believed (Guidobaldi 1998 & 2004, 42-44). This probable presence of the imperial family (Constantine himself left Rome definitely in 326) close to the Porta Tiburtina must be kept in mind to correctly understand the construction of a huge basilica by

Constantine close to the tomb of the martyr Laurentius outside the Porta Tiburtina.

The study will try to understand how the movement of pilgrims to the tomb of Laurentius was reflected by different kinds of evidence. Architecture and archaeology are particularly important, and this study will be able to take advantage of new research made in recent years in these disciplines. The tomb of Laurentius, the surrounding catacomb and sanctuary and the roads of the area have been studied in the last ten years by Simonetta Serra (Serra 1994, 1998, 2000a, 2000b, 2003& 2004). The *Suburbium* of Rome is the object of new scholarly interest, witnessed by the volumes dedicated to the Suburbium of the *Lexicon topographicum urbis Romae* and of a series of conferences on the *Suburbium*, of which only the first, that on the Late Antique *Suburbium* of Rome, has been published (Pergola, Santangeli Valenzani & Volpe 2003).

The tomb of Laurentius was one of those most visited by Late Antique pilgrims, and after the end of the persecutions against the Christians. The arrangements made for visitors to his tomb from the fourth century and the basilicas built in the fourth, sixth and 12th centuries (Krautheimer 1950 & 1962) witness how this place outside the city walls had been included among the sights to visit in the Eternal City. Special attention will be given to the problematic identification of the U-shaped basilica, one of the largest Early Christian basilicas in Rome. According to Richard Krautheimer and most modern scholars it was built by the Emperor Constantine, but Herman Geertman (1976) attributes it to Pope Sixtus III (432-440).

Other interesting evidence can be seen in the early medieval pilgrim guides, the *itineraria* (published in Valentini & Zucchetti 1942). Most famous and important of them all is the oldest, the *Notitia ecclesiarum* from the seventh century. It is a list of monuments and sights which the early medieval visitor to Rome was supposed to visit. These lists show that Christian pilgrims cared little for the monuments in the centre of the city and only visited the sanctuaries of the martyrs outside the walls. In this process, beginning with the monumental



San Lorenzo fuori le mura on the Veduta delle sette chiese di Roma di Lafréry (1575).

constructions of the Emperor Constantine, the suburbium became an important part of the cityscape of Rome. These documents show how important these sanctuaries had become for the image of Rome. This process is also witnessed by the fact that most city gates were named after the most famous important martyr buried outside: the Porta Tiburtina became the Porta Sancti Laurentii.

Also maps of Rome, published by Frutaz (1962), show that the sanctuary of Laurentius belonged to the city of Rome in some periods but in others it did not. The even more intense pilgrimages to the tomb of St. Peter led to the construction of a wall around the Vatican, making that area a part of the city. San Lorenzo, however, remained

outside. But the earliest maps of Rome in the 14th century show an awareness of the presence of important sanctuaries outside the walls such as San Paolo, Sant'Agnese, San Sebastiano and San Lorenzo. Maps from the 15th and 16th centuries usually also show these churches outside the walls.

But after the detailed map by Bufalini (1551), all interest in the sanctuaries of the martyrs seems to get lost quickly. New 16th century pilgrimages to the seven churches, encouraged by St. Filippo Neri, is reflected in the *veduta delle sette chiese di Roma* by Antonio Lafréry (1575), which shows an empty area outside the city wall, and separate vedutas of the seven churches inside and outside the walls in exaggerated size. This important veduta may be the first realistic representation of the sanctuary of San Lorenzo. But the fortune of San Lorenzo was waning; in the detailed map from 1557 by Stefano Du Pérac, edited by Antonio Lafréry, the fields, the vineyards and the Via Tiburtina end before S. Lorenzo. The map of Francesco de Paoli (1623) may be the last to show San Lorenzo on a map which intends to show Rome, and not its “dintorni”, its surroundings. In the 18th and 19th centuries, the tendency is to leave the space outside the walls blank on the maps.

More recent maps show that the area again becomes part of Rome in the 19th century, with the construction of the new Verano cemetery, the railway station, and new areas on both sides of the Via Tiburtina. But this time, the tomb of St. Laurentius had little to do with the process.

Olof Brandt

Sheep, shrine, sulphur

Via Tiburtina and the urban pastoral landscape

The aim of this study is to understand the movements on Via Tiburtina as part of an organized economic system of animal breeding, so called transhumance, i.e. changing pastures. In antiquity, large flocks of sheep were driven seasonally over large distances along particular roads to reach new pasture. Many of these roads had been used over millennia, crossing geographical and tribal boundaries (Pasquinucci 1979; Corbier 1991; Frizell Santillo 2002, 2004, 2005). These drove-roads are projected according to an inherent logic, based on decisions which evaluate certain features in the landscape, such as fords where to cross the river, supply of water, access to pasture. These choices, mainly based on economic requirements, have greatly influenced the socio-political development and ideological attitudes, reflected in visible structures like markets and sanctuaries.

Tivoli, ancient Tibur, was situated near a prehistoric cattle-trail, later known as Tiburtina-Valeria, which lead from the surroundings of Rome to the interior Apennine highlands, today known as Abruzzo. The primary economic outcome was the production of wool, but in addition there was an almost endless list of specialized products which derived from this livestock. The main focus of my study will be on the space which connect the cattle-markets in the center and periphery of Rome with Tivoli and the inland beyond.

Via Tiburtina constitutes an important element in the urban pastoral landscape and should be considered as such in the cultural heritage management. Since the needs and requirements of the pastoral economy have deeply affected the development of the road in a very long term perspective, it has a great educational potential as a protected monument. It deserves more attention for its preservation, which could be done by creating an ecological restoration project, that includes both buildings and structures of interest, and grazing animals with the double purpose of using them as ecological lawn mowers and

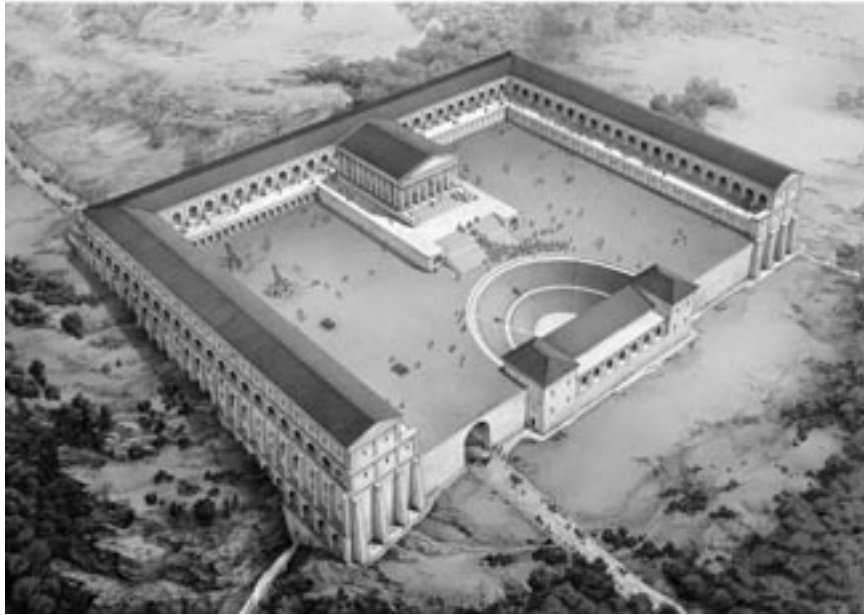


Fig.1. The sanctuary of Hercules Victor at Tivoli. To the left, the Via Tecta through which the Via Tiburtina passed can be seen. In this part of the portico the great market halls were situated and in Medieval times a chapel, dedicated to S. Maria del Passo, was constructed in the halls. Reconstruction by Inklink Firenze.

living elements in a open air museum. It can be used as an instructive example of the living conditions of earlier epochs and thus develop a richer everyday environment.

Grazing sheep are being used more and more in Sweden in the keeping monumental areas free from high grass, and in Italy interesting efforts towards ecological protection of the environment have been made recently. In Treviso, the head of the region has installed donkeys to keep the street free from grass, and at the archaeological site of Herculaneum, falcons are being used to keep pigeons away.

Tivoli developed at a natural geographical border between mountain and plain, on a high outcrop dominating the valley of the river Aniene, the ancient Anio. Ethnically this was the border which divided

the Sabellic area from the Latin, and consequently the place held great strategic and economic importance. Due to favourable climatic and geographic conditions, specialized pastoralism had a strong economic importance in this territory. The coastal plains, which were marshy and plagued with malaria and thus little exploited for agriculture, constituted significant reserves in animal breeding and saltworks, of multiple usefulness since salt is also an extremely important product in animal husbandry. The early history of Rome was closely associated with the control of the salt production at the mouth of the Tiber and its distribution inland. Marshes and wetlands constituted the coastal landscape of Rome to the north and south of the Tiber from earliest times until the gigantic reclamation projects during the Fascist era in the 1920. These transformed the Tuscan Maremma and the Pontine Marshes into agricultural land (Traina 1988; Purcell 1996, 180-212; Horden & Purcell 2001, 186-190; Pratesi 2001, 139-159).

In antiquity, in the area of Central Italy, sacred places and shrines in connection with springs were often dedicated to Hercules. Lately it has been possible to establish a correlation of many of these to the ancient transhumance routes (Van Wouterghem 1992, 319-337). The town Alba Fucens, which was situated on such a route, had an important cattle market, with a shrine dedicated to Hercules right in the centre of the town (Lauter 1971, 55-62). A great sanctuary to Hercules Victor was built at Tivoli in late Republican times and archaeological evidence indicates that the area around the sanctuary was a resting place for migrating shepherds, as well as a cattle market. These functions had however remote origins, certainly prior to the late Republican sanctuary. Archaeological material testify presence as far back as the Middle and Late Bronze Age (Mari 1983, 295).

An important topographical feature is the ford crossing the river Aniene in the locality Acquoria. Before a stone bridge was built, part of which still stands in situ, this was the ford where the shepherds conducted the flocks to cross the river. During work on the electricity plant in the 1920 a votive deposit with archaeological material dating from the 8th to the 2nd century and a base for a votive statue with a



Fig. 2. The Aquae Albulae, the sulphurous lakes on the Via Tiburtina. In the background modern Tivoli, to the left of it is the sanctuary of Hercules Victor. Behind Tivoli, the Monti Tiburtini, through which the Tiburtina-Valeria passed on its way to the Appenine mountains. Photo B.S. Frizell

inscription dated the middle of the 6th century was found (Reggiani 1998, 13). The arcaic inscription is difficult to understand. It has been suggested that it was dedicated to Hercules (Coarelli 1987, 99). The finds indicate that there was a shrine or a temple closed to the bridge where the shepherds and other travellers could evoke protection, a feature which also occurs at the bridge of the Etruscan site, S. Giovenale (Backe-Forsberg 2005).

The great sanctuary dedicated to Hercules was a huge temple complex of Hellenistic inspiration with a portico, temple, theatre and market halls, similar to those in Palestrina and Terracina (Coarelli, 1984).

A unique feature is the covered road, Via Tecta, over the Via Tiburtina, which was incorporated into the market halls and flanked by

shops (Fig.1). Through this road the herdsmen conducted their flocks. The hero and god Hercules was protector of herds, both cattle and sheep, and his protection was invoked by shepherds; but he was also the god of markets. The presence of Hercules in pastoral contexts reflect an economic situation of capital investments and markets, the organized and civilized side of pastoral life.

It seems that, while the sanctuary collapsed in Late Antiquity, the transhumance economy lived on but probably on a reduced scale, and the Via Tecta continued to be used. This is a problem since the sources regarding Late Antiquity are fragmentary, scattered and poorly investigated. That the Via Tecta was still in use in the Middle Age is confirmed by a chapel built into the market halls. The chapel is dedicated to S. Maria del Passo, which is a typical transhumance name, and it dates probably to the 12th century. In a written document from 1363 the pass at Tivoli is indicated as an obligatory stop for tax collecting (Quilici 1984, 159). This organization of the transhumance economy is probably a result of the reintegration of the system which had been carried out almost a century earlier by the Papal State. It was called Dogana dei Pascoli del Patrimonio di S. Pietro in Tuscia (1289) and covered the area south and north of Rome using the Campagna Romana and the Maremma for winter pasture and the Appenines of Abruzzi, Umbria and Marche for summer grazing. It was founded in late Medieval period and reorganized during the 15th century (Vigueur 1981). A regular transhumance continued until the 1950s when flocks of sheep still passed Rome in the autumn on their way towards winter pasture in the Roman Campagna. The rapid urbanization in the 60s made it very difficult to continue using the periphery of Rome for pasture and the animals were transported by trucks to other places.

In the Barrington Atlas the Via Tiburtina goes north of the Aniene all the way to Rome, only crossing the river at two points with Ponte Lucano (close to Villa Hadriani) and Ponte Mammolo, outside Rome. It does not pass the bridge of Acquoria, a feature which can be seen on later maps, such as the map of Cabral and Del Re (1779) and Desjardins (1854). On their maps, the road makes a deviation, passing

through the area of the sulphurous lakes, *Aquae Albulae*, “the white waters”. This is a highly interesting feature to investigate in association with the transhumance economy, a correlation which has not been observed earlier. *Aquae Albulae* were famous for their therapeutic qualities in antiquity and were marked out on the world map of Late Antiquity, The *Tabula Peutingeriana*. References in literary sources from ancient and later periods indicate that these waters were commonly used for curing muscular and rheumatic illnesses and other diseases (Strabo, *Geography* 5.3.11) and Augustus is said to have cured his rheumatism with baths from these waters (Suetonius, Aug. 82). Two of the ancient lakes can still be seen, their modern names are Lago della Regina and Lago delle Colonnelle. The so called baths of Agrippa are however later and belong to the period of Hadrian (Mari 1983, 295-296). There is no archaeological evidence of a thermal building from the Augustan period and if Augustus took his baths here, he must have done it directly in the lakes or in some wooden device.

Is there any evidence that these waters were used also for animals? In fact, there is and I have argued in favour of this hypothesis elsewhere. Treatments of the animals with sulphur for various purposes was frequently mentioned by the ancient writers. It was used for curing diseases, such as scab, which was a constant threat to the sheep-farmers – the mineral waters were also important for washing the fleece before bringing the sheep to the market and before shearing them in order to get rid of insects.

A crucial find to support my hypothesis is a votive stele with an inscription regarding a horse, named Samis, being cured by treatment in sulphurous waters which was found in 1733 near the *Aquae Albulae* (*CIL* XIV 3911). The horse was not suffering from scab or other skin diseases but wounded by a boars’ tusk in Roselle. After being cured in the waters, Samis was healed and could start to run again. From the inscription it is clear that medical treatment in sulphurous waters was practised in Roman veterinary medicine. One would assume that if you bring a horse all the way from Roselle to Tivoli, which is more than 200 kilometres, the waters must have had a good reputation for

veterinary treatment. The unique inscription regarding the horse Samis from Tivoli is significant and helps to understand the role of the area in the transhumance economy. The waters at Aquae Albulae were evidently sacred since the nymph Lymfa dwelled in them and a temple was dedicated to her there (Frizell Santillo, 2004). On the map of Cabral and Del Re (1779), there was also a shrine to Faunus, situated close to the lake (Mari 1983, 17). The god Faunus was the protector of the flocks and his presence indicates the occurrence of sheep and goats. This should indicate that sheep and goats also were washed and dipped in these lakes, not surprisingly given the importance of Tivoli as a cattle market and resting place for flocks and herdsmen. The deviation of Via Tiburtina should be understood in the light of the importance of the therapeutic qualities of the sulphurous lakes.

Barbro Santillo Frizell

Movement on the Edge

Interventions in the Urban Landscape

The aim of this study is to develop theories and methods for an analysis of the urban landscape, in the interface between urbanism, architecture, landscape architecture, cultural geography, archaeology, and the humanities in general. It is carried out as a comparative study of the cities of Rome and Gothenburg, concentrating on the areas around the Via Tiburtina (Rome) and the parallel E6 and RV45 roads between the city of Gothenburg and the town of Kungälv in western Sweden. The study draws on previous research – on the Gothenburg case (Hellerström 2004) and on urban peripheries (Bjur 1995; 2000; 2003; 2005).

One purpose of this study is to analyse and interpret the maps of Rome and Gothenburg – with surroundings – as two different palimpsests, taking movement as a primary point of departure. The imprints of the layers of time can be found in the spatial organisation and in the artefacts, as well as in long-lived physical, social and cultural structures. One hypothesis is that these structures have to a large extent determined the development of the urban landscape of the two cities, and that they have continued to structure city space and surroundings even up until recent times. Rome, like Gothenburg, has two different morphologies, one in the city centre, and another in the spontaneously growing periphery. The latter, a vague transition zone, is neither city nor countryside. This new urban landscape is problematic in many ways. It lacks structure, legibility, and identity (Boeri et al. 1993; Marcelloni 2003; Sieverts 2001; Sudjic 1992; Zardini 1999). Our hypothesis is that defining and strengthening historical structures and borders could be strategic acts of urban planning that would help to create intelligible contexts and develop identity in vague cityscapes, such as the Via Tiburtina area of Rome or the northern Gothenburg area. That calls for a development of methods.

Methodologically, the areas are studied in three distinct ways (in order to obtain information not generated by only one of the three methods on its own):

- Orthogonal, two-dimensional studies, i.e., with the use of maps.
- The perception of the landscape in motion. Field studies and the construction of sequences of vertical panoramas.
- The perception of space and borders related to specific locations. Based on observations on location.

These three approaches generate different representations of the urban landscape and its structure, which can be integrated and jointly observed in a model-based approach that may then be applied to other similar urban situations.

The landscape itself acts as a structurizing and shaping factor in the formation of societies. To a large extent, the geological and hydrological conditions determine the ecological systems, which in turn provide the conditions for vegetation, cultivation, and human activities. Rivers – such as the Tiber, with its tributary the Aniene, in Rome, or the Göta River, with the tributaries Säveån, Lärjeån, and Mölndalsån, in Gothenburg – have shaped the historical landscape. They remain as structuring elements in the modern cityscape. Major artefacts have the same capacity to generate and moderate city development. For example, the Aurelian Wall in Rome has had such a shaping, strategic role. As a distinctive boundary, it has long separated the "inside" from the "outside" – physically, economically, administratively, and mentally. To a large extent, it still does so. In Gothenburg, the walls and the moat have had a corresponding function of determining "centrality". Up to this day, the preserved moat has retained this function. Other elements with the same importance for present city forms are aqueducts, roads, railroads and structures related to land use, as well as places and artefacts of cultural importance. Some of these contribute meaning and identity, while others work simply as catalysts in a constant transformation of landscapes into urbanized environments.

On the basis of geological, hydrological, and topographical data, a



Vertical panorama of the urban landscape along the E6-road north of Gothenburg.

number of conclusions can be drawn. Hillsides act as natural boundaries, defining spatial perception. Influencing the creation of territorial boundaries, they also form the basic conditions for ecological systems. These conditions have in turn been altered by human activity, and various niches – with functions such as winegrowing, grazing, quarries and fields – have been formed. When information on movements, traces, land-use, artefacts and urbanization from different time periods is synthesized with the various existing conditions, multi-layered maps can be drawn up, from which various conclusions on the permanence of structures – as well their function – can be drawn. This, in turn, leads to the locating of spaces and artefacts of general importance.

In the analysis of a structure based on movement, the aspect of velocity is crucial. Space-time analyses make possible a discussion of the perception and construction of historic as well as contemporary and



future urban landscapes. Thus, the aspect of movement brings both new perspectives and the possibility of taking action through city planning and design. For instance, a conscious creation of "inertia" – as a counterforce to the increasing velocity and inconstancy of modern life – through the establishing of connections – visually and functionally – to places and spaces in the urban landscape, could be promoted in the processes of planning and design. Thus, the ability to identify and understand relationships between artefacts and spatial expressions of human activities in urban landscapes over time is crucial; and this is the reason why this study is heavily dependent upon the outcome of other studies in this overall project.

Along the Via Tiburtina, as well as in the area of investigation north of Gothenburg, all the various forms of modern city traffic are found: buses, trams, subways, cars, bikes, and pedestrians. How a certain area is perceived depends to a large extent on the velocity at



Map showing one key situation along the Via Tiburtina, the Ponte Mammolo area. The river Aniene meets the Via Tiburtina, the underground station meets the first station for the suburban train, as well as the soon to come High-velocity trains.

which it is crossed. Here a study of various theories of the effects of increasing speed and its resulting immobility (cf. e.g. Virilio 1996) will be undertaken. From a planner's perspective there is an indication that an increasing share of our spatial surroundings is perceived only at either large velocities or at rest. The sequences of vertical panoramas, which result from movement, require distinction. As noted by Lynch and Appleyard (1964), borders need to be defined and key identity-creating elements must be found, etc. These analyses also give rise to the question of a need for retardation, or the insertion of connections or

variations that help to define spaces even in motion.

Complementing these vertical views, there will be analyses of key spaces. A "space" may be defined as a perception of boundaries – a changeable notion. It is dependent upon people's relationship to it. The notion of identity, and the relation to urban spaces, could produce a complementing "emotional map", adding less tangible structures to the model.

Kristina Hellerström and Hans Bjur

Chasing villas.

Transformation, survival and preservation of Roman villas along the Via Tiburtina

The aim of this study is twofold: by generating a settlement pattern of Roman villas along the Via Tiburtina and by confronting the data through different phases, I hope to reach conclusions both on the ebb and flow of building activity in the ancient rural landscape, and the possible bearings of the ancient remains for the modern urban landscape as well. As for the Roman period, I hope to clarify what role the Via Tiburtina per se, together with its subsidiary roads and junctions, might have played in this process. One hypothesis is that the organization, utilisation and maintenance of the landscape along the road might seek its explanation from a clustering process dependent on the level of through traffic and “attraction of place”, rather than traditionally assumed socio-economic factors such as intensification of rural production or investments of the elite.

In order to test the hypothesis, Geographical Information System (GIS) will be used to generate a settlement distribution map of Roman villas along the Via Tiburtina from Rome to Tivoli. As the settlement typology and chronology in the area has been relatively well studied through cartographic studies, survey and excavation (Calci & Mari 2003), the investigation will be carried out on a general level in order to give a synthesis of the data. By taking settlement type, size, and access to the road as well as other factors into consideration, and by arranging this data in superimposed chronological layers, the collected data will allow for an analysis and comparison between different levels. As an integrated part of this working process, decisions on what criteria should be used to assign different types of villas, and whether survey results can chart settlement change over time at all, should lead to assessments of the relevance of the methodology itself.

There will be three levels of investigation. The first comprises the Roman period (c. 2nd cent. BC –5th cent. AD) with subdivided

archaeological/historical phases, so that the growth and disappearance of villa sites may be traced over space and time. The question how long the villas remained a defining feature of the landscape along the Via Tiburtina will be discussed in conclusion.

On a second level, the “modern” stratum of the Via Tiburtina palimpsest will be examined, i.e. the state of preservation of ancient villa sites by the late 19th and early 20th centuries. Issues on what structures were worthy of preservation or scholarly attention, and to what extent the remains may have given topographical resonances in the present urban landscape, will be touched upon.

On a third and last level, the condition of the sites in the “super-modern” present will be related for. By examining and estimating the state of preservation and accessibility of a select number of sites under study, questions on maintenance and cultural heritage in general will be discussed. This part of the study can serve as a mirror to the situation recorded some 80 years ago (Ashby 1927).

Since the Roman villa was one of the most conspicuous landmarks in the Roman landscape and belongs to a category of relatively easily distinguishable archaeological remains, it is well suited for a diachronical study. Whereas the bulk of villa studies traditionally has laid emphasis on purely architectural or art historic topics, the last decades have witnessed an increased interest in the spatial pattern of villa sites in larger regions (Small & Buck 1994; Brogiolo 1995; Cremona 1998; Volpe 2000). Researchers from different disciplines address questions such as the villa’s role in shaping the physical and mental landscape of the ancient population (Frizell & Klynne 2005), or the causes behind social and economic change over long time periods (Aoygai & Steingraber 1999; Accardo 2000; Ripoll & Arce 2000; Sfameni 2004). At the same time fundamental issues on the origin, development and end of the ancient villa continue to generate new studies, e.g. when trying to distinguish how the meta narratives of classical authors and contemporary research as regards the “Catonian”, “Varronian” and “latifundium” type of villa tend to distort our understanding of the past (Terrenato 2001). Another trend is the recent interest on the suburbium

of Rome, with research trying to clarify the changing relationships between town and hinterland (Coarelli 1986; Patterson 2005; Pergola, Santangeli Valenzani & Volpe 2003). Finally, in another context, the expansion of modern Rome and the urgent need to deal with questions on the cultural heritage management keeps generating a steady stream of reports.

Accordingly, a multi-period study of a settlement type from a rural to an urban environment, in an area currently facing vast urbanistic transformation, will hopefully lead to inferences with implications for both the ancient period and the future development of the sector, where past and present hopefully is allowed to interact more fully.

Allan Klynne

Rituals on the Road

Two highways at Rome and Ravenna AD 400-750

This study will analyse rituals on the Via Tiburtina, and their impact on the bid for power in late antique Rome. The focus will be on the interaction of human activity with physical and mental structures, taking into consideration ritual, ideology, symbols, boundaries and monuments along the road. The late antique hinterland of Rome merits a closer study, since this was a period of fundamental change which also deeply affected highway activity. The study hopes to answer questions such as how the road, buildings and human activity were conceived and perceived in the power game, towards which audience the monuments and rituals were directed, and how they were looked upon by contemporaries (Moore & Myerhoff 1977; Kertzer 1988; Cosgrove & Daniels 1988; Dovey 1999; Ellis & Kidner 2004).

To put the study of the late antique Via Tiburtina in a wider perspective, a comparison with one road in Ravenna in the same period will also be undertaken. Ravenna was chosen because it represents the other seat of imperial might in Italy at the time. Moreover, it allows interesting comparisons between developments around Rome and in the north of Italy (Rapoport 1993; Wharton 1995; Clark & Lepetit 1996; Malmberg 2003 & forthcoming).

Rome was still among the most important political and religious centres in the Mediterranean in the later part of late antiquity (c. AD 400-750). The city had become a renewed imperial seat in the early and middle part of the fifth century. Through the special status of its bishop it was the outstanding Christian centre of the West, and its strategic importance was clearly shown in the drawn-out struggle between Goths and Byzantines for the Italian peninsula in the middle of the sixth century. The devastation of war was followed by military stalemate between Byzantines and Lombards in the last century and half of the studied period. This probably had negative consequences



*Porta Tiburtina in the 18th century (from Giuseppe Vasi, *Sulle magnificenze di Roma antica e moderna*, vol. 1, *Le porte e le mura di Roma*, Rome 1747, plate 6)*

for rural areas around Rome, which under those conditions of siege could not recover. But it also allowed the city's bishop to carve out a political niche which brought Rome to new prosperity in the centuries to follow (Marazzi 1998).

From a traditional perspective, the gap between city and country widened in late antiquity and the early middle ages, because of the depopulation of the hinterland and the construction of city walls. New results largely contradict this picture. The hinterland seems still to have thrived in the fourth and fifth centuries, and in some places even boomed, while the city boundaries in some aspects became less distinct, through the ruralisation of many cities, and the lifting of the burial ban within the walls (Christie 1996 & 2004).

The city of Rome underwent fundamental changes in late antiquity. Old forms of urban life centred on Forum and Circus gave way to defensive works, processions and pilgrim routes (Brogiolo & Ward-



People on the road in the early 6th century (from P. Richter, Wien Genesis, Vienna 1895.)

Perkins 1998; Marazzi 2001). In a way it was a decentralisation of power, where political and religious activity moved from the centre to the periphery of the city (Krautheimer 1983). This took monumental form in the building of major churches and covered cemeteries along all the major highways into the city, outside the city walls. The seat of the high priest was no longer at the Regia, at the heart of the city, but at the Lateran, at its fringes. Likewise, imperial dwellings were situated close to the city walls, like the Sessorian and Licinian palaces between Via Tiburtina and Via Praenestina, or the Pincian palace not far from Porta Flaminia (Guidobaldi 1998 & 2004; Cima 1998). In a way, this was the monumentalization of suburbia.

The road between city and countryside provides the focus of the Via Tiburtina Project. As the city, the road too was transformed in many ways in late antiquity. A sign of the times, the last imperial milestones along the Via Tiburtina, erected at the beginning of the fifth century, were replaced in centuries to come by pilgrims' itineraries. The evocative symbol of imperial power linking the empire had been supplanted by a geographically narrower itinerary of holy suburban loci. But spiritually it was world-embracing, bringing visitors from the

whole of Christendom (Serra 1998; Spera 2003).

However, it is also worth stressing its continuity. The Via Tiburtina kept its importance during late antiquity. In many cases, Christian practices may only have replaced earlier Pagan ones. Everyday business may not have been affected much, and traffic continued between Rome and Tibur much as it always had (Calci & Mari 2003).

In Ravenna, the Via Caesaris was chosen. It was the main highway through eastern Ravenna, went past the imperial palace and the suburbs of Caesarea and Classe until it reached the foothills of the Apennines near Cesena (Novara 2000; In Agro Decimano 2000).

Both roads passed by important monuments and churches, palaces, aqueducts and suburbs. There were also several boundaries interacting with the roads: they passed the pomerium (an important religious and legal boundary), multiple city walls (gradual extension of the cities), rivers (marking the end of the cities' territories), until finally reaching the mountains.

The study hopes to place the Via Tiburtina in a wider perspective of change in the late antique city and hinterland, and to provide models for comparing road activity across time and place.

Simon Malmberg

Bibliography

- Accardo, S. (2002): *Villae Romanae nell'ager Bruttius. Il paesaggio rurale calabrese durante il dominio romano.*
- Andersson, H. (2002): "Centre – Periphery, World Systems, and Medieval Archeology", i Helmig G., Scholkmann B. & Untermann M. (2002): *Centre. Region. Periphery. Medieval Europe*, vol. 1.
- Aoygai, M. & Steingräber, S. [eds.] (1999): *Le ville romane dell'Italia e del Mediterraneo antico: Academic meeting at the University of Tokyo, November 13-15th, 1996.*
- Appleyard, D. & Lynch, K. (1964): *The View from the Road*, MIT Press.
- Ashby, T. (1927): *The Roman Campagna in Classical Times*, reprint London 1970.
- Augé, M. (1995): *Non-places. Introduction to an anthropology of supermodernity.*
- Azimzadeh, M. (1999a): "Urban Society –a Configurational Reality" in Ola Wetterberg [ed.] *Det nya stadslandskapet*, Stadsbyggnad, Chalmers.
- Azimzadeh, M. (1999b): *Society –a spatial configuration*, Dept of Urban Design & Planning, Chalmers, Göteborg 1999 (Thesis for the degree of Licentiate of Architecture).
- Azimzadeh, M. (2000a): "Analytic Methods – to re-examine the concept of space", in *Nordic Journal of Architectural Research* Vol.13, No 1-2 (with Klarqvist B.).
- Azimzadeh, M. (2000b): "Metamorphosis of Cities", in *9th International Planning History Conference, proceedings.*
- Azimzadeh, M. (2003a): "Survival of Bazaars, Global spatial impact and local self-organizing processes", in *Space Syntax 4th International Symposium, proceedings* (available at: www.spacesyntax.net/SSS4.htm).
- Azimzadeh, M. (2003b): *Evolving Urban Culture in Transforming Cities, Architectural and urban design in a fluid context*, Chalmers University of Technology, Göteborg (Diss.), (available at: www.arch.chalmers.se/tema/stadsbyggnad/download/mir2003.pdf).
- Bartolotti, L. (1988): *Roma Fuori le Mura*, Laterza.
- Bellincini, L. & Ingersoll, R. (2001): *Periferia italiana.*

- Bjur, H. (1996a): "Periferins gestalt," in *Arkitektur* 1996 [with Bertil Malmström].
- Bjur, H. (1996b): "Periferins potential," in *Arkitekturmuseets årsbok* 1996.
- Bjur, H. (1999): "Sustainable Forms of the Future City – on Urban Development and Transportation," paper (key-note speech), *congress Sweden-China on scientific exchange*, Shanghai.
- Bjur, H. (2000): "Urban Form, Movement and Transformation – Urban Development and Mobility", paper (key-note speech) *IFHP conference*, Helsinki.
- Bjur, H. (2003): "Periferins plaster och vardagsliv", i *Den ut hålliga staden som livsmiljö* III, Formas (available in English at: www.urbanism.nu).
- Bjur, H. & Azimzadeh, M. (2004): "Evolving Urban Culture in Transforming Cities, The role of the configuration of the network of public spaces in urban life" in *the 11th IPHS Conference, Barcelona, July 2004, proceedings*. Available at: www.iphs2004.com.
- Bjur, H. (2005a): "L'Arte Urbanistica in Svezia nel 1600", in *Confini Perduti, proceedings* (in prep.), Bologna.
- Bjur, H. (2005b): *Time, Place and Meaning in the Urban Periphery*, (in prep.)
- Boeri, S., Lanziani, A. & Marini, E. (1993): *Il territorio che cambia. Ambiente, paesaggi e immagine della regione milanese*.
- Bonamico, S., Colini, A. M. & Fidenzoni, P. (1968): *La Carta Storico – Monumentale dell'Agro Romano*.
- Braudel, F. (vol. 1:1986, 2:1987): *The Mediterranean and the Mediterranean World in the Age of Philip II*.
- Braudel, F., Aymard, M. & Coarelli, F. (1990): *Medelhavet. Rummet och historien*.
- Brogiolo, G.P. [ed.] (1995): *La fine delle ville romane: trasformazioni nelle campagne tra tarda antichità e alto medioevo*.
- Brogiolo, G.P. & Ward-Perkins, B. [eds.] (1998): *The idea and ideal of the town between late antiquity and the early middle ages*.
- Brogiolo, GP, Gauthier, N. & Christie, N [eds.] (2000), *Towns and their territories between late Antiquity and the early Middle ages*.
- Cabral, S. & Del Re, F. (1779): *Delle ville e dei più nobili monumenti della città*

di Tivoli e suo territorio.

Calci, C. & Mari, Z. (2003): “Via Tiburtina”, in Pergola, Santangeli Valenzani & Volpe 2003.

Carlestam, G. & Solbe, B. [eds.] (1991): *Om tidens vidd och tingens ordning. Texter av Torsten Hägerstrand.*

Christie, N. (1996): “Barren fields? Landscapes and settlements in late Roman and post-Roman Italy”, in *Human landscapes in classical antiquity: environment and culture.*

Christie, N. [ed.] (2004): *Landscapes of change: rural evolutions in late antiquity and the early middle ages.*

Cima, M. (1998): “Gli Horti Liciniani: una residenza imperiale della tarda antichità”, in *Horti romani.*

Clark, P. & Lepetit, B. (1996): *Capital cities and their hinterlands in early modern Europe.*

Coarelli, F. (1986): “L’urbs e il suburbio”, in A. Giardina [ed.], *Società romana e impero tardoantico*, 2.

Coarelli, F. (1987): *I santuari del Lazio in età repubblicana.*

Corbier, M. (1991): “La transhumance entre le Samnium et l’Apulie: continuités entre l’époque républicaine e l’époque impériale”, in *La romanisation du Samnium aux IIe et Ier siècles av. J.-C.. Naples, Centre Jean Berard, 4-5 Novembre 1988.*

Cosgrove, D. & Daniels, S. [eds.] (1988): *The iconography of landscape: essays on the symbolic representation, design and use of past environments.*

Cremona, A. (1998): *Ville tra la via Tuscolana e la via Appia Nuova.*

Dovey, K. (1999): *Framing places: mediating power in built form.*

Desjardins, E. (1854): *Topographie du Latium.*

Ellis, L. & Kidner, F. [eds.] (2004): *Travel, communication and geography in late antiquity.*

Entrikin, J. N. (1991): *The Betweenness of Place. Towards a Geography of Modernity.*

Fridell, K. & Weilguni, M. (2003): *Public Space in Roman Pompeii*, BAR International Series 1186/2003; see also *Nordisk Arkitekturforskning* 3/2002.

Frizell Santillo, B. (1996): “Per Itinera Callium. Report on a pilot

project” in *Opuscula Romana* 21.

Frizell Santillo, B. (1998): “Monumental building and propaganda at Mycenae.” In *First International Conference on Ancient Greek Technology, Thessaloniki, 4-7 sept. 1997*.

Frizell Santillo, B. (1998): “Monumental building at Mycenae: its function and audience”, in *Opuscula Atheniensia* 22.

Frizell Santillo, B. (1998): “Giants or geniuses? Monumental building at Mycenae.” In *Current Swedish Archaeology* 6.

Frizell Santillo, B. (1999): “Det pastoral landskapet – en historia bortom tiden”, in *Tvärsnitt* 1999:1.

Frizell Santillo, B. (2001): “The dynamics of development in traditional house-building: ethnohistory and dry-masonry domes” In *From huts to houses. Transformations of ancient societies. Proceedings of an International Seminar organized by the Norwegian and Swedish Institutes in Rome, Sept. 21-24, 1997*, Eds. R. Brandt & L. Karlsson.

Frizell Santillo, B. (2002): ”Sal, sulphur, saltus. Tre landskap – en historia.” in *Humanist vid Medelhavet*.

Frizell Santillo, B. (2002): ”Då var djurtransporter inget problem”, in *Forskning och Framsteg* 6, 2002.

Frizell Santillo, B. (2003): ”Svavelbad i antik djurhållning.” in *Svensk Veterinärtidning* 55.

Frizell Santillo, B. (2003): ”The rhetoric of building construction”, in *Toward an Archaeology of Buildings. Contexts and concepts. Ten papers on the analysis of standing buildings and concepts of building reconstruction*. Ed. G. Malm, BAR International Series 1186.

Frizell Santillo, B. (2004): “Curing the flock. The use of mineral waters in Roman pastoral economy”, in *PECUS. Man and animal in antiquity. Proceedings of the conference at the Swedish Institute in Rome, September 9-12, 2002*. Ed. Barbro Santillo Frizell (The Swedish Institute in Rome. Projects and Seminars, 1). www.svenska-institutet-rom.org/pecus.

Frizell Santillo, B. (2005): *Pastoral landskap – myt och verklighet*. (Pastoral landscapes – myth and reality. Summary in English).

Frizell Santillo, B. & Klynne, A. [eds.] (2005): *Roman villas around the Urbs: interaction with landscape and environment. Proceedings from a conference*

- held at the Swedish Institute in Rome, September 17-18th, 2004 (SIRPS 2) (forthcoming).*
- Frutaz, A.P. (1962): *Le piante di Roma*.
- Gasparrini, C. (2001): "La costruzione del piano. Strategie, regole e progetti per la Città storica", *Urbanistica* 116, s. 93–116
- Geertman, H. (1976): "The builders of the Basilica Maior in Rome", in *Festoen. Opgedragen aan A. N. Zadoks-Josephus Jitta* (Scripta Archaeologica Groningana 6).
- Guidobaldi, F. (1998): "Il Tempio di Minerva Medica e le strutture adiacenti: settore privato del Sessorium costantiniano", in *Rivista di archaeologia cristiana* 74.
- Guidobaldi, F. (2004): "Le residenze imperiali della Roma tardoantica", in C. Balmelle, P. Cevalier & G. Ripoll [eds.], *Mélanges d'antiquité tardive. Studiola in honorem Noël Duval*, (Bibliothèque de l'Antiquité Tardive publiée par l'Association pour l'Antiquité Tardive, 5).
- Harvey, D. (1989): *The Conditions of Postmodernity*.
- Hillier, B. (1996): *Space is the Machine*.
- Hillier, B. (2001): "Society seen through the prism of space. Sketch for a theory of society and space", invited paper for the *Third Space Syntax Symposium 2001, Atlanta, Georgia*.
- Horden, P. & Purcell, N. (2001): *The Corrupting Sea. A Study of Mediterranean History*.
- In agro Decimano. Per un catalogo del patrimonio storico archeologico del territorio a sud di Ravenna*, 2000.
- D. Kertzer (1988): *Ritual, politics and power*.
- Klasander, A.-J. (2004): *Suburban Navigation. Structural Coherence and Visual Appearance in Urban Design*, Chalmers University of Technology, Göteborg (Diss.).
- Krautheimer, R. (1950): "Le esplorazioni nella basilica di san Lorenzo nell'Agro Verano", *Rivista di archeologia cristiana* 26.
- Krautheimer, R. (1962): *Corpus basilicarum Christianarum Romae* II.
- Krautheimer, R. (1983): *Three Christian capitals*.
- Lanciani, R. (1988): *Forma Urbis Romae*.
- Laurence, R. (1999): *The Roads of Roman Italy. Mobility and Cultural*

Change

- Lauter, H. (1971): “Heiligtum oder Markt?”, in *Archäologische Anzeiger*.
- Lefebvre, H. (1990): *The Production of Space*.
- Lloyd Jones, Tony [ed.] (2004): *Urban Design for Sustainability, EU-WG on Urban Design for Sustainability*.
- Malmberg, S. (2003): *Dazzling dining: banquets as an expression of imperial legitimation*.
- Malmberg, S. (forthcoming): “Copying the capital: the Ravenna of Theoderic”.
- Marazzi, F. (2001): “Da “suburbium” a “territorium”: il rapporto tra Roma e il suo hinterland nel passaggio dall’antichità al medioevo”, in *Roma nell’alto medioevo*.
- Marazzi, F. (1998): “The destinies of the late antique Italies: politico-economic developments of the sixth century”, in *The sixth century: production, distribution and demand*.
- Marcelloni, M. (2003): *Pensare la città contemporanea. Il nuovo piano regolatore di Roma*.
- Mari, Z. (1983): *Tibur. Pars Tertia*. (Forma Italiae, Regio I, Vol. 17).
- Moore, S. & Myerhoff, B. [eds.] (1977): *Secular ritual*.
- Muratori, S., et al. (1963): *Studi per una Operante Urbana per Roma*.
- Novara, P. [ed.] (2000): *Peregrinatio ad loca sancta: testimonianze del passaggio dei pellegrini lungo i percorsi viari a sud-est di Ravenna*.
- Pasquinucci, M. (1979): “La transumanza nell’Italia romana”, in E. Gabba & M. Pasquinucci [eds.], *Strutture agrarie e allevamento transumante nell’Italia romana (III-I sec.a.C.)*.
- Patterson, H. (2005): *Approaches to regional archaeology in the Middle Tiber Valley* (Archaeological Monographs of the BSR) (forthcoming).
- Pergola, P., Santangeli Valenzani, R. & Volpe, R. [eds.] (2003): *Suburbium. Il suburbio di Roma dalla crisi del sistema delle ville a Gregorio Magno* (Collection de l’Ecole Francaise de Rome 311).
- Purcell, N. (1996): “Rome and the management of water: environment, culture and power”, in *Human Landscapes in Classical Antiquity*.
- Quilici, L. (1984): “La transumanza nell’Italia centrale in età moderna e medioevale come contributo alla conoscenza di quella antica.” in

- Ambiente e società pastorale nella montagna Maceratese. Atti del XX convegno di studi maceratesi. Ussita 29-30 settembre 1984 (=Studi Maceratesi 20).*
- Rapoport, A. (1993): "On the nature of capitals and their physical expression", in *Capital cities: international perspectives*.
- Reggiani, A.M. (1998): *Tivoli. Il santuario di Ercole Vincitore. Tivoli. The Sanctuary of Hercules Victor*.
- Ripoll, G. & Arce, J. (2000): "The transformation and end of Roman villae in the west (fourth-seventh centuries): problems and perspectives", in G.P. Brogioli, N. Gauthier & Rossi, A (1985): *The History of the City*.
- Serra, S. (1994): "La via Tiburtina dall'antichità al medioevo", in Passaglini, M. [ed.], *Il quartiere di S. Lorenzo a Roma*.
- Serra, S. (1998): "La viabilità tardoantica e medievale dalla porta Tiburtina a San Lorenzo fuori le mura: una nota", in *Bullettino della commissione archeologica del Comune di Roma* 99.
- Serra, S. (2000): "San Lorenzo fuori le mura", in L. Pani Ermini [ed.], *La visita alle "Sette Chiese"*.
- Serra, S. (2002): "La basilica di S. Stefano all'Agro Verano. Nuove considerazioni", in F. Guidobaldi & A. Guiglia Guidobaldi [eds.], *Ecclesiae Urbis. Atti del congresso internazionale di studi sulle chiese di Roma (IV-X secolo). Roma, 4-10 settembre 2000* (Studi di antichità cristiana pubblicati a cura del Pontificio istituto di archeologia cristiana 49).
- Serra, S. (2003): "Nuove scoperte della PCAS nel cimitero del Verano a Roma", in E. Russo [ed.], *1983-1993: dieci anni di archeologia cristiana in Italia. Atti del VII Congresso Nazionale di Archeologia Cristiana. Cassino, 20-24 settembre 1993*.
- Serra, S. (2004): v. 'Cyriaces coemeterium', in *Lexicon Topographicum Urbis Romae. Suburbium II*.
- Sfameni, C. (2004): "Residential villas in Late Antiquity Italy: continuity and change", in W. Bowden, L. Lavan & C. Machado [eds.], *Recent Research on the Late Antique Countryside* (Late Antique Archaeology, vol. 2).
- Sieverts, T. (2001): *Zwischenstadt – zwischen Ort und Welt, Raum und Zeit, Stadt und Land*.

- Small, A. & Buck, R.J. (1994): *The Excavations of San Giovanni di Ruoti, I. The Villas and their Environment*.
- Soja, E.W. (1996): *Thirdspace, Journeys to Los Angeles and Other Real-and-Imagined Places*.
- Spera, L. (2003): "The Christianization of space along the Via Appia: changing landscape in the suburbs of Rome", in *American journal of archaeology* 107.
- Sudjic, D. (1992): *The 100 Mile City*.
- Talbert, R.J.A. [ed.] (2001): *Barrington Atlas of the Greek and Roman World*.
- Terrenato, N. (2001): "The Auditorium site in Rome and the origins of the villa", in *Journal of Roman Archaeology* 14.
- Tomassetti, G. & F. (I:1910, II:1979): *La Campagna di Roma. Antica, Medioevale e Moderna*.
- Tordi, E. (1995): *Roma città intercomunale. Analisi storico-propositiva dell'aspetto urbanistico e della mobilità*.
- Traina, G. (1988): *Paludi e bonifiche del mondo antico. Transurbanism*, NAI Publishers, 2002.
- Tuan, Yu-Fu, (2001): "Space and Place. The Perspective of Experience", in *Urbanistica*, numero 116.
- Van Wonterghem, F. (1992): "Il culto di Ercole fra i popoli osco-sabellici", in *Héraclès: d'une rive a l'autre de la Méditerranée*.
- Wetterberg, Ola (red.) (1999): *Det nya stadslandskapet*.
- Wharton, A. (1995): *Refiguring the post-classical city: Dura Europos, Jerash, Jerusalem and Ravenna*.
- Whiston Spirn, A. (1998): *The Language of Landscape*.
- Vigueur, M. (1981): *Les Paturages de l'Église et la Douane du bétail dans la Province du Patrimoine (XIV-XV siècles)*.
- Virilio, P. (1996): *Försvinnandets estetik*.
- Volpe, R. (2000): "Le ville del suburbio di Roma", in *Aurea Roma. Dalla città pagana alla città cristiana* (Catalogo della mostra).
- Zardini, M. (1999): *Paesaggi ibridi*.